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

July 17, 2013

Mr. Dominique Grandemange
Site Manager
AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99354-0130

SUBJECT: AREVA NP, INC. (RICHLAND) – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT NUMBER 70-1257/2013-003

Dear Mr. Grandemange:

This refers to the inspections completed during the first quarter of calendar year 2013, at the AREVA NP, Inc., facility in Richland, Washington. The purpose of the inspections was to determine whether activities authorized under the license were conducted safely and in accordance with the Nuclear Regulatory Commission's (NRC's) requirements. The enclosed report presents the results of these inspections. The findings were discussed with members of your staff at exit meetings held on April 25, May 9, and June 27, 2013.

During the inspections, the NRC staff examined activities conducted under your license as they related to public health and safety, to confirm compliance with the Commission's rules and regulations, and with the conditions of your license. Areas examined during the inspections are identified below. The inspections consisted of facility walkdowns; selective examinations of relevant procedures and records; interviews with plant personnel; and observations of plant activities. Throughout the inspections, observations were discussed with your staff. The inspections covered areas pertaining to operational safety, environmental protection, waste management, transportation, management organization and controls, and operator training.

Based on the results of these inspections, the NRC has determined no violations of NRC requirements occurred.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its Enclosure will be made available electronically for public inspection in the NRC Public Document Room, or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

D. Grandemange

If you have any questions, please call me at (404) 997-4629.

Sincerely,

/RA/

Marvin D. Sykes, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

Docket No. 70-1257
License No. SNM-1227

Enclosure:
NRC Inspection Report 70-1257/2013-003
w/Attachment: Supplementary Information

cc: (See page 3)

D. Grandemange

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X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE **X**NON-SENSITIVE
ADAMS: ☐ Yes ACCESSION NUMBER: ML13198A138 **X** SUNSI REVIEW COMPLETE **X** FORM 665 ATTACHED

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DCP	RII:DFFI	RII:DFFI	RII:DFFI
SIGNATURE	MSykes for	/RA/	MSykes for	/RA/	/RA/	/RA/	/RA/	/RA/
NAME	C. Rivera	T. Vukovinsky	M. Romano	N. Peterka	D. Edwards	S. Subosits	M. Thomas	M. Sykes
DATE	07/ /2013	07/ /2013	07/ /2013	07/ /2013	07/ /2013	07/ /2013	07/ /2013	07/ /2013
E-MAIL COPY	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO

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U.S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No:	70-1257
License No:	SNM-1227
Report No:	70-1257/2013-003
Licensee:	AREVA NP, Inc.
Facility:	Richland, Washington
Dates:	April 1, 2013 to June 30, 2013 (Second Calendar Quarter)
Inspectors:	M. Thomas, Senior Fuel Facility Inspector (Sections B.1, D.1, 2b, and 3) T. Vukovinsky, Fuel Facility Inspector (Sections C.1 and 2) C. Rivera, Fuel Facility Inspector (Sections A.1 and D.2a) M. Romano, Material Control and Accounting Inspector (Section D.2b) D. Edwards, Construction Inspector, (Sections B.2 and 3) N. Peterka, Fuel Facility Inspector (Section D.2b) S. Subosits, Senior Resident Inspector (Section D.2b)
Approved by:	M. Sykes, Chief Fuel Facility Inspection Branch 3 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

AREVA NP, Inc.
NRC Inspection Report No. 70-1257/2013-003
April 1 – June 30, 2013

Inspections were conducted by regional inspectors during normal shifts in the areas of safety operations, effluent control and environmental protection, radioactive waste management, transportation, management organization and controls, and operator training. The inspectors performed a selective examination of licensee activities that were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews, and discussions with licensee personnel, and a review of numerous licensee documents.

Safety Operations

- The Items Relied on for Safety reviewed were properly implemented and maintained in order to perform their intended safety function. (Section A.1)

Effluent Control and Environmental Protection

- The Environmental Protection program was implemented in accordance with the license application and regulatory requirements. (Section B.1)

Radioactive Waste Management

- Radioactive waste activities were performed in accordance with regulatory requirements and procedures. (Section B.2)

Transportation

- Shipments of radioactive materials were prepared and shipped in accordance with applicable regulations and plant procedures. Certificates of compliance were maintained current. Shipping records were properly completed and maintained in accordance with applicable regulations. (Section B.3)

Management Organization and Controls

- The Management Organization program was implemented in accordance with the license and regulatory requirements. (Section C.1)

Operator Training

- The training program was implemented in accordance with the license and regulatory requirements. (Section C.2)

Other Areas

- Temporary Instruction (TI) 2600/017 was completed for AREVA. (Section D.1)
- Unresolved Item (URI) 2013002-01 was closed. (Section D.2a)
- The corrective actions for Order EA10-141 were verified to be completed (Section D.2b)
- Several 71.95 reports were closed. (Sections D.3-6)

Attachment

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

REPORT DETAILS

Summary of Plant Status

The AREVA Richland facility converts uranium hexafluoride (UF_6) into uranium dioxide for the fabrication of low-enriched fuel assemblies used in commercial nuclear power reactors. During the inspection period, normal production activities were ongoing.

