NRC FORM 591S PART 1
(8-2002)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/CERTIFICATE HOLDER	2. NRC/REGIONAL OFFICE
AREVA NP Inc. 1724 Mount Athos Road, P. O. Box 11646 Lynchburg, Virginia 24506 REPORT NUMBER(S) 71-00003/2006201	Spent Fuel Project Office M/S O-13-D-13 Washington, DC 20555-0001

3. LICENSEE/CERTIFICATE NUMBER(S)	4. INSPECTION LOCATION	5. DATE(S) OF INSPECTION
71-0003	Lynchburg, Virginia	April 24-May 24, 2006

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or Certificate of Compliance (CoC). The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

☐ 1. Based on the inspection findings, no violations or nonconformances were identified.

☐ 2. Previous violation(s) or nonconformance(s) closed.

☐ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.

_____ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

☒ 4. During this inspection certain of your activities, as described below and/or attached, were in violation or nonconformance of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION OR NONCONFORMANCE, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations, Nonconformances, and Corrective Actions)

71.125, Control of measuring and test equipment states in part . . . The certificate holder shall establish measures to assure . . . gauges used in activities affecting quality are properly controlled.

In addition, AREVA NP Standard Work Instruction, SWI-6901-03 " Fuel Assembly Packaging," element # 36, requires the personnel using the pressure relief valve test unit to verify the calibration sticker is current. The pressure relief valve test unit is used by AREVA NP to test 51032-1 transportation packagings.

Contrary to the above, The NRC inspector examined the pressure relief valve test unit and noted that the test unit's gauge had no calibration sticker and that the gauge is not a part of the AREVA M&TE Program. In addition, the inspector verified that the test unit had been used according to AREVA Route Card RC-12296-11, Step 23 to test containers serial number 6237, 6242, and 6449 on 02/19/06. AREVA NP promptly initiated a new condition report (CR # 2006-1891) to address this issue.

STATEMENT OF CORRECTIVE ACTIONS

☐ I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested; OR

☒ Written Response requested in 30 days ☒ YES ☐ NO

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE	Chuck Armontrout	Chuck Armontrout	6/01/06
NRC INSPECTOR	Jim Pearson	Jim Pearson	6/01/06

NRC FORM 591S PART 1 (8-2002)

INSPECTOR NOTES COVER SHEET

Licensee/Certificate Holder (name and address)	AREVA NP 1724 Mount Athos Road, P. O. Box 11646 Lynchburg VA
Licensee/Certificate Holder contact and phone number	Charles Armontrout 434-832-5043
Docket No.	0710003
Inspection Report No.	2006201
Inspection Date(s)	April 24-May 24, 2006
Inspection Location(s)	AREVA NP, Lynchburg, VA Facility
Inspectors	Jim Pearson, Mike Karmis, Banad Jagannath, Bill Bezanson
Summary of Findings and Actions	Overall, AREVA NP implementation of their NRC approved Quality Assurance program description and control of transportation and maintenance activities in regard to 10 CFR Part 71 were assessed to be adequate. Two findings were noted and identified on NRC FORM 591. 71.125, Control of measuring and test equipment states in part . . . The certificate holder shall establish measures to assure . . . gauges used in activities affecting quality are properly controlled. In addition, AREVA NP Standard Work Instruction, SWI-6901-03 " Fuel Assembly Packaging," element # 36, requires the personnel using the pressure relief valve test unit to verify the calibration sticker is current. The pressure relief valve test unit is used by AREVA NP to test model 51032-1 transportation packagings. Contrary to the above, the NRC inspector examined the pressure relief valve test unit and noted that the test unit's gauge had no calibration sticker. The inspector also verified that the gauge is not a part of the AREVA NP M&TE program. In addition the inspector verified that the test unit had been used according to AREVA Route Card RC-12296-11, Step 23 to test containers serial number 6237, 6242, and 6449 on 02/19/06. AREVA NP promptly initiated a new condition report (CR # 2006-1891) to address this issue.
Lead Inspector Signature/Date	James J. Pearson James J Pearson 6/01/06
Inspector Notes Approval Section Chief Signature/Date	Melanie Wong Melanie Wong 6/9/06

02.02 Verify that the Certificate of Compliance (CoC) holder's activities related to transportation packagings are being conducted in accordance with the CoC, as well as the NRC-approved Quality Assurance (QA) Program (reference Regulatory Guide 7.10), and that implementing procedures are in place and effective.

The team reviewed portions of the current Framatome ANP Fuel Sector Quality Management Manual (FQM). The team noted that the manual is available to all company personnel through the use of the company intranet. In addition, the implementing procedures are also available to all personnel on the intranet. The inspector questioned numerous personnel to determine that the consistent and proper choice for work procedural direction was, as each person replied, the AREVA NP intranet.

The inspector noted that the FQM QA manual describes and depicts quality assurance independence where the fuel sector quality manager reports to both the Fuel Sector Executive Vice President and the AREVA NP Corporate Sustainable Development and Continuous Improvement Vice President.

In addition, the inspector noted that QA organization is depicted on multiple AREVA organizational charts as independent of operations and separately reporting to AREVA Management.

02.03 Verify that provisions are in place for reporting defects which could cause a substantial safety hazard, as required by 10 CFR Part 21.

