

June 23, 2011

Mr. William Arnold
President
Century Industries
522 Princeton Road
Johnson City, TN 37601

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION (NRC) INSPECTION REPORT
NO. 71-0947/2011-202 AND NOTICE OF VIOLATION

Dear Mr. Arnold:

This letter refers to the team inspection conducted by the U.S. Nuclear Regulatory Commission (NRC) on April 19-21, 2011, at Century Industries (CI) facility located in Johnston City, TN. The purpose of the inspection was to assess CI's progress in addressing observations identified in a previous inspection conducted on July 20-23, 2010. The specific concern was that NRC inspection of CI's NRC-approved Quality Assurance (QA) program, as implemented at that time, did not meet the NRC's QA program requirements contained in Part 71 to Title of Code of Federal Regulations (10 CFR Part 71). Currently, CI has an NRC Certificate of Compliance (CoC) No. 71-9342, Revision 4, for the Model Nos. Versa-Pac 55 and 110 transportation packages. The enclosed report (Enclosure 1) presents the results of this inspection.

The NRC inspection team assessed that, overall, CI's implementation of its NRC-approved QA program was adequate. However, CI's continued non-compliance with certain aspects of its QA program remains a concern in the functional areas of its QA program that formed the basis for NRC approval of the program. The team determined that CI's implementing procedures for the Versa-Pac shipping container need further development and strengthening, particularly with regard to CI's QA organization and independence of personnel who verify that an activity is performed correctly.

Based on the results of this inspection, the NRC has determined that one (1) Severity Level IV violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) (Enclosure 2) and the circumstances surrounding it are described in detail in the subject Inspection Report. The violation is being cited in the Notice because it was identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, and its enclosures, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

Eric J. Benner, Chief
Rules, Inspections, and Operations Branch
Licensing and Inspection Directorate
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-0947

Enclosures: 1) NRC Inspection Report No. 71-0947/2011-202
2) Notice of Violation (Notice)
3) Closure of Confirmatory Action Letter (CAL) NMSS 2010-001

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NAME:	ELove		MDeBose		EBenner	
DATE:	6/23/2011		6/23/2011		6/23/2011	

**U.S. NUCLEAR REGULATORY COMMISSION
Office of Nuclear Material Safety and Safeguards
Division of Spent Fuel Storage and Transportation**

Inspection Report

Docket: 0710947

Report: 071-0947/2011-202

Certificate Holder: Century Industries
522 Princeton Road, Building 3
P.O. Box 17804
Johnson City, TN 37601

Date: June 19-21, 2011

Inspection Team: Earl Love, Team Leader, SFST
Jim Pearson, Senior Inspector, SFST
Clyde Morell, Safety Inspector, SFST
Pierre Saverot, Project Manager, SFST

Approved by: Eric J. Benner, Branch Chief
Rules, Inspections, and Operations Branch
Licensing and Inspection Directorate
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety and Safeguards

EXECUTIVE SUMMARY

REPORT DETAILS

1.0 Inspection Scope and Background

On October 13, 2009, Century Industries (CI) submitted an application for approval of the Versa-Pac packages (Model Nos. 55 and 110).

On February 23 and 24, 2010, an NRC inspection team (team) performed an initial inspection of the implementation of CI's Quality Assurance (QA) program (Inspection Report No. 71-0947/2010-201, ADAMS Accession No. ML100880204) before issuance of a Certificate of Compliance for the Versa-Pac 55 and 110 transportation packages and fabrication of the packages. The team determined that CI had not effectively implemented programmatic controls in significant portions of the functional areas of its QA program. While the team's observations did not identify any safety concerns, the team identified numerous instances where CI's QA program was not properly implemented.

On April 14, 2010, CI participated in a management meeting with representatives from the Division of Spent Fuel Storage and Transportation (SFST) within the Office of Nuclear Material Safety and Safeguards (NMSS), to discuss these concerns (ADAMS Accession No. ML101170559) and to present the CI corrective actions taken to date. As a result of that meeting, the NRC issued Confirmatory Action Letter (CAL) NMSS-2010-001 (ADAMS Accession No. ML101720312), in part, due to CI's inability to effectively implement programmatic controls in the functional areas its QA program that formed the basis for NRC approval.