A. Safety Operations

1. Operational Safety (Inspection Procedure (IP) 88020)

a. Inspection Scope and Observations

The inspector interviewed staff and reviewed records associated with the Dry Conversion Process area, specifically System 810- Dry Conversion Vaporization, System 820- Dry Conversion Powder Production, System 830- Dry Conversion Powder Preparation, and System 840- Liquid Effluent and HF Recovery. The inspector determined that specific items relied on for safety (IROFS) including, but not limited to IROFS 816.01, 902, 903, 905, 813, 906, 1227, 1228, 1229, 1230, 1102, 1103, 1025, 1104, 1224, 1225 and 1226 were properly implemented and communicated as described in the Integrated Safety Analysis (ISA). The inspector determined that the systems were operated safely and in compliance with requirements.

The inspector confirmed that engineered controls reviewed were present and capable of performing their intended safety function(s). Specifically, the inspector verified the physical presence of passive and active engineered safety controls, evaluated the safety controls to determine their capability and operability, and verified that potential accident scenarios were adequately covered.

The inspector reviewed the ISA summary, nuclear criticality safety specifications (NCSS), chemical hazard analyses, licensee policies, and operating procedures to determine the existing process safety controls. The inspector also reviewed management measures, required programs, and supporting documentation, functional tests, surveillances, calibrations, maintenance, and condition reports (CRs) for designated IROFS to ensure that safety controls were available and reliable to function when needed. The inspection also included interviews of licensee personnel and a plant walk-down.

The licensee has identified that, in some instances, the technical basis for derived setpoints used for active engineering controls were either limited in detail or unavailable due the historic nature of the site. The licensee has implemented a long term initiative to review each system and perform the engineering calculations needed to develop the engineering basis for setpoints used in safety systems. EHS&L personnel are reviewing these calculations to determine if there is any impact to current NCSS and NCA documents. To date, the licensee has not identified any values that have been non conservative in nature. The inspectors reviewed a sampling of calculations and verified that the new calculations were conservative and did not conflict with established values.

The inspector determined that licensee administrative controls were implemented and communicated. The inspector reviewed procedures that included but are not limited to

Standard Operating Procedure (SOP)-40297, SOP 40292, SOP 40315, SOP 40228, SOP 40486, SOP 40259, and SOP 40287 and determined that required actions as identified in the ISA Summary were correctly transcribed into written operating procedures. The inspector evaluated the procedures' contents with respect to operating limits and operator responses for upset conditions and verified that limits needed to assure safety were adequately described in the procedures.

The inspector interviewed operators and determined that operators were adequately implementing the required safety controls. The inspector observed operators performance and determined that they were adhering to applicable safety procedures. The inspector reviewed the postings and operator aids applicable to the tasks being observed and determined that these postings and operator aids were current, reflect safety controls, and were followed by operators.

The inspector reviewed the licensee corrective action program entries for the past 6 months associated with the IROFS reviewed and determined that deviations from procedures and unforeseen process changes affecting nuclear criticality, chemical, radiological, or fire safety were documented and investigated promptly. Specifically, the inspector evaluated the corrective actions associated with CR 2012-9918 and CR 2013-132 and determined that the completed corrective actions were adequate.

Through interviews and document reviews, the inspectors verified that the licensee conducted preventive maintenance, calibration, and periodic surveillance as required by the ISA Summary for the selected safety controls.

b. Conclusion

The inspector performed an operational review of selected systems in the Dry Conversion Process Area. No findings of significance were identified.

B. Radiological Controls

1. Effluent Control and Environmental Protection (IP 88045)

a. Inspection Scope and Observations

The inspector reviewed program changes and procedures revised since the last inspection and verified that the program and procedures were in accordance with license requirements. The program change was to add a new section on the Decommissioning Planning Rule to the "Environmental Standards," E11-01-003, Version 8; and to add Stack K75 for the Uranyl Nitrate Building to SOP "Radioactive Gaseous Effluent Sampling," SOP-40032, Version 12. The inspector reviewed the 2012 audits and verified that identified corrective actions were adequately implemented.

The inspector reviewed program requirements in license and determined that the quality control of laboratory measurements was implemented in accordance with the license.

The inspector reviewed the 2011 and 2012 semi-annual effluent reports and determined that the licensee was in compliance with 10 CFR 70.59. The inspector reviewed records of airborne effluents, observed technicians change sample filters on various stacks and at the fenceline sampling stations and prepare them for counting; and determined that

the licensee was in compliance with SOP-40032. The inspector reviewed records of liquid effluents, observed a technician obtain a sample at the City of Richland sewer lift station; and verified compliance with SOP-40031, "Waste Effluent Monitoring and Sampling," Version 9. The inspector verified that liquid and gaseous effluent monitors were calibrated and functional checks performed in accordance with licensee procedures.

The inspectors reviewed the public dose assessment and determined that the average annual effluent concentrations released in 2012 did not exceed the values specified in Appendix B of 10 CFR Part 20 and the dose at the fenceline did not exceed 0.002 rem (0.02 mSv) in an hour and 0.05 rem (0.5 mSv) in 2012.