Fuel America Administrative Procedures Manual, "Fuel America Corrective Action Program", Procedure No. 1703-77, Revision No. 10, dated 12/02/05, provides guidance for meeting the requirements of 10 CFR Part 21 deficiency reporting. Required Part 21 postings were reviewed at the AREVA facility and were found to be visibly posted as required. The Purchase Orders for Category A, safety related items were reviewed to assure reporting requirements were specified for reporting defects in accordance with Part 21. These provisions were reviewed and found to be adequate.

02.04 Interview selected personnel and review selected design documentation to determine that adequate design controls are implemented.

Fuel America Administrative Procedures Manual, "Design Control," Procedure No. 0405-40, Revision 09 provides guidance on managing design changes. The Configuration Management department managed the Design Change Request Process (DCR), and assigns each DCR to a responsible DCR Owner for review. Any AREVA employee can initiate a DCR. Upon initiation, the Configuration Management department takes the DCR and an owner is assigned. The level of formality of the review is dependent on the level of importance and risk. The DCR is categorized in descending order of importance from Level 1 to Level 4. Guidance on required activities is referenced in a matrix of requirement in Fuel America Administrative Procedures Manual, "Design Control," Procedure No. 0405-40, Revision 09. Related procedures include Fuel America Administrative Procedures Manual,"Change Management Plan", Procedure No. 1703-78, Revision 02, 01/06/06 and Fuel America Administrative Procedures Manual, "Design Review Boards", Procedure No. 0405-22, Revision 21, 06/20/05.

The DCR is effected through the Engineering Change Order (ECO) process. These procedures were reviewed and found to provide a very good level of guidance. It was noted that the DCR and ECO forms in use today did not directly link the Environmental Safety Health and Licensing (ESH&L) Managers approval to a block in the forms currently in use. While

errors in design change management were not found, therefore the possibility of missing constructive changes in the DCR process may exist, especially in high change processes such as are seen in designing and fabricating a new design.

The design change control methods and the systems in place to support these processes were reviewed and found to be adequately accomplished. The transition to the Matrix, Documentum and SAP software application systems over the last several years is an improvement to both design control and associated control of documents and records. The Matrix system contains the Bill of Materials, the DCRs, the ECOs. AREVA is transitioning to Documentum, which contains more recent sets of drawings. Older drawings are either on microfiche or previous computer system named the FRD system. SAP contains the Router and associated Bill of Materials/Parts list. The DCR process and ECO process were reviewed and found to be adequately accomplished. DCR #s 2596, 2659, 2699, 2739 were reviewed. Drawings in Documentum were reviewed to assure drawings were updated and at the correct revision level.

The ESH&L Manager is responsible for assuring design changes are reflected in the Part 71 CoC via the license amendment process. The ESH&L Manger interfaces with the AREVA Regulatory Affairs department and the NRC as required. The CoC was then reviewed to assure the changes to the design were reflected in a revision of the CofC.

Design control procedures were reviewed and found to be adequately accomplished. The AREVA designs which the Lynchburg facility is responsible for are mature designs with few design changes. Several amendments to CoCs were reviewed and changes to drawings were found to be accomplished as required. CoCs were reviewed to the controlled drawings in FRD and Documentum to assure the revisions were at the current level as documented in the CoC. Also, recent DCRs were reviewed to assure CoCs were amended to reflect the changes in the CoCs and its drawings and calculations were accomplished.

In summary, design control and the modification processes were reviewed and found to be adequately accomplished. Part 71 CoC were reviewed to assure that design changes were adequately documented and reflected the current revision levels of the CoC drawings. The design control and modification processes were found to be adequately accomplished in accordance with well developed and mature procedures. Also, NRC CoCs were reviewed to assure CoCs reviewed were adequately managed and reflected the current revision levels in use at the AREVA facility for manufacturing, maintenance, repair and procurement. CoCs were found to be adequately managed and reflected the current revision levels of drawings.

02.05 Review selected drawings, procedures and records, and observe selected activities being performed to determine that the fabrication, test, and maintenance activities meet SARP design commitments and requirements documented in the CoC.

Although the Inspection Plan Section 4.3, references Fabrication Control requirements, the facility inspected only performs the maintenance (re-furbishing. or repairing) of various fuel storage shipping containers. However, based on the team's inspection of the maintenance control program requirements specified in Section 4.4 and the review of various documentation pertaining to container weld repairs, a limited number of fabrication special process requirements could be verified, e.g. welding, welding personnel, weld procedures, documentation, and inspections.

The inspection results listed below reference the applicable paragraphs identified in the NRC Inspection Plan. The shipping containers and applicable documentation, drawings, procedures, instructions, route cards, etc pertained to the Model B and Model 51032-1 shipping containers.

The team noted, and as stated by AREVA personnel, that no container fabrication was performed at this facility in the last year - only container repair and maintenance. However, when container weld repairs are required, this activity is sub-contracted to the AREVA Support Services, organization/building (SERF #3) at this same Mount Athos Road location. Although no fabrication (welding) was performed during this inspection the team reviewed various records (welder and weld procedure qualification and inspection records for container weld repairs). The team also reviewed Engineering Requirements procedure ER-418 "Refurbishment of Model B Shipping Containers," Rev. 3. That document specifies the requirements for a vendor to refurbish a shipping container. As a result, the team's fabrication control inspection was limited to the following attributes listed below.

The team review of container repair documentation packages 23-5071713-00, and 23-5070575-00, for containers # 21 and # 22 indicated those packages identified the applicable weld procedures that were used and inspection requirements for those welds which would be performed under a special process procedure.