On June 15, 2010, the NRC Staff issued CoC No. 71-9342 for the Versa-Pac 55 and 110 packages, concluding that the package design met all applicable 10 CFR Part 71 design standards.

On July 20-23, 2010, the NRC performed a second follow-up inspection prior to fabrication and to assess corrective actions taken to the observations identified during the February 2010 inspection. In addition, the inspection team evaluated CI's actions taken in response to the CAL. The inspection noted examples of continued lack of adherence to procedures and ineffective corrective actions taken in response to observations identified during the February 2010 inspection. As a result, the conditions of the CAL still applied in that CI remained restricted from conducting fabrication activities until such time as they demonstrate their ability to effectively implement programmatic controls in the functional areas of its QA program.

On September 10, 2010, CI participated in a second management meeting with representatives from SFST to discuss these concerns (ADAMS Accession No.: ML101170559) and to present the CI corrective actions taken to date to previous inspection findings. The purpose of the meeting was to provide CI with an opportunity to discuss the reasons for the inadequate implementation of its NRC approved QA program, and the actions it has taken to assure its full and proper implementation prior to packaging fabrication.

On September 28-30, 2010, the NRC performed a third inspection to continue to assess corrective actions taken to the programmatic issues identified in the February and July 2010 inspections. The team determined that some corrective actions were acceptable and others

needed continued enhancements. Further, the team determined that the CAL would remain in effect until such time that all the action items have been addressed.

1.1 Inspection Procedures/Guidance Documents Used

IP 86001, "Design, Fabrication, Testing, and Maintenance of Transportation Packagings,"
NUREG/CR 6314, "Quality Assurance Inspections for Shipping and Storage Container,"
Regulatory Guide 7.10, "Establishing Quality Assurance Programs for Packaging Used in the
Transport of Radioactive Material."

1.2 List of Acronyms Used

AFT	American Foam Technologies
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Materials
AVL	Approved Vendors List
AWS	American Welding Society
B&W	Babcock & Wilcox
CI	Century Industries
CAL	Confirmatory Action Letter
CAR	Corrective Action Report
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
GTAW	Gas Tungsten Arc Weld
METS	Montgomery Engineering Technical Services
NR	Nonconformance Report
NDE	Nondestructive Examination
NIST	National Institute of Standards and Technology
NMSS	Nuclear Material Safety and Safeguards
NRC	U.S. Nuclear Regulatory Commission
PO	Purchase Order
QA	Quality Assurance
QAM	Quality Assurance Manual
QAP	Quality Assurance Plan
QC	Quality Control
SAR	Safety Analysis Report
SCAQ	Significant Condition Adverse to Quality
SFST	Spent Fuel Storage & Transportation
SOP	Standard Operating Procedure
WPQ	Weld Procedure Qualification
WPS	Weld Procedure Specification

1.3 Persons Contacted

The team held an entrance meeting with CI on April 19, 2011, to present the scope and objectives of the NRC inspection. On April 21, 2011, the NRC held an exit meeting with CI to present the final inspection results. The individuals present at the entrance and exit meetings are listed below in Table 1.

**Table 1
Entrance and Exit Meetings Attendance**

NAME	AFFILIATION	ENTRANCE	EXIT
Earl Love	NRC	X	X
Jim Pearson	NRC	X	X
Clyde Morell	NRC	X	X
Pierre Saverot	NRC	X	X
William Arnold	CI	X	X
Andrew Sallee	CI	X	X

2.0 Management Controls

2.1 Nonconformance Controls

2.1.1 Scope

The team reviewed selected records and interviewed selected personnel to verify effective implementation of the nonconformance control program, and that corrective actions for identified deficiencies from the previous NRC inspections were proper and completed in a timely manner.