The inspectors reviewed the airborne portion of the public dose assessment and verified that result was in compliance with the As Low As Reasonably Achievable (ALARA) constraint required by 10 CFR 20.1101(d). The inspector reviewed the concentrations of liquid releases discharged to the sanitary sewer and verified that the licensee was in compliance with 10 CFR 20.2003.

The inspector reviewed sampling points and results for soil, forage and groundwater and determined that they were in compliance with the license requirements.

b. Conclusion

No findings of significance were identified.

2. Radioactive Waste Management (IP 88035)

a. Inspection Scope and Observations

The inspectors evaluated whether the licensee has established and maintained adequate procedures and quality assurance programs to ensure compliance with the requirements of 10 CFR Part 20 and 10 CFR Part 61 applicable to low-level radioactive waste form, classification, stabilization, and shipment manifests/tracking.

The inspectors reviewed written procedures and observed performance of tasks related to radioactive waste. The procedures were clearly written and adequately delineated responsibilities related to radioactive waste management. The inspectors reviewed training qualifications for waste management operators and verified they were current.

The inspectors reviewed the quality assurance program for radioactive waste management and determined that the licensee was performing the required audits. The findings from these audits were entered into the licensee's corrective action program for resolution.

The inspectors reviewed the licensee's program for classifying low-level radioactive waste. The inspectors reviewed the procedures for classifying waste as well as records relating to waste. The inspectors reviewed the licensee's program for ensuring that waste was properly packaged to ensure the waste form met the requirements of 10 CFR 61.56.

The inspectors reviewed the licensee's procedures for labeling waste shipments and tracking radioactive waste. The procedures were adequate to ensure that radioactive waste was properly labeled and specified actions to be taken should the shipments not reach the intended destination in the time specified. Additionally, the inspectors observed the loading of a radioactive waste shipment for transportation to a disposal site.

The inspectors performed walk-downs of selected radioactive material storage areas. The storage areas had adequate postings to ensure that the proper material was being stored in the area and the material was safely stored in accordance with the nuclear criticality safety requirements. The containers were properly labeled to reflect their contents and were in acceptable physical condition.

b. Conclusions

No findings of significance were identified.

3. Transportation (IP 86740)

a. Inspection Scope and Observations

The inspectors evaluated whether the licensee had established and was maintaining an effective program to ensure radiological and nuclear safety during the receipt, packaging, delivery, and private carriage of licensed radioactive materials. The inspector also evaluated whether transportation activities were in compliance with the applicable transport regulations.

The inspectors reviewed a number of shipping records involving the shipment and receipt of special nuclear material products and waste disposal. The inspectors verified the storage of shipping records as required by 10 CFR 61.80 and 10 CFR 71.137. The licensee ensured that the appropriate documentation accompanied the packages being shipped. The licensee recorded the required information on the packaging and shipping orders including the transportation index, package activity, labeling, and placards.

The inspectors reviewed the training records to ensure that the licensee had administered 49 CFR 172.704 hazardous materials transportation training to affected personnel as required by the Department of Transportation and their license. The inspectors observed the loading of packages for three radioactive material shipments. The personnel loading the packages followed the appropriate procedures. The inspectors also interviewed the transportation personnel and carrier personnel to ensure they were knowledgeable of NRC and U.S. Department of Transportation (DOT) requirements.

The inspectors verified that the licensee met the 10 CFR 71.21 conditions required to use the general license provision for transport of licensed material. The inspectors reviewed audits of the transportation program and determined the licensee was performing periodic audits of the program as required. The results of the audits were appropriately addressed in the corrective action program.

b. Conclusions

No findings of significance were identified.

C. Facility Support

1. Management Organization and Controls (IP 88005)

a. Inspection Scope and Observations

The inspectors interviewed senior managers, managers, and supervisors to verify that the management team understood the plant policy for safety and roles in implementing it. The inspectors reviewed changes in personnel responsibilities and functions that occurred within the past year. The inspectors verified that the personnel selected met the qualifications as required by the license application.

The inspectors verified the licensee's control of procedures through discussions with licensee staff. The inspectors reviewed four procedures which had been changed in the past year to ensure that they were reviewed and approved in accordance with approved procedures.

The inspectors reviewed the licensee's problem identification and resolution program to determine if the program was being conducted in accordance with approved procedures and the license application. The inspectors observed a management meeting in which the safety significance and classification was assigned to each new item in the corrective action program. Additionally, the inspectors observed a management meeting in which the status of open items in the corrective action program (CAP) were discussed in detail and signed to the responsible organization.

The inspectors reviewed safety committee meeting minutes and verified that the committees operated per the associated charter and implementing procedures.

b. Conclusion

No findings of significance were identified.

2. Operator Training (IP 88010)

a. Inspection Scope and Observations

The inspectors reviewed the Operator Training program and evaluated the program against the license application. The inspectors interviewed the licensee on changes to the training program in the past year and reviewed applicable procedure revisions. The inspectors determined that changes made were in accordance with the license application. The inspectors reviewed training material and lesson plans to ensure that the licensee was adhering to the Institute of Nuclear Power Plant Operations Systematic Approach to Training (SAT) process. The inspectors reviewed several new training presentations to determine if the SAT process was being adhered to.

The inspectors conducted interviews and discussed training with selected staff in the dry conversion area. The inspectors also observed human performance lab training which

was being given to all employees. This training encompassed five human performance tools selected by management to be reinforced.