The container repair documentation package 23-5071713-00, and 23-5070575-00 include the Fabrication Routing Documents. The team review of those documents indicated the critical hold points (e.g. QA or QC) were specified and completed.

The team review of documentation package 23-5071713-00 and 23-5070575-00 identified a requirement that the weld operator and inspectors qualifications be submitted to the AREVA FA Process Engineering for review and approval.

Discussions with responsible AREVA personnel indicated that Process Engineering had reviewed and approved those documents. Step 3 on the applicable Fabrication Routing Document also indicated that QA had verified that process engineer's review and approval had been performed.

During the team inspection of the AREVA weld wire control program it was observed in the Support Services SERF # 3 facility that various uncontrolled welding materials (e.g.: coated, bare and spools of weld wire) were stored on the second floor of that facility in an unlocked open area. This condition may have a potential to result in the same problem (unauthorized use of uncontrolled weld wire) identified during the last NRC Inspection at the AREVA NP Richland, WA facility. That condition was identified in NRC Report (Docket No. 2005201) as a finding for using uncontrolled weld material to make welds on Part 71 Transportation packagings. The inspector could not determine that the uncontrolled materials at the Lynchburg facility had been used in any activities affecting quality. AREVA NP was quick to document this condition in AREVA Condition Report CR-2005-2009.

The team review of available documents (e.g. Route Card # RC-11897-08 and Standard Work Instruction, SWI-6901-3) for the Model B and 51032-1 shipping containers indicated two types of leak tests are performed on sealed containers. One is an air pressure test of the final assembled container. The other is a vacuum test of the container Pressure Relief Valve.

Although no testing was performed during this inspection a review of completed documentation packages indicated the tests were being performed and the results were documented.

The team reviewed the procedures associated with testing/calibration program control for tools and equipment and verified their implementation in regard to the associated procedures listed in documents reviewed.

The team verified the following test tools (used in the container maintenance program) were adequately identified and their calibration labels were current:

1. P/N 5039261-001, Fuel Bundle Lifting Fixture
2. P/N 5047048-001, Fuel Bundle Lifting Fixture
3. P/N 5043512-001, Fuel Bundle Lifting Fixture
4. —124, Pressure gage
5. MFG-151, Torque Wrench
6. MFG-147, Torque Wrench

It was also verified that container Shock Indicator Accelerometers (e.g. 233, 268, and 63821) were serialized and had calibration labels. Although some of those accelerometers were still in the containers, and their calibration was not current, they are replaced prior to the container being shipped and that calibration data is recorded on the applicable Route Card. The team noted no discrepancies except for that condition noted later in this section of this report for container # 24.

The team' s review of the various tools and equipment during this inspection indicated they were within the required range and sensitivity requirements and identified with serial numbers that were traceable to the calibrated equipment records.

AREVA Procedures MA-533 "Maintenance of Model B Fuel Assembly Shipping Containers", Revision 04, Paragraph 3.2 and MA-657 "51032-1 Shipping Container Maintenance & Repair," Revision 02, Paragraph 2.0, specify that all fuel assembly shipping containers must undergo a maintenance inspection prior to loading any fuel assemblies.

The team review of various fuel assembly shipping container maintenance records for Model B serial numbers 2, 7, 21, and 24, and Model 51032-1 serial numbers 6228, 6237, 6242, and 6449 indicated the required inspections were performed.

The team selected and verified some of those dimensions specified on the CoC drawings 1273422, 1273426, EMF-309,813, EMF-303,359, and EMF-303,360 including the welding dimensions for containers # 24 (Model B) and # 6228 (Model 51032-1). The inspection results indicated the dimensions were within those acceptance criteria specified in those drawings, with the following exception described immediately below:

> The team inspection of shipping container, Serial # 24 indicated one of four welds were missing from the Aft Cradle Cross Channel (Item 15) to the Shock Mount Frame (Item 17) as shown on drawing 1273425, Rev. 0. It appears that this weld has been missing since the original manufacture of the packaging. In addition, AREVA's review of

immediately available Model B drawings indicated none of those drawings reviewed identified the Cradle Cross Channel to Shock Mount Frame weld joints. As a result of these conditions, AREVA issued Condition Report 2006-1873 and placed a Hold Tag on that particular container. Though these welds and their associated detail do not appear on the CoC drawings for this model packaging, AREVA has, in follow-on actions, located a representative drawing of the area in question and is continuing to assess this concern under their corrective action process.

AREVA could not provide any objective evidence during this inspection for the Failure Trending of Packaging. However, the Container Manager stated that AREVA has been considering the actual format for the metric chart, as well as considering items and /or processes which would be appropriate to use in a trending process/method. The Container Manger stated that AREVA currently discussing the use of the number of WebCAPs (also consider the levels of the individual WebCAP, which would include both AREVA and customer concerns), 71.95 Reports issued to NRC and Part 21 reportability, as well as NRC Violations. Further consideration may include resolution of 71.95 reports in a timely manner and also Requests for Additional Information relative to these reports and general licensing actions. Areva may also identify the number of CoCs that we support including renewals and new packages. AREVA's current rule is to allow 12 months for review of a new package, 6 months for amendments, and 3 months for renewals. A good/bad metric used by AREVA is evaluation of the number of shipment days delayed due to inability to meet the CoC requirements.