2.1.2 Observations and Findings

The team reviewed five (5) Nonconformance Reports (NR's) and noted that three (3) were dispositioned "Use-As-Is." The team noted the lack of a technical basis and/or supporting evidence from a CI qualified individual for final acceptance. During a follow-up inspection, the team noted the addition of repair, Use-As-Is, rework, and scrap definitions within SOP 9.1, Revision 4, "Nonconforming Items and Corrective Action," dated 09/29/2010. The team determined that enhancements were made to clearly define acceptable methods by which nonconforming items are identified, dispositioned and documented (Corrective Action Report (CAR) 1010).

The team noted that once corrective actions are taken in response to an NR, final closure to assure appropriate resolution of identified adverse conditions does not occur and that the SOP does not prescribe the determination process or method to evaluate Significant Conditions Adverse to Quality (SCAQ) and is missing a requirement to trend and track conditions adverse to quality in order to preclude repetition (CAR 1012).

The team reviewed CI's response to CAR 1012 and noted NR's have been properly documented to include a technical basis. The team noted that CAR's that were prematurely closed were re-opened to make the necessary corrections to assure appropriate resolution of identified adverse conditions. In addition, the team noted, CI has prescribed activities to address SCAQ as part of its trend analysis at 3 month intervals as defined by SOP 9.9, Revision 2, dated 08/4/2010, "Nonconformance Accountability, Trending, and Evaluation."

The team reviewed the procurement and Approved Vendor List (AVL) procedures and interviewed the CI's purchasing agent and the QA manager as applicable to training and expectations concerning procedural changes. The team verified completion of training by both

individuals. The team reviewed samples of the CI outline directory, session records (Form D50), individual training records (Form D51), and indoctrination or training session outlines (Form D52) as well as CI's SOP 1.1, Revision 1, "Indoctrination and Training." The team discussed the procedural requirements regarding development and completion of Form D52. The team noted adequate training and completion of the forms, as required.

2.1.3 Conclusions

The team assessed that CI's response to issues identified in 2010 inspections were adequate, and that overall, CI's controls for nonconformances satisfy the requirements of 10 CFR Part 71, Subpart H.

2.2 Documentation Controls/Records

2.2.1 Scope

The team reviewed applicable instructions, procedures, and drawings to assess the adequacy of CI's corrective actions to issues identified from the previous NRC inspections.

2.2.2 Observations and Findings

Quality Assurance Manual (QAM), QA-1 Revision 2, Section 1.0, "Quality Assurance Organization," describes CI's organization currently being implemented. The team noted that CI's QA manager has the overall responsibility for establishing and enforcing the QA program. The organization of the CI program includes engineering (under direction from the president), operations, production, QA organization, and purchasing. The team noted that QAM, Section 1.2.4, defines the roles and responsibilities of the QA manager. Such tasks include but are not limited to the establishment of a QA plan (QAP), preparation and qualification of welding procedures, qualification of welders, and qualification of personnel for Inspection, Nondestructive Examination (NDE) and auditing.

The team reviewed Versa-Pac shipping container QAP, QA-8, Revision 2, dated 04/23/2010 and verified that the QAP accurately describes the methods, responsibilities, and procedures associated with the manufacture of Versa-Pac shipping containers. The team noted that the QAP satisfactorily provides evidence of assuring compliance with requirements of Safety Analysis Report (SAR) and CI's QA program. The team noted appropriate requirements and methods within the QAP assuring adequate controls in drawing configuration, fabrication, material (including purchasing), special processes, as well as inspection and test. In addition, the team noted provisions to assure compliance to manufactured items such Polyurethane Insulation, Drum, and Primary Structural Container. Lastly, the team noted prescribed pre-production QA requirements included fabrication control records, identification of sub-vendors, personnel certifications and procedure qualifications in the areas of welder/welding and NDE, equipment certification and calibration, processing of nonconformance's, hold and witness points, and final package inspection and certification.