The inspectors reviewed examinations. The inspectors verified that key points from the lesson plans were incorporated in the examinations. The inspectors determined that trainee understanding and command of learning objectives were evaluated as required. The inspectors reviewed nuclear criticality safety and radiation protection training and determined that the training was being administered at the required frequency and included the requirements in 10 CFR 19.12.

The inspectors reviewed the training history of several employees in the dry conversion area to verify that training, including on-the-job training (OJT), was being conducted. The inspectors determined that the operators conducting OJT met the requirements to administer this training. The inspectors observed shift operations and verified that non-qualified operators were provided training instructions and paired with a qualified operator.

b. Conclusion

No findings of significance were identified.

D. Other Areas

1. Temporary Instruction 2600/017, Review of the Implementation of the Decommissioning Planning Rule (DPR)

Based on the results of the environmental inspection documented in Section B.2 the inspectors verified that the licensee maintained adequate radiological control programs to minimize the introduction of radiological contamination into the site environment, and had a program to ensure that releases of radioactivity to the environment are promptly identified and characterized using procedure E18-01-002, “Safety, Environmental or MC&A Incident Notifications, Version 12. In addition, the inspectors verified that the licensee recorded radiological survey data to identify the location and concentrations or quantities of contamination that may require remediation at the time of license termination, and was reporting updated financial assurance as required by the DPR.

2. Follow-up on Previously Identified Issues (IP 92702)

a. (Closed) URI 70-1257/2013-002-01: Further evaluate whether the licensee is in compliance the performance requirements during the time they had both IROFS in the degraded condition.

This issue was to further evaluate whether the licensee was in compliance with the performance requirements during the time both IROFS 3514 and 3529 were in the degraded condition. The inspector reviewed the ISA Summary, accident sequences, the available safety controls to mitigate or prevent a high or intermediate accident event related to this degraded condition, and determined that the licensee met the performance requirements during this degraded condition. This item is closed.

b. (Closed) Confirmatory Order EA-10-041: A violation of an Advisory Engineer who deliberately falsified international transportation documents which are material to the NRC.

The inspectors confirmed that the licensee completed Section V.3.c of Confirmatory Order EA-10-041, which required AREVA to conduct an independent safety culture assessment in accordance with an accepted nuclear industry standard. This was conducted at both the AREVA Horn Rapids Road (HRR) Facility and the AREVA Old Forest Road (OFR) Facility. The inspectors reviewed the recommendations to AREVA from the independent management consulting firm that conducted the assessment. AREVA's response to the recommendations included:

- conducting a senior management-led all-hands meeting to communicate the assessment results along with planned AREVA response actions;
- make the assessment report available to employees;
- appoint a small management team to interview respondents who identified themselves to discuss their responses and report results to management;
- appoint a small team with participation at site management to evaluate expressed concerns and issue a report with recommendations for action for management review and acceptance;
- assess the ideas for improvement expressed in interviews and in the narrative responses to the Safety Conscious Work Environment (SCWE) survey items, evaluate their merit and feasibility to implement;
- evaluate the tension between production and safety that was reported by several interviewees and by some SCWE survey respondents, a tension which allegedly has the potential to compromise safety. Include in this evaluation ongoing strategies underway to combat this perception;
- review and assess the significance of the 25 survey items which more than 20% of the respondents rated Mildly Agree or lower; and
- provide an action plan for revitalization of the Employee Concerns Program (ECP) via a marketing/communication campaign.

AREVA developed the 2013 OnePlan Tactical Goal Summary Action Plan to implement these recommendations. The actions included:

- an employee safety commitment and accountability pledge;
- a 2013 safety culture assessment;
- increased employee awareness for safety;
- Human Performance Lab training;
- 5S[1] Visual Standards for work areas;
- Site Safety and Chemical Safety committees;
- employee and team recognition for achieving excellence in safety;
- Essential to Safety Training; and
- 2013 Safety Day Event.

The inspection team selected employees from all levels across the organization to interview regarding the assessment [safety culture survey]. While the selection primarily

[1] 5S is a workplace organizational method. The 5S phases are: sorting, set in order, systematic cleaning, standardizing, and sustaining.

focused on transportation (including TransNuclear), security, and all operations employees, a random sample of employees from other departments were also interviewed. Several employees recalled taking the safety culture survey and have seen some improvements. Many employees recalled receiving the results of the survey as well.

In general, the employees interviewed both knew several options to raise a safety concern (through direct line management, the corrective action program, the Site Safety Committee, the NRC, etc.) and were comfortable doing so. Many of these options, their implementation, and safety culture additions/enhancements are detailed in the sections below.

In addition, the inspectors interviewed management and staff and attended several meeting to assess the emphasis placed on the eight Institute of Nuclear Power Operations (INPO) Principles for a Strong Nuclear Safety Culture. In evaluating the licensee's implementation of their Safety Culture related corrective actions, the inspectors observed the licensee incorporate the INPO principles.