The team inspection indicated maintenance hold points were adequately addressed on the applicable Route Cards reviewed. The review also indicated those Hold Points were completed as required. The team's review of those maintenance and repair procedures, listed in documents reviewed, indicated they were adequate for controlling the various shipping containers maintenance program requirements.

The team selected three personnel, noted elsewhere in this report, from an electronic listing (ePTR Document List) to determine if they had received the required training. The results of that review indicated all three individual had received adequate training in the container maintenance program requirements. This training was also evident when observing various container maintenance operations during this inspection. In addition, the team reviewed the Eye Examination (as specified in procedure QC-1415 "Eye Examination-Visual Inspection Personnel," Rev. 10) records for four additional AREVA personnel required to be tested. The results of that review were satisfactory.

The team's review of the container spare parts program as identified in QAP-08 "Product Identification and Traceability," Rev. 0, indicated those parts were adequately identified with the part number. That part number was also traceable to PO's which had recently been transferred from the AREVA Richland facility. However, since most Model 51032-1 parts were furnished by the AREVA Richland facility and that documentation was still being obtained from Richland, not all purchase orders were currently available at the Lynchburg location. Since several parts were selected and the applicable Richland P.O.'s were obtained and reviewed, the inspector was satisfied that the results indicated the maintenance materials traceability program was adequately implemented.

The team review of various procedures, route cards and individual observation of AREVA

maintenance personnel, indicated the applicable container handling requirements were being implemented. The team inspection of the spare parts storage area indicated the parts were adequately protected, placed in storage containers, and segregated by part number.

The team inspection included a review of procedure EMF-S31210 "Container Product Specification 51032-1 Shipping Container," Rev. 0. The review and container inspections indicated the requirements of that procedure were satisfactorily implemented. Although no individual material specification procedure was available for the Model B containers, AREVA stated that due to the age of that model and none were being manufactured, the applicable drawing Bill of Material drawings (e.g.: 1215466 and 1215464E) did identify the component material specification requirements. A review of the various Bill of Materials and applicable PO's for replacement parts indicated compliance with those drawings.

After discussions with AREVA personnel and the review of available drawings, specification, procedures, purchase orders and various product (paints, adhesives, lubricants, neoprene gaskets, etc.) labels, the team could not identify any shelf life product requirements.

Although AREVA could not provide a spare parts inventory list, it appeared that the spare parts in the storage area were adequate to support the container maintenance program. As explained by AREVA personnel, when parts are starting to get low, the Maintenance Technician will notify the planner who will order new parts.

The team review of various maintenance program requirements indicated the required tools and equipment was specified in the applicable Work Instructions e.g. SWI-6900, SWI-6901, SWI-6902, SWI-2517 etc. The maintenance and testing tools and equipment observed by the team during this inspection were adequately identified and in good condition with the exception of one test gauge. The team review indicated the range and sensitivity of those tools examined was satisfactory. Most of the tools were identified with a serial number and current calibration labels. In addition to those tool serial numbers listed below, there are some additional tools that were inspected and found to be satisfactory, e.g.; slings, straps, chains, container tables, cranes, and the transit vehicle being used to move the various containers:

1. —124, Pressure gage
2. MFG-151, Torque Wrench
3. MFG-147, Torque Wrench
4. P/N 5039261-001, Fuel Bundle Lifting Fixture
5. P/N 5047048-001, Fuel Bundle Lifting Fixture
6. P/N 5043512-001, Fuel Bundle Lifting Fixture

Traceability of Maintenance Tools and Equipment
The team review of those maintenance tools and equipment observed during this inspection indicated the traceability of those tools and equipment was satisfactory, based on the calibration records that were reviewed.

The team reviewed associated procedures listed in documents listed below. Those procedures specify the requirements for controlling any out of calibration tools or equipment. Since no out of calibration tools or equipment were observed being used during this inspection the inspector determined that the procedures were adequate.

However the team identified the following issues:

A review of those requirements specified in Standard Work Instruction SWI-6901-03 "Fuel Assembly Packaging" for the 51031-1 container identified the following issue. Element # 36a in that SWI specifies that the pressure relief valve test unit shall have a Calibration Sticker. The team noted that the pressure relief valve test unit had no calibration sticker and was not identified in the AREVA calibration program.

It was also noted that steps completed on Model 51031-1 records for Element 36a had been signed-off although the pressure relief valve test unit was not calibrated. This issue is captured as a violation on the NRC FORM 591 for this inspection. As a result of this issue AREVA issued Condition Report 2006-1891. Follow on actions by AREVA NP has shown that the gauge is within the required tolerance and the gauge has been entered into the AREVA NP Calibration program. Other corrective action measures remain to be completed by the Condition Report 2006-1891 in regard to this issue.

02.06 Observe activities affecting safety aspects of the packaging (such as fabrication, assembly, and testing) to verify that they are performed in accordance with approved methods, procedures, and specifications.

The team noted and as stated by AREVA personnel, that no container fabrication was performed at this facility, only container maintenance. However, when inspection of maintenance activities occurs during an inspection some portions of this inspection area and the associated activities provides a basis for the inspector to determine how fabrication and assembly might occur if required.

The team's inspection indicated maintenance hold points were adequately addressed on the applicable Route Cards listed in documents reviewed. The review also indicated those Hold Points were completed as required. The team's review also included review of those maintenance and repair procedures, listed in documents reviewed below, and determined that they were adequate for controlling the various shipping containers maintenance program requirements.