The team reviewed qualification records of CI's interim QA manager and noted that that the individual was proficient in quality management as evidence by his record of work history and 30 years experience in QA/QC in the nuclear and commercial industry. The team reviewed the individual's credentials and previous qualifications in the disciplines of inspection, auditing, and quality management. In addition, the team reviewed the individual's current lead auditor

certification summary report as originated by CI and noted that qualification records were incomplete (CAR 1013).

The team noted that CI's QA manager is essentially absent the majority of the time from the ongoing activities. In place of the QA manager's action, the President and/or the Quality Control (QC) inspector have indicated they are conferring with the QA manager by phone and then the CI QC Inspector signs for the QA manager as needed for approval. The team noted that the CI program has no description of delegation for the QA manager's responsibilities or actions. Consequently, since the QA manager is only present at the CI facility one or two days per month according to the CI President. The failure of CI to provide independence of personnel who verify that an activity is performed correctly is a Violation of 10 CFR 71.111 and is one of the examples cited in the enclosed Notice (Enclosure 2).

The team's assessment of CI's SOPs identified adverse trends in the implementation of CI's quality program. CI has since reviewed and updated their SOPs accordingly. The team reviewed CI's revised procedures to assure adequate corrective actions. The team noted that a number of SOPs were verified to include updated text. However, the team noted that certain SOPs still have exclusion(s), and inaccurately identified and/or numbered forms. CI initiated CAR 1016 to assess the need for additional details to the requirements within the SOP. In addition, a review of sample forms attached to the original SOPs noted inadequacies that have since been corrected. Further, CI has reviewed all SOPs and made the corrections, as necessary to correct observed inadequacies.

2.2.3 Conclusions

Concerns continue to be noted regarding CI's implementation of its QA program through written procedures. The team assessed that CI has made progress in addressing the issues by strengthening various procedures. However, given that many of the program and procedure changes were recent, and that other changes were still to be implemented, a comprehensive assessment of CI's progress in addressing all of the programmatic issues could not be made until such time as the majority of changes had been implemented for a meaningful period of time.

2.3 Audit Program

2.3.1 Scope

The team reviewed CI's audit program to determine whether plans, procedures, and records were available. The team determined whether CI scheduled and performed internal QA audits and vendor audits in accordance with approved procedures; whether qualified, independent, personnel performed the audits; and whether CI took appropriate follow up actions in those areas found to be deficient.

2.3.2 Observations and Findings

The team noted CI's reliance on the vendor's past performance and reputation in the industry was used as a basis for AVL approval. The team noted the use of survey checklists and questionnaires as documented evidence for qualifying suppliers. As a result, the team noted weaknesses (e.g., missing forms as required by procedure, lack of objective evidence in support of the vendor's basis of approval, and/or CI's failure to annotate any limitations and/or restrictions, as applicable) in CI's performance of surveys (CAR 1017). During a follow-up

inspection, the team noted adequate corrective actions by CI in the performance of vendor surveys.

The team reviewed four (4) of CI's purchase orders (POs) of various components (i.e., foam, blind nuts, and plate material). The team noted that the items ordered were from suppliers that have been surveyed and approved. In all cases the purchase orders contained appropriate quality and technical requirements including 10 CFR Part 21 report ability requirements.

The team noted that CI procured production weld wire as a general shop item in an open agreement with an unapproved supplier. In lieu of an important to safety quality PO and receipt inspection, traceability was verified to be maintained through the recording of heat numbers on fabrication control records. The team noted that CI recently instituted a process of directly purchasing the welding materials as a quality item, has performed a vendor survey of the supplier, and incorporated them on to their AVL.

2.3.2 Conclusions

Overall, the team assessed that CI's control of the vendor survey process has improved, since the last NRC inspection, due to recent procedure enhancements. The team noted both internal and external audit planning and scheduling were adequate in addressing both CI SOP requirements and applicable requirements of 10 CFR Part 71, Subpart H. One exception, which is cited in the attached Notice, is CI's failure to adequately assure independence of personnel who verify that an activity is performed correctly.