In addition to the employees interviewed at the Areva HRR and OFR sites, the inspection team interviewed a sample of employees associated with the fuel technology and services groups at the AREVA OFR Facility in Lynchburg, VA regarding the safety culture survey and to assess their knowledge of safety culture principles. The inspector noted from the interviews that most of the employees recalled taking the survey. The inspection team also noted that in general there was adequate knowledge of the following principles and how to utilize them to improve safety: 1) Problem identification and resolution; 2) Avenues for raising safety concerns; 3) The role having a questioning attitude plays in enhancing safety.

Employee Concerns Program

The inspectors assessed the adequacy of the licensee's recommended action to "provide an action plan for revitalization of the ECP via a marketing/communication campaign." The inspectors discussed this revitalization plan and its associated actions with the licensee staff responsible for the program. At the time of the inspection, the inspectors did not observe any indication of an ECP or advertisement of such a program. However, they did observe a 2011 SCWE memorandum poster with a line regarding the ECP including an email address. The inspectors sent an email to that address only to have it auto-returned. After discussing this with the licensee management, one licensee manager also tried the address with the same result. A representative from Human Resources was contacted and the ECP email address was re-configured the next day. The licensee's estimation was that the ECP email address had not been functional for approximately four months at the time of the inspection.

Additionally, although there were no visual signs of the ECP or an appropriate contact representative throughout the facility, the licensee showed the inspectors the posters in the queue ready for approval to post in the facility. This action was set to be complete by August 2013.

While AREVA has ECP and SCWE policies, very few of the employees interviewed knew that an ECP existed.

Observation Record Cards

The inspectors observed that employees and contractors are now using “Green Cards” – Observation Record Cards to note positive and negative observations. The cards were brought over from Areva’s Reactor Services Group in Lynchburg, VA after being observed as a best practice at that facility. Use of the cards was initially piloted with HRR management and supervision, followed by a site-wide rollout to employees. The front of the card is for documenting specific information on the observation, while the back contains three overarching observation categories (Safety, 5S/Housekeeping/Foreign Material Exclusion (FME), and Human Performance/Other) for tracking and trending. The information from the cards is entered into a database used for tracking and trending, and actions taken by management on specific trends as necessary.
Employees and management/supervisors are required to submit one observation record card per calendar quarter and two per month, respectively. These requirements for completing observation record cards are incorporated in each employee’s accountability and performance appraisal. Moreover, the implementation and use of observation record cards was used as an example of safety culture departmental and individual goals for the year.

Human Performance (HUP) Lab

Areva developed the Human Performance (HUP) Lab as a means to actively engage employees and contract personnel in error prevention techniques through hands on training. The first HUP Lab was conducted in 2010. The licensee revised and expanded the HUP Lab in the spring of 2013. The inspectors had the opportunity to tour the training area and review training material for the most recent session. The 2013 lab focused on the following topics:

- Take 2
- Log Keeping / Shift Turnover
- Tagging
- Observation and Coaching
- FME / 5S / Housekeeping

The inspectors interviewed multiple employees about the HUP Lab. These employees viewed the training as beneficial to their daily activities. The inspectors also noted that the knowledge and use of Human Performance tools is a portion of the employee’s appraisal.

Corrective Action Program

The inspectors reviewed the status of the eight corrective action items referenced above in the licensee’s CAP. The inspectors determined that all actions were complete or scheduled to be completed (ECP revitalization) in the next few months. The inspectors also reviewed the CAP governing procedure and a few of the major changes in the past two years, including clarification of reporting nuclear safety concerns. The inspectors verified these changes were complete.

The inspectors attended a CAP screening committee meeting. The inspectors observed a questioning attitude among the representatives regarding the safety concerns or events and the categorization levels. In addition, the inspectors observed and discussed with the CAP manager the assignment of codes for tracking and trending events and Human Performance issues.

The inspectors interviewed the CAP program manager and discussed the recent changes to the program. The inspectors also reviewed the most recent Corrective Action Review Board (CARB) meeting minutes and verified the Board met periodically to discuss the safety issues that rise to the appropriate corrective action threshold. Additionally, the inspectors noted that the licensee is trending, on a quarterly basis, specific CAP issues through the CARB. For example, the licensee is monitoring all "Level 1 or 2" issues with a code of "Human Performance". The CAP manager understood that an effective CAP is a reflection of the principle of nuclear safety undergoing constant examination.

Site Safety Committee and Site Communications Committee

The licensee has a Site Safety Committee with representatives from the various business units at the facility, which meets monthly. This committee has been in existence in some form (Employee Safety Committee) but has received additional focus and support in the past two years. The inspectors reviewed the minutes from the last four months' meetings. The inspectors also interviewed the Chairperson for the meetings and discussed agenda items, including Near Misses, injuries, and appropriate training (e.g. the HUP Lab).

AREVA also has a Site Communications Committee (SCC) to solicit feedback from employees, which meets monthly as well.

Employee Safety Commitment – 2013

Employees were asked to sign a safety commitment to be held accountable for the safety of themselves and their co-workers. In addition, pre-job briefs and meetings begin with a safety moment during which the supervisor or manager will discuss a pertinent safety issue.