02.07 Review selected drawings and records, and interview selected personnel, to verify that the procurement specifications for materials, equipment, and services received by the QA Program holder meet the design requirements.

In the area of materials procurement, the team inspection indicated container spare parts were being purchased. The team reviewed the Purchase Orders listed in documents reviewed below. Those purchase orders identified the material specification requirements listed on the applicable drawing Bill of Material. The team also reviewed Procedure 0412.75, Rev. 5 "Dedication of Commercial Grade Items", which applies to Part 71, as noted under section 6, step 6, step 6.1.2.

This procedure also references procedure 0412-59 (rev 14) titled: "Engineering Information Record/Technical Data Record" which defines the actions to prepare and process the engineering information recorded. The record defines the method or technique to be used in an engineering evaluation. The evaluations for two shipping containers were reviewed. Document

51-5050869-00 for Model 51032-1 & 51-121181147-04 for Model B shipping container.

The team also reviewed the Richland, EHS & L Document, E17-04-001, version 2.0, licensed packaging component classification with regard to importance to safety. This document provides listings in the form of a matrix for each transportation packaging under Richland's control. (Note: some CoCs listed as "primary" for Lynchburg are now controlled by Richland.) These changes are to be recognized by NRC/SFPO licensing under progress from AREVA NP licensing submittals. This document along with the procedures noted above provides adequate controls for a graded approach to quality in regard to transportation packagings which Areva NP has been designated "primary" design holder/controller.

The inspector determined that the collective use of the reviewed documents and listing provides an adequate dedication process and procurement control. Purchase orders reviewed and compared to AREA NP's approved supplier listing indicated that suppliers were adequately identified as approved on the listing.

02.08 Review selected records and interview selected personnel to verify that a nonconformance control program is effectively implemented, and that corrective actions for identified deficiencies are technically sound and completed in a timely manner.

The AREVA corrective action management program was reviewed and found to be an adequately implemented program. The WebCAP system is used to assure all condition reports (CRs) are managed until all required reviews, root cause analysis and corrective actions are accomplished. Fuel America Administrative Procedures Manual, Procedure No. 1703-76, Rev.03, "Issue Investigation and Causal Analysis Procedure, 01/06/2006 provides guidance for formal issue investigation. Fuel America Administrative Procedures Manual, "Fuel America Corrective Action Program", Procedure No. 1703-77 12/02/05, Revision No. 10 provides guidance for the Corrective action program.

CRs are initiated to document issues requiring review. CRs are classified as Level 1 (highest cost and risk) to Level 4 (addressing smaller issues). The methods and strategies in place to assure closure of CRs in a timely manner was reviewed and found to be adequate. It was noted that a large number of CRs were open. However, the mix of CRs - small number of Level 1 CRs and majority of CRs being level 3 and 4 were as expected to be seen in a well working corrective action management program. AREVA is moving to place more emphasis to individual teams to assure closure. Metrics are in place which trend and track the CRs by rank (Levels 1 - 4) to time open. More emphasis is being placed on assuring individual teams and personnel actively work to close CRs. The WebCAP system is providing a set of documents and records for actions related to each CR.

Nonconformance controls were reviewed and overall, they were found to be adequately accomplished in accordance with AREVA procedures. Fuel America Administrative Procedures Manual, "Fuel America Corrective Action Program", Procedure No. 1703-77 12/02/05, Revision No. 10 provides the guidance for documenting and managing nonconformances. Nonconforming equipment, components and receipt inspected items are tagged out. Nonconformances are documented in a CR. The computer application used is the WebCAP system. A sample of CRs were selected and reviewed to assure all required tagging, root cause analysis and actions (such as changing procedures, routing documents, inspection

methods, etc..) were accomplished.

One followup action performed by the inspection team was of the CoC holder's 10 CFR 71.95 Report of Non-Compliance with CoC USA/9203/AF, revision 13, for the Model DHTF Package. The CoC holder, AREVA NP, identified a non-compliance with CoC for USA/9203/AF, Rev 13, wherein the licensee received on May 31, 2005, a shipment of pellets in DHTF and BW-2901 containers and found that the DHTF container did not have a stainless steel (SS) spacer plate between two layers of pellet boxes. The SS spacer plate was missing only in one DHTF container (#146). Condition 6 of the CoC for this container requires that each package must have a SS spacer plate positioned between pellet boxes, as shown on FCF Drawing No. 1249874E, Rev 4.

Although the loading procedure for DHTF containers, SOP-40078 V4.0, Section 7.0, step 4, requires that a stainless steel spacer plate be placed between two layers of B-Boxes in a DHTF container, there was no check list to be checked-off by the packing staff prior to closing the containers.

The licensee considered this as a not-significant-to-safety issue. However, the licensee revised loading procedure, SOP-40078, V5.0, and included a new requirement at Section 7.0, Step 8 to verify that a SS spacer plate is placed between two layers of pellet boxes in DHTF containers. In addition, the licensee revised Controlled Form FRM-20169 version 1.0 to provide a step for checking-off after verifying that a SS spacer plate is placed between two layers of pellet boxes in a DHTF container.

The staff verified both procedure SOP-40078, V5.0 and Controlled Form FRM-20169, V1.0 to ensure that there are provisions to verify placement of SS spacer plate between two pellet boxes in packing a DHTF container for shipment. The staff considers this license identified non-compliance issue to be closed.