3.0 Design Controls

3.1 Design and Modifications

3.1.1 Scope

The team interviewed selected personnel and reviewed selected design documentation to determine if adequate design controls were implemented. The team reviewed selected drawings, procedures, and records, and observed selected activities to determine if fabrication, test, and maintenance activities met design specifications identified in the Safety Analysis Report (SAR) and CoC.

3.1.2 Observations and Findings

The team noted that design interface efforts and design verifications had not been properly performed according to procedure and that the assignment of appropriate responsibilities to participating groups was lacking and signature on records attesting to adequate checking of the design under review was incomplete. CI performed a document review of the SAR checklist to correct the missing information in the design review documents (CAR 0005). As a result, CI determined that a purchase order was needed that assigned responsibilities specific to technical and engineering services utilized for design input, change verification, and interface.

Subsequently, the team noted that CI has appropriately documented and controlled design interface efforts such that all participating organizations shall have responsibilities assigned and procedures established. In addition, the team verified that those responsibilities among participating design organizations (e.g., subcontracted engineering services and quality assurance) have been clearly defined and that records of design input performed by

Montgomery Engineering Technical Services (METS) are complete for checking the adequacy of the design.

The team reviewed CI design drawing CI-55VP-001, "Fissile Material Shipping Container (55 GAL)," for compliance to SAR, Revision 3, and Certificate of Compliance (CoC) No. 71-9342, Revision 0. Further, the team reviewed CI's Approved Vendor List (AVL) specifically to evaluate METS's status and basis for approval. The team noted that approval was based on the performance of an in-office survey specific to education, industry experience, reputation and past performance, as well as, QAP, Revision 2, dated 04/15/04. In addition, the team noted references were made to METS's QA program through written procedures. The team noted that CI has not performed a performance based audit or surveillance to verify implementation of the QA program in support of their services provided (i.e., control of engineering records, control of engineering analyses, and control of computer programming). As a result, the NRC staff re-reviewed the Versa-Pac package application using the guidance in NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material," and concluded that the full scale testing of the package, coupled with the analyses provided, demonstrate that the package meets the requirements of 10 CFR Part 71. In addition, the team noted that CI has since audited METS and satisfactorily verified effective implementation of their QA program as it relates to design control services.

3.1.3 Conclusions

The team determined that, overall, CI has adequate procedures and controls in place governing the implementation of their QA program for 10 CFR Part 71, Subpart H, design control and modification activities.

4.0 Fabrication Controls

4.1 Material procurement / Fabrication & Assembly

4.1.1 Scope

The team reviewed procedures, selected drawings and records, and interviewed selected personnel, to verify that the procurement specifications for materials, equipment, and services met the design requirements.

4.1.2 Observations and Findings

The team reviewed PO 103009, dated 8/6/2010, and receiving inspection records of components (tube and flat bar) supplied by Sisken Steel. The team noted that the reported chemical and physical requirements conformed to standard American Society for Testing and Materials (ASTM) A1011 in lieu of ASTM A36, as required by purchase order. Subsequently, CI performed a 'like-for-like' evaluation and concluded that the material conforms to A36-94, "Standard Specification for Carbon Structural Steel." The team noted that CI failed to document this nonconforming condition and initiate the required corrective actions as prescribed by SOP 9.1, Revision 3, dated 9/28/2010, "Nonconforming items and Corrective Actions," which requires disposition of nonconforming items to be documented on a nonconformance report and the initiation of a corrective action report for recurring and adverse conditions to determine probable cause of the condition and actions that are to be taken to prevent recurrence.