The inspectors observed other safety culture and Human Performance initiatives throughout the week. One of these initiatives is the use of Actions Centering on Excellence (ACE) cards. ACE cards are used as an employee recognition program for employees to recognize fellow employees for "above and beyond" performance. Many of the traits rewarded are those of a strong safety culture (e.g. questioning attitude, Human Performance). Employees who receive an ACE award also receive a monetary AREVA gift. Other initiatives observed include the promotion and use of the "STAR" (Stop, Think, Act, Review) method and increased management presence on the floor. Lastly, the licensee has committed to conduct another safety culture assessment in October 2013.

3. (Closed) LERs 2012003-00, 2012004-00, 2012005-00 71.95(b) Reports: The licensee submitted two reports in accordance with 10 CFR 71.95(b) for cylinder valve thread engagement issues and one report for plug thread engagement issues which are instances in which the conditions in the certificate of compliance were not followed

during a shipment. The licensee has taken the corrective actions stated in the reports (ML12179A158, ML12235A480,ML12235A479) to revise the valve or plug replacement section of the cylinder refurbishment procedure to include marking a line on the threads to ensure that a minimum of seven threads are engaged as required by ANS/ANSI 14.1 Section 6.10.6.

4. (Closed) 71.95(b) Report of Certificate Non-compliance for Model No. SP-1, SP-2, and SP-3 Licensed Shipping Containers: The licensee submitted a report in accordance with 10 CFR 71.95(b) for an instance in which the conditions in the certificate of compliance were not followed during a shipment when three SP-2 inner shipping containers that did not comply with a dimensional characteristic called out on license drawing EMF-304, 416 Revision 14. The licensee has taken the corrective actions stated in the report (ML12177A391).

5. (Closed) 71.95(b) Report of Certificate Non-compliance for Model No. ANF-250 Licensed Shipping Containers: The licensee submitted a report in accordance with 10 CFR 71.95(b) for an instance in which the conditions in the certificate of compliance were not followed during a shipment when three Model ANF-250 packages were received which were each missing one of the required six latches required by license drawing EMF-304,306 Revision 8. The licensee has taken the corrective actions stated in the report (ML12314A379).

6. (Closed) 71.95(b) Report of Certificate Non-compliance for Model Liqui-Rad (LR) Licensed Shipping Container: The licensee submitted a report in accordance with 10 CFR 71.95(b) for an instance in which the conditions in the certificate of compliance were not followed during a shipment when the welds for the internal draw tube within several the LR-230 vessels broke. The draw tube is depicted on license drawing LR-SAR Revision 8 and used for the downloading of the container contents at the receiving facility. The licensee has taken the corrective actions stated in the report (ML13091A081).

E. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized at exit meetings on April 25, May 9, and June 27, 2013, to D. Grandemange and staff. No dissenting comments were received from the licensee. No findings of significance were identified. An unresolved item was identified to further evaluate whether the licensee is in compliance with the performance requirements during the time they had both IROFS in the degraded condition. Proprietary information was discussed, but not included, in the report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

Name	Title/Area
R. Burklin	Health Physicist
W. Doane	Criticality Safety Engineer
D. Durham	Supervisor, Health, and Safety Technicians
D. Grandemange	Site Manager
W. Koglin	Principal Engineer (Uranium Conversion and Recovery)
M. Koontz	NMSR Supervisor
P. Lee	Preventative Maintenance Administrator
M. Leonard	Project Engineer
B. Lewis	Project Engineer
R. Link	Environmental, Health, Safety, and Licensing Manager
C. Manning	Criticality Safety Manager
L. Maas	Manager, Licensing and Compliance
K. Olsen	Reliability Engineer
D. Petersen	Packaging and Transportation Manager (TRANSNUCLEAR)
Y. Sakach	Health Physicist
T. Tate	Safety, Security, and Emergency Preparedness
L. Hope	Training Manager

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

07001257/2013002-01	URI	Further evaluate whether the licensee is in compliance the performance requirements during the time they had both IROFS in the degraded condition.
EA-10-041	EA/VIO	A violation of an Advisory Engineer who deliberately falsified international transportation documents which are material to the NRC.
2012003-00, 2012004-00, 2012005-00	LER	71.95(b) Reports of Plug and Valve Thread Engagement for 30B Cylinders
	LER	71.95(b) Report of Certificate Non-compliance for Model No. SP-1, SP-2, and SP-3 Licensed Shipping Containers
	LER	71.95(b) Report of Certificate Non-compliance for Model No. ANF-250 Licensed Shipping Containers
	LER	71.95(b) Report of Certificate Non-compliance for Model Liqui-Rad (LR) Licensed Shipping Container

Attachment

3. INSPECTION PROCEDURES USED

86740 Inspection of Transportation Activities
88005 Management Organization and Controls
88010 Operator Training/Retraining
88020 Operational Safety
88035 Radioactive Waste Management
88045 Effluent Control and Environmental Protection
92702 Followup on Corrective Actions for Violations and Deviations

4. DOCUMENTS REVIEWED

Records:

Ambient Air Sample Concentration for Fugitive Emissions 2008-2012
Audit # EMA-38, Semi-annual Environmental Monitoring Audit Summary
Audit Number (No.): 11:06 - Transnuclear, Inc. Columbia, Maryland. Approved 02/22/2011
Audit No.: 13:037 – 10 CFR 71, Subpart H, Packaging/Shipping, dated 05/23/2013