On May 16, 2005, NRC/SFPO performed an inspection of Framatome-ANP, Richland, WA. From this inspection a notice of violation was issued based on multiple occasions over an indeterminate time period, welding was performed on shipping containers with weld filler material that did not meet the requirements for release in that the weld material traceability had not been determined prior to use. Further, the work was performed without an approved procedure for control of welding activity. AREVA initiated CR 2005-2009 for the issue found by NRC at the Richland facility. The CR was generated to address the weld wire traceability concern. The CR 2005-2009 was closed at the Horn Rapids Road facility at Richland, WA.

In response to the above NRC notice of violation, CR 2005-2149 was created by Fuel America (FA), the licensee. This required review of container repair records and procedures (mostly welding) for work performed at both Richland, WA, facility (HRR facility) and Lynchburg, VA, facility (MAR facility). Model B and 51032-1 containers were repaired at both facilities; mostly 51032-1 at HRR facility and Model B at MAR facility. This CR 2005-2149 initially covered both Model B and 51032-1 containers. However, resolution of Model B containers is followed through in three children CRs,; CR 2005-2392, CR 2005-2393, and CR 2005-2603. Resolution of 51032-1 containers is addressed in CR 2005-2149 and 2006-1930. The scope of resolution involved review of documentation pertaining to Release Records for weld filler material (traceability issue), weld filler material quality, and providing a basis for accepting welding work-

some by qualified workers and in a few instances by non-qualified workers.

CR 2005-2149: As a result of the CR, stop-shipping order was issued for model 51032-1 containers. Eighty model 51032-1 containers were repaired at the HRR facility and repair records were reviewed by Container Process Engineer at the HRR facility. They were able to provide Release Record for weld filler material wire to address its traceability concern. The weld filler wire Release Record documentation (weld wire lot 55029) is in CR-10007. The tags for two weld wire lots, 55029 and 55030, were interchanged by mistake and this resulted in this lack of traceability issue. The licensee provided CR-10007 documentation supporting weld wire traceability. This documentation supported the removal of stop shipping order for 73 out of the 80 containers covered by this CR. The staff has reviewed the licensee documents for addressing the weld wire traceability concerns for 51032-1 containers and is satisfied with the resolution of 73 of the 80 Model 51032-1 containers identified in CR 2005-2149. For lack of availability of repair records, the remaining seven containers are scheduled to be inspected. Two action items were created for these seven red-tagged 51032 containers - (1) place hold tags on containers with serial numbers 6136, 6233, 6235, 6240, 6458, 6470, and 7131; (2) a component disposition CR to be written to address the disposition process for the seven containers. It is noted that this CR was closed with three signatures as per procedure no. 1703-77, "Fuel America Corrective Action Program," revision 10 , dated 12/02/05 whereas, only Action item 1 has been completed. The remaining action under processing under item 1 will occur at the time when additional AREVA procedures are implemented to ship any material in any of the red tagged containers. Multiple processes are in place at AREVA to ensure that no packaging container is used without being inspection to determine that the packaging meets the associated CoC. Action item 2, inspection for component disposition has not been scheduled yet. Action item 2 will be tracked under CR 2006-1930.

CR 2005-2392: The Document Tube caps welded to Model B containers did not comply with licensing Drawing 02-1273427B-00, Note 1, which states all container welding must be in accordance with ASME Section IX. Specifically, there is no weld filler material traceability. About 30 containers had this non compliance condition. The licensee reviewed records and located documentation to support traceability of weld filler material which included - (1) Weld Control Record (WCR), (2) Welder Performance Qualification (WPQ), (3) Actual Weld Material Test Certificate, and (4) Welding Procedure Specification (WP1/1/F6AW1-02). The staff reviewed these and find that actual weld material specifications (AWS 5.18 ER70S-2; ASME SFA 5.18 ER70S-2), WCR, WPQ, and Welding Procedure all together supported closure of CR 2005-2392.

CR 2005-2393: Model B containers Serial No. 4,14,and 25 did not have retrievable welder operator qualification records. Model B container No. 21 had no retrievable shell repair records. Model B No. 22 has an incomplete Deviation Report, DR No. 101-5724 which was for repairing toggle handle. These affected requirements as per Drawing 02-1273427B-00, Note 1. In the absence of supporting documents the licensee decided to rework the containers and restore them to compliance with the drawings. Required authorization documents for this rework - ER-418 (special instruction form), PA 83-5067577, and Routing Card R-11924 were prepared for each container. The rework CR has been signed by three officials. The staff review of the documents supported the licensee's closure of CR 2005-2393.

CR 2005-2603: The issues identified in CR 2005-2149, traceability of weld wire and welding,

are followed in CR 2005-2603 for Model B containers refurbished at MAR facility. Model B containers serial numbers 04, 14, and 25 were found to have been welded by a unqualified welder, and container serial numbers 02, 03, 05, 07,15,22, 27, and 38 did not have weld control records and filler metal slips. Three containers 04, 14, and 25 were reworked as per the revised procedure PA83-5067577 which required welding as per the drawings 02-1273422B-00 through 02-1273427B-00. The codes and standards identified in the revised procedure are acceptable. These three containers were reworked and brought back to an acceptable condition to release them for shipping. The other seven containers' repair records were reviewed by AREVA NP engineering staff cognizant of the ASME section IX and AWS requirements and found them to be acceptable, as documented in a letter of July 19, 2005. Based on these two actions, CR 2005-2603 is considered closed.