The team reviewed CI's acceptance records of polyurethane closed cell foam, as supplied by American Foam Technologies (AFT), for compliance to CI-VP-004, Revision 3, "Fissile Material Shipping Container (55 GAL)," and SOP No. 6.11, Revision 3, "CI -1 Polyurethane Closed Cell Foam Specification." The team noted that AFT failed to record the correct lot/batch numbers of materials used in production and record production data on a correct version of a form (UF-1 Revision 1 vs. Revision 5). The team noted that procurement of polyurethane closed cell foam is categorized under the graded approach for the Versa-Pac as a Category B. The failure of CI to perform adequate receipt inspections is a Violation of 10 CFR 71.111 and is two of the examples cited in the enclosed Notice (Enclosure 2). Immediate corrective measures were taken by CI. CAR0025 was initiated to obtain the correct lot/batch numbers of materials used in production and to record production information on the correct form.

The team reviewed PO 103006, dated 8/6/2010, issued to Intertek Testing Services, Inc., Elmhurst, TX. The scope of the PO was for Intertek to conduct testing on CI supplied closed cell polyurethane foam samples according to ASTM standard test methods. The team noted that 10 CFR Part 21 reporting requirements were imposed and that Intertek was listed as a Category B approved supplier (AVL dated 09/10/2010) for ASTM testing services based on accreditation criteria from a testing laboratory.

Personnel performing activities affecting quality are trained in accordance with written procedures. As noted, SOP No. 1.1 requires department managers to train personnel within their disciplines and for maintaining summary records of training. The team reviewed CI's purchasing agent training records specific to activities relating to vendor selection and approval and procurement of materials, parts, services, and welding material as prescribed by SOP's 3.0 and 3.1 and noted that CI's purchasing agent was appropriately indoctrinated and trained. Further, the team reviewed individual training records of shop personnel and verified appropriate training of SOP's as applicable to work function. In addition the team noted completion of training applicable to 10 CFR Part 21.

The team verified that the Century Versa-Pac shipping container is subjected to visual inspections of all welds and magnetic particle inspection of those welds shown on the fabrication drawings to insure that the welds of the package are in compliance with the applicable codes and standards required by the drawings and specifications of the Versa-Pac design. These inspections shall be recorded on the fabrication control record as part of the QA program. The team reviewed SOP 7.5, Revision 1, "Magnetic Particle Examination," dated 3/15/2010 and SOP 7.15, Revision 0, "Visual Examination" and noted a requirement specific to subcontractors providing NDE services that require qualification according to American Society for Nondestructive Testing (ASNT), Recommended Practice ASNT-TC-1A. The team noted CI's acceptance of the individuals' certification as a NDE, Level III, was based on a resume which stated previous ASNT certification. The team noted lack of objective evidence in support of the individuals resume and overall qualification in that CI's files did not contain copies of the individuals previous and current certifications in support of his services that are to be provided (CAR 1017). Subsequently, CI provided objective evidence that the NDE, Level III, was appropriately qualified to ASNT-TC-1A (Certificate LM-1261). In addition, the team noted CI's certification by a written statement. No additional concerns were noted.

The team reviewed CI's NDE, Level II, visual testing and magnetic testing qualification and certification records for compliance to SOP 7.0, Revision 1, dated 3/22/2010, "Qualification and Certification of Nondestructive Testing Personnel," and for compliance to ASNT-TC-1A (88 edition) and noted that CI's inspector was qualified.

The team noted that a tack weld used to assemble a bar 'BF' to sheet metal 'PA' was not detailed properly, in that the fabrication drawing indicated a 1/8" fillet weld along the bottom edge of bar BF. Instead, the team noted "Tack Welding" had occurred with no detailed minimum size or minimum quantity. In response, CI has revised the fabrication drawing to reflect appropriate detail requirements and to incorporate certain additional enhancements such as removing the A/R (As-Required) from weld details.

The team assessed CI's welding process specific to welding the Versa-Pac nameplate onto the outer skin of the finished package. The team noted that the corners of the stainless nameplate were spot welded to the outer surface of the carbon steel drum. The team noted that the nameplate was manufactured of 300 series stainless steel and the drum was manufactured of carbon steel and that CI failed to conduct a Weld Procedure Qualification (WPQ) test and failed to generate a Weld Procedure Specification (WPS) for the dissimilar metals prior to conducting the operation. The failure of CI to conduct a WPQ test and generate a WPS for the dissimilar metals is a Violation of 10 CFR 71.111 and is one of the examples cited in the enclosed Notice (Enclosure 2). Immediate corrective measures were taken by CI. Nonconformance Report (NR) 0014 was initiated to perform a procedure qualification test, generated a WPS, and to qualify the welder making the nameplate spot welds.