Concentration of U in Sewer Sludge at Richland Treatment Plant 2008-2012
Downstream Alpha Results 2008-2012
Drawing EMF-608,610 HRR Site Arrangement Sanitary Drain, Sheet 4, Revision 12
E04-NCSS-163, Industrial Wastewater Treatment Facilities, V16
E11-01-003, Environmental Standards, Version 8
E12-03-013 Environmental Audit, Version 7
Environmental Liquid Effluents 2008-2012 – Total U Activity, Tc-99 Activity, U Concentrations
HRR MAP 12 Shipping Container Refurbishment, User Curriculum Status, dated 06/25/2013
Internal Audit (IA) Report, IA-2013-02: Transportation, Approved 04/08/2013
Licensed Radioactive Shipment Material Release, User Curriculum Status, dated 06/25/2013
New Brunswick Laboratory Certified Reference Material Certificate of Analysis, CRM125-A, Uranium (Enriched) Oxide – UO2 in Pellet Form, Uranium Assay and Isotopic Standard, December 1, 1997
New Brunswick Laboratory Certified Reference Material Certificate of Analysis, CRM125, October 1, 1982 (Uranium Analysis and Isotopic Standard)
Powder Shipping and Receiving, User Curriculum Status, dated 06/25/2013
Semi-Annual Radioactive Waste Handling Audit, dated July 19, 2012
Semi-Annual Radioactive Waste Handling Audit, dated January 10, 2013
Soil, Air, Forage Analysis Results, October 2012- April 2013
Supplier Audit (SA) Report, SA 2012-10: CAST Transportation, Approved 09/17/12
UO2 Waste Compaction, User Curriculum Status, dated 06/25/2013
Waste Assay System, User Curriculum Status, dated 06/25/2013
Waste Handling Movement and Storage, User Curriculum Status, dated 06/25/2013
Waste Segregation and Packing, User Curriculum Status, dated 06/25/2013
2012 SH-2, Licensed Packaging Audit, dated 12/11/2012
2nd 2012 SH-1, Regulated Shipment Biannual Audit, dated 12/18/12
21342-NP1-004-01 (Waste shipping record)
21342-NP1-007-01 (Fuel assembly shipping record)
21342-NP1-007-02 (Fuel assembly shipping record)
21342-NP1-002-01 (Fuel assembly shipping record)

C810A001
C810P009
S810P001
C820I017
C820I020
C820P010
C821I012
C822I012
C821I011
C822I011
C823I011
C820P009

Maintenance Order: 13146392, 13157675, 13152488, 13146607, 13158026, 13152400, 13146608, 13158027, 13136108, 1360692

Procedures:

AID-10094, Reference 101 Dwyer Flowmeters for Room Air Samples, Version 2.2
AID-10132, Reference 151, Red Lion Controls Process Input Meter Model “IMP”, Version 2.2
AID-10339, Reference 1002, Yogokawa pH/ORP Analyzer Model PH202G, Model PH400, and PH402G with Various Combination pH/ORP Probes, Version 3.2
AID-10340, Reference 1003 GSE Model 350 Digital Weight Indicator with Various Weight Platforms, Version 2.2
AID-10467, Reference 1104, Yokogowa Model ADMAG AXF, Integral Type Magnetic Flowmeter, Verion 2
AID-10488, Reference 1112, Fischer D/P Tranmistters Model DPF-1003
AID-10179, Reference 211 Newport Digital Panel Meter Dual Setpoint Controller Model Q2001E, Version 2.2
AID-10189, Reference 54 Fischer-Porter Minimag (Microprocessor0-Based) Magnetic Flowmeter, Version 3
C163I106, Scale Labe Waste Coupon, Quarter 1, Version 2
C163P109, Retention Tanks/Sumps, 3 Month, Revision 0
E11-01-004, Radioactive Material Shipping Standard, Version 21
E12-01-003, Environmental, Health Safety, and Licensing Audit and Assessment Program, Version 5, 10/27/2011
E12-03-026, Transportation-regulated Shipment Audit, Version 4.0, 07/12/2012
E12-03-027, Shipping Container License Audit, Version 4.0, 08/18/2011
E17-03-001, Licensed Packagings/Regulated Waste Packagings Work Practice, Version 4.0
E17-05-063, Model MAP 12 or MAP 13 Package Compliance Summary, Version 4.0, 01/19/2013
E17-05-080, HRR Release Checklist Radioactive Waste to US Ecology Shipment,
E18-01-002, “Safety, Environmental or MC&A Incident Notifications, Version 12
IRM01672, Meter, Retention Tanks, Chemical, 1 Year
IRM01673, Meter, Retention Tanks, Chemical, 1 Year
IRM01679, Indicator, Sump, 1 Year
IRM02082, Flowmeter 1 Year, Version 3
IRM02091, Flowmeter 1 Year, Version 3
IRM03115, Flowmeter 1 Year Calibration, Version 2
IRM03117, Analyzer pH-949, 2 Year Calibration