02.09 Review selected records and procedures, interview selected personnel, and observe selected activities affecting the safety aspects of the packaging to verify that individuals performing activities affecting quality are properly trained and qualified, and to verify that management and QA staff are cognizant and provide appropriate oversight.

The team verified personnel training records for three AREVA personnel who were involved in the implementation of the container maintenance program. The records reviewed were found to be acceptable.

The team reviewed training records for three packaging operators. The inspector noted the listing of training for each employee was extensive and included quality and lower tier operating and maintenance procedures.

All personnel interviewed during dimensional verifications and packaging inspection were very knowledgeable and used appropriate procedures during witnessed work activities.

The team noted from document reviews and personnel interviews that the requirements of procedure 1702-22 rev, 26 "Employee Training" and QC-1440, rev. 18 " MAR site training activities" have been met.

The team reviewed procedure 1719.31 rev. 02, "management review of fuel America quality system" as well as the last mid year management review dated 10/26/05. The inspector noted that currently AREVA NP has chosen to perform this review twice a year as opposed to the procedurally required annual review.

The report was well written and thorough. The report provided information as required by the procedure (1719.31) and appeared to aggressively address action required through specific assignments to individuals with designated due dates.

02.10 Verify that audits of the QA Program and activities affecting the safety aspects of the packaging are scheduled, have been performed as scheduled, and that identified deficiencies have been satisfactorily resolved in a timely manner.

The team reviewed the AREVA NP Fuel Sector Quality Management Manual, Revision 2, Attachment 2, "applicability of ANSI Standards and Regulatory Guides", Item No. 7, regarding applicability of ANSI N 45.2.12 in reference to performance of both internal and external audits,

basing frequency on the importance and status of the organization/area being audited.

The team also reviewed AREVA NP Procedure 1719-23, rev. 16, "Qualification of Quality Assurance Audit Personnel". The inspector compared lead auditor certifications for five personnel with the AREVA NP procedural requirements. All personnel reviewed met the qual/cert requirements of AREVA NP Procedure 1719-23, rev. 16.

The team reviewed vendor audits, Audit # 02:72 & associated audit findings 02:72-01 & 02:72-02 and Vendor audit 04:52 which had no findings or observations. Both vendor audits covered all 18 quality criteria. Findings were adequately tracked.

The team reviewed the audit of Columbiana Hi Tech (The inspector also verified that the vendor was approved as a supplier to AREVA NP) who was last audited by AREVA NP on January 10 & 11, 2006. The audit is documented in audit report 06-01. The inspector noted that the audit was performed at Columbiana HI Tech facility located at 1802 Fairfax Road, Greensboro, NC 27419 and resulted in no findings, no observations, or no comments. The inspector noted from the review that the audit checklist was comprehensive. The audit was performed under guidance of AREVA NP Procedure 1719-25, rev. 10 "Fuel America Supplier Quality Evaluations Audits". The audit report preparation was completed on 2/3/06 and approved on 2/3/306 by the manager, Lynchburg fuel site quality.

The team also reviewed the 2005 & 2006 supplier audit schedules (PSG:05:016 & PSG:06:012), both schedules are acceptable and meet requirements of AREVA NP procedure 1719-25, rev. 10, "Fuel America Supplier Quality/Evaluations and Audits".

The team also reviewed NUPIC audit (2005-0120) #192 50. The audit appeared to be thorough and provided a listing of two observations with seven examples of the second observation (lacking attention to detail). Six of the seven examples did not pertain to the control transportation activities and the seventh noted as a minor error in document distribution dates.

The team also reviewed AREVA NP internal audit 055:64 (12/16-01/27/06) resulting in 2 findings and 12 comments. The audit covered all 18 QA criteria. The team noted that corrective actions were captured in the Webcap system and addressed according to the associated AREVA NP procedures. Overall the implementation of the audit planning, performance and associate corrective action was adequate.

Documents reviewed during the inspection and personnel contacted:

Certificates of Compliance:

Certificate of Compliance No. 6206, Revision 30, Docket No. 71-6206, Package ID USA/6206/AF, Model No. B

Certificate of Compliance No. 6581, Revision 12, Docket No. 71-6581, Package ID USA/6581/AF, Model 51032-1

Certificate of Compliance No. 9251, Revision 12, Docket No. 71-9251, Package ID USA/9251/AF, Model No. BW-2901

Certificate of Compliance No. 9289, Revision 3, Docket No. 71-9289, Package ID USA/9289/B(U)F-85

Drawings:

EMF-309, 813, Sheets 1 & 2, Revision 2,
EMF-303, 359, Revision 7,
EMF-303, 360, Revision 6,
EMF-303,898, Revision 5, and
EMF-300, 607, Revision 3
1215464 E, Revision 1.
1215466 E, Sheets 1-4, Revision 1
1215542, Revision 1
1215599 Revision 5
1273422 through 1273427, Revision 0,
1273575, Revision 0,
1273577, Revision 0,
1273568, Revision 0,
1273574, Revision 0,
1273576, Revision 0,
1273964, through 1273968, Rev. 0
208J004, Revision 10, (Container Research Drawing) :Shock Mount Frame," Section B-B
5016270, Revision 1, WE-1 Configuration
5018889 Revision 2, BW 2901 Shipping Container Lid Clamp Upper Clamp Housing
5018890 Revision 2, BW 2901 Shipping Container Lid Clamp Housing
5018891 Revision 2, BW 2901 Shipping Container Lid Clamp Pivot Boss
5021426, Revision 0, WE-1 Pathfinder Canister (License Drawing), Sheets 1 and 2

Procedures/Manuals/Policies reviewed:

Corporate Policy 0401, "Reporting of Defects and Non-Compliances Concerning Substantial Safety Issues"

EMF-S31210 "Container Product Specification 51032-1 Shipping Container," Revision 0

Engineering Information Record Document 51-1218147-04 "Model B Shipping Container Part Safety Classification," Revision 04

EHS &L Document E17-04, 001 "Licensed Packaging Component Classification With Regard to Importance to Safety," Version 2.0

ER-418 "Refurbishment of Model B Shipping Containers," Rev. 3.