The team observed a Gas Tungsten Arc Weld (GTAW) and noted a deviation in voltage from the WPS. Specifically, the team observed a voltage of 10 and 13 on contact; the bottom range of the WPS was 13.5. The team noted that American Welding Society (AWS) D1.1 provides a 25% tolerance for the GTAW voltage without revision to the procedure. AWS D1.1, Section 3.6, allows for the revision of the WPS to address variables within the procedure including voltage and that voltage is partially a control of arc distance to welding surface and equipment used in the process. CI's violation from a WPS is a Violation of 10 CFR 71.111 and is one of the examples cited in the enclosed Notice (Enclosure 2). In order to comply with the specification, CI revised the applicable WPS to provide an acceptable range for the process being used.

The team reviewed various weld procedure qualifications and specifications for compliance to AWS D1.1. The team reviewed welder qualification records in accordance with AWS D1.1 along with CI's qualified welder's list, dated 07/8/2010 and noted welders were not qualified to perform groove welds (CAR 1014). As a follow-up, the team reviewed welder qualification records of six (6) GTAW welders. The team determined that all welders were adequately qualified on 08/11/2010. Afterwards, the team observed welding performed on numerous components and noted compliance to WPS's and fabrication drawings.

The team noted that CI welders were not qualified to AWS D1.3. This primarily had impact upon the 16 gauge sheet metal used as the liners for the product. The failure of CI to qualify welders to AWS D1.3 is a Violation of 10 CFR 71.111 and is one of the examples cited in the enclosed Notice (Enclosure 2). Immediate corrective measures were taken by CI. NR0013 and CAR0021A were initiated to qualify welders.

4.1.3 Conclusions

The team identified one violation with six examples where the requirements of 10 CFR 71.111 were not met. However, based on observation of shop activities the team noted significant improvement in the overall quality of fabrication activities, specifically, welding.

4.2 Tools & Equipment

4.2.1 Scope

The team reviewed selected measuring and test equipment including records and procedures for conformance to the requirements of 10 CFR Part 71, Subpart H.

4.2.2 Observations and Findings

The team noted that a calibration service company, who performed the calibration of a scale, was not listed on CI's AVL and that the scale had not been recently calibrated. Subsequently, the team noted that the vendor (Carlton Scale) was added to the AVL based on a evaluation of Charlton's performance history for calibration services, traceability to National Institute of Standards and Technology, and accreditation by the Laboratory Accreditation Bureau under ISO/IEC17025:2005, Certificate L1105-1 (NR0017 and CAR0024).

In addition, the team noted that floor scale calibration date was found to be out of date by approximately 3 weeks and was removed from service and calibrated. The failure of CI to calibrate the scale is a Violation of 10 CFR 71.111 and is one of the examples cited in the enclosed Notice (Enclosure 2). Immediate corrective measures were taken by CI. NR 0016 was initiated to calibrate the scale in question.

4.2.3 Conclusions

Overall, the team assessed that CI's actions added to list calibration services on the AVL were adequate. The team noted one violation where the requirements of 10 CFR 71.111 were not met. Specifically, a scale was found to exceed its calibration frequency date.

5. Meetings

On April 19, 2011, the team conducted an entrance meeting with CI personnel. On April 21, 2011, the team conducted an exit meeting where the inspection findings were presented to CI management. The team confirmed with CI management that no proprietary information was discussed at these meetings. Discussions at the exit meeting focused on the fact that CI's implementation of its NRC-approved QA program was marginally adequate and that although no single deficiency represents a significant adverse condition, CI's continued non-compliance with certain aspects of its QA program remains a concern in the functional areas of its QA program that formed the basis for NRC approval of the program. The team determined that CI's implementing procedures for the Versa-Pac shipping container needs further development and strengthening, particularly with regard to CI's QA organization and independence of personnel who verify that an activity is performed correctly.