IRM08090, Flowmeter Retention Pit, 12 Month
IRM08156, Pressure Transmitter, 1 Year, Version 1
IRM08157, Pressure Transmitter, 1 Year
MCP 30114, Logistic Waste Shipping Guidelines, Version 4.0
MCP-30121, “Review and Reporting of Liquid Effluent Monitoring Results,” Version 5.0
MCP 30132, Satellite Accumulation Area Control, Version 5.0
MCP-30235, Radioactive Solid Waste Packaging, Version 4.1
PM: 004999, Low U Lab Waste Basket Strainer, 1 Month
PM: 005036, Retention Tank (North), 1 Year
PM: 005037, Retention Tank (South), 1 Year
SOP-40032, “Radioactive Gaseous Effluent Sampling”, Version 12.0
SOP-40042, “Routine Fenceline/Building Exterior Radiation Level Surveys,” Version 4.0
SOP-40065, Nuclear Material Shipping and Receiving – General Rules, Version 13.0
SOP-40071, Radioactive Package Marking and Labeling, Version 17.0
SOP-40228, Uranium Conversion and Recovery Operations Rules, Version 14
SOP-40259, UF6 Cylinder Wash Operation, Version 33
SOP-40285, Dry Conversion Facility- Preparation and Heat up, Version 13
SOP-40287, Steady State Operation, Version 16
SOP-40292, Preparing and Removing UF6 Cylinders, Version 15
SOP-40297, UF6 General Information, Version 8
SOP-40300, Dry Conversion Facility- Powder Oxidizer, Version 15
SOP-40303, Dry Conversion Facility- Preparation-Calciner Product, Version 5
SOP-40315, Recertification Testing and Inspection of UF6 cylinders, Version 16
SOP-40375, “Retention Tanks and Sumps,” Version 9
SOP-40382, Solid Waste Packaging Procedure, Version 25.0
SOP-40383, Waste Assay Operations, Version 8.0
SOP-40384, Waste Volume Reduction and Packaging, Version 8.0
SOP-40386, Mixed/Hazardous/Dangerous Wastes Handling and Storage, Version 8.0
SOP-40387, Low Level Radioactive Waste (LLRW) and Ash Container Handling and Storage, Version 8.0
SOP-40389, Preparing Low Level Radioactive Waste (LLRW), Mixed Waste, Hazardous Waste and Material Shipments, Version 4.1
SOP-40486, Dry Conversion Facility-Process Start-up, Version 10
SOP-40487, Contaminated Waste Generator Requirements, Version 13.0
SOP-40579, “Preparation and Certification of Uranium and U-235 Standards,” Version 2.3
SOP-40901, “Analysis of Uranium Oxides, Urine, Waste, and Other Matrices for Impurities and Relative Isotopic Abundance by Inductively Couple Plasma – Mass Spectroscopy,” Version 2.1
SOP 40937, Shipping and Receiving of MAP 12 Containers, Version 5.0
SOP-40492, “Industrial Waste Water Proportional Samples,” Version 11.1
SOP-41024, Storage of Shipping Containers, Version 2.0

Transnuclear:
Transnuclear, Inc. Quality Assurance program Description Manual for 10 CFR, Subpart H and 10 CFR 72, Subpart G, Revision 12, 12/18/2012
Transportation Program Manual (TPM) 5.2, Transportation Specifics, Revision 3, 09/19/2012
TPM 2.5, Transportation Event Response Plan, Revision 1, 07/02/2012
TPM 2.6, Transportation Training, Revision 0, 08/16/2011
TPM 2.3, Transport Planning, Revision 1, 11/08/2012
Transnuclear Implementing Procedure (TIP) 3.6, Control of Quality Assurance Records, Revision 15, 06/07/2012

TIP 16.1, Corrective Action, Revision 20, 09/21/2012
TIP 18.1, Internal Audits, Revision 12, 10/16/2011
1703-77, US Fuel Business Unit Corrective Action Program, Rev. 31
1703-78, Change Management Plan, Rev. 6
1703-76, Issue Investigation and Casual Analysis Procedure, Rev. 18
1723-01, US Fuel Business Unit Training Process, Rev. 6
1723-01-F02, Training Course Development Request, Rev. 0
1723-01-F09, Continuing Training Evaluation, Rev. 0
1723-01-F10, Training Curriculum Content Approval, Rev. 0
1723-01-F11, Training Participant Course Evaluation, Rev. 1
1723-01-F07, On-The-Job Training Checklist, Rev.2
1723-01-F08, Skills Evaluation, Rev.1

Condition Reports Written as a Result of the Inspection:

Condition Reports:

2013-5060, K32A Filter Bank
2013-219
2012-6742
2013-1369
2013-373
2013-1171
2013-858
2013-3330
2012-9918
2013-132

Transnuclear Corrective Action Reports (CAR):
CAR 2013-071
CAR 2013-072
CAR 2013-075
CAR 2013-076

Other Documents:

Human Performance Lab Lesson Plan
Richland Site Safety Committee Minutes, 2/19/13
Richland Site Chemical Safety Team Notes, 2/25/13, 3/25/13
Ceramics Safety Inspection Audit, April 2013
Training and Qualification Audit Report, 2012
Training Review Committee Charter (Draft)
Training Advisory Committee Charter (Draft)
Training Oversight Committee Charter (Draft)
SWI-40052, HF and Corrosive Chemical Exposure Treatment, Version 6