Framatome ANP Fuel Sector Quality Management Manual, Revision 2, 01/01/06

Fuel America Administrative Procedures Manual, "Design Review Boards", Procedure No. 0405-22, Revision 21, 06/20/05

Fuel America Administrative Procedures Manual, "Design Control," Procedure No. 0405-40, Revision 09

Fuel America Administrative Procedures Manual, "Design Specification Requirements", Procedure No. 0412-55, Revision 25, 06/20/05

Fuel America Administrative Procedures Manual,"Engineering Information Record/Technical Data Record, Procedure 0412.59, " Revision 14

Fuel America Administrative Procedures Manual, "Dedication of Commercial Grade Items," Procedure 0412.75, Revision 5

Fuel America Administrative Procedures Manual, "Employee Training," Procedure 1702-22, Revision 26

Fuel America Administrative Procedures Manual, Revision 03, "Issue Investigation and Causal Analysis Procedure," Procedure No. 1703-76, 01/06/2006

Fuel America Administrative Procedures Manual, "Fuel America Corrective Action Program", Procedure No. 1703-77, 12/02/05, Revision No. 10

Fuel America Administrative Procedures Manual, "Change Management Plan", Procedure No. 1703-78, Revision 02, 01/06/06

Fuel America Administrative Procedures Manual,"Fuel Communications", 8/31/05, Procedure No. 1703-80, Revision No. 01

Fuel America Administrative Procedures Manual, "Evaluating and Reporting Safety Significant Issues," Procedure No. 1707-01,

Fuel America Administrative Procedures Manual, "Qualification of Quality Assurance Audit Personnel," Procedure 1719-23, Revision 16

Fuel America Administrative Procedures Manual,"Fuel America Supplier Quality/Evaluation Audits," Procedure 1719-25, Revision 10

Fuel America Administrative Procedures Manual, "Management Review of Fuel America Quality System," Procedure 1719-31, Revision 2

MA-269, "Fuel Assembly Packaging, Shipping, and Container Storage at Site," Revision 07.

MA-292, "MK-BW and MK-B Fuel Assembly and Cage Assembly Packaging, Shipping, and Container Storage," Revision 27

MA-533, "Maintenance of Model B Fuel Assembly Shipping Container," Revision 04

MA-657, "51032-1 Shipping Container and Repair," Revision 2

MA-658, "Unloading, Loading, and Handling of 51032-1 Shipping Containers," Revision 4

Procedure 55-WCP 04-14 "Weld Control Procedure." Revision 14

Procedure 55-WPI/1/1/F6 AW1-004 "Weld Procedure Specification," Revision 4

Procedure- WP1/1/F4 AW2-06 "Weld Procedure Specification," Revision 6

QAP-06, "Purchasing," Revision 01

QAP-08, "Product Identification and Traceability," Revision 0

QAP-11, "Control of Inspection, Measuring and test Equipment," Revision 03,

QAP-13, "Control of Non-Conforming Product, Corrective Action, and Preventive Action"

QC-800, "Gage Control," Revision 39

QC-968, "General Requirements for Inspection Operators," Revision 11

QC-1405, "Control of Measuring & Test Equipment," Revision 07.

QC-1415, "Eye Examination-Visual Inspection Personnel," Revision 10

QC-1440, "MAR Site Training Activities," Revision 18

SOP-40078 V4.0, Packing, Shipping and Receiving of UO2 Pellets in DHTF and BW-2901 Shipping Containers, Version 4

SOP-40078 V5.0, Packing, Shipping and Receiving of UO2 Pellets in DHTF and BW-2901 Shipping Containers, Version 5, Posted on Documentum on 7/12/2005.

SWI-6900, "51032 Shipping Container Fuel Assembly Un-packing," Revision 2

SWI-6901, "51032 "Shipping Container Fuel Assembly Packaging," Revision 3

SWI-6902, "51032 Shipping Container - Fuel Container Refurbishment," Revision 2

Purchase Orders:

PO 4600001095 to M & M Bolt Company
PO 4600001476 to Valley fasteners
PO 4600001478 to BMG Metals

Route Cards:

RC-11897-08, Container Serial # 7
RC-12010-14, Container Serial # 21
RC-12361-02, Container Serial # 6242
RC-12296-11, Container Serial # 6242
RC-12296-11, Container Serial # 6449
RC-12296-11, Container Serial # 6237

Personnel contacted:

Shipping Container Manager
Q/M Technical Advisor
2 Manufacturing Technicians
QA Technician/Document Control
Procurement Planner
Supervisor Uranium Products Center
M&TE Technician
Supervisor Support Services
Quality Engineer
Process Engineer
Configuration Management Supervisor
ESH&L Manager
3 Design Engineers