NOTICE OF VIOLATION

Century Industries
Johnston City, TN 37601

Docket No. 71-9342

During an NRC inspection conducted at the Century Industries (CI), in Johnston, TN, on April 19-21, 2011, violations of NRC requirements were identified. Century Industries, is an NRC certificate holder, No. 9342, and manufacturer of Versa-Pac shipping containers, Model Nos. 55 and 110 under 10 CFR Part 71. The violations are being treated as a Notice of Violation (NOV), consistent with Section 2.3.3 of the Enforcement Policy. The Enforcement Policy is located on the NRC's Web site <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>, the violations are listed below:

10 CFR 71.111, "Instructions, procedures, and drawings," states, in part, that the certificate holder shall prescribe activities affecting quality by documented procedures and shall require that these procedures be followed.

Contrary to the above, the following instances were identified by the NRC where activities affecting quality were not prescribed in documented procedures, or where procedures for activities affecting quality were not followed:

1. CI's QA manager is absent the majority of the time from the ongoing activities and CI's program has no description of delegation for the QA manager's responsibilities or actions. The QA manager is only present at the CI facility one or two days per month.
2. CI's weigh scale used to weigh packages was found to be out of calibration for approximately 3 weeks.
3. Receipt inspection and assessment of third party qualification test results:
 - a) Receiving inspection records of various components (tubing and flat bar) did not conform to a purchase order requirement. Specifically, ASTM A1011 material was supplied instead of ASTM A36.
 - b) CI's manufacturer of polyurethane closed cell foam failed to record the correct lot/batch numbers of materials used in production and record production data on a correct version of a form (UF-1 Revision 1 vs. Revision 5).
4. CI welders were not qualified to American Welding Society (AWS) D1.3. This primarily had impact upon the 16 gauge sheet metal used as the liners for the product.
5. CI failed to conduct a Welding Procedure Qualification test and generate Weld Procedure Specification (WPS) for dissimilar metals. Specifically, the welding of the Versa-Pac nameplate to the drum of the finished package.
6. Voltage of a GTAW process on production components deviated from a WPS. The voltage was observed to be 10 and 13 volts on contact, contrary to the WPS which states the bottom range of the WPS as 13.5.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Century Industries, is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to Eric J. Benner, Chief, Rules, Inspections, and Operations Branch, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), <http://www.nrc.gov/NRC/ADAMS/index.html> to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, (the Public Electronic Reading Room). If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 23rd day of June 2011.

CLOSURE OF CONFIRMATORY ACTION LETTER (CAL) NMSS 2010-001

On June 17, 2010, the U.S. Nuclear Regulatory Commission (NRC) issued Confirmatory Action Letter (CAL) NMSS-2010-001, following an inspection at your facility in Bristol, VA. The CAL presented four items that required action to resolve significant shortcomings in the implementation of the Century Industries (CI) NRC-approved Quality Assurance (QA) program. The following is the NRC's current understanding of the status of those action items.

Action 1 of the CAL stated that, CI would provide a schedule for completion of corrective actions; hire an interim QA manager and purchasing agent; review records to ensure that all nonconformance have been properly documented and recorded into a nonconformance accountability log; complete a full review of Standard Operating Procedures (SOPs); update CI's Approved Vendor List (AVL) to include appropriate vendor qualifications prior to services being rendered; conduct an internal audit; evaluate the need to have welders qualified to the American Welding Society standards as part of the CI's qualification process; and ensure that customer QA staff will be on site during key functional activities associated with the package fabrication to assure that each package conforms with the regulations of 10 CFR Part 71. In letters, dated July 7, 2010, July 12, 2010, September 13, 2010, October 11, 2010, and October 21, 2010, CI provided responses to the CAL which provided information concerning the actions taken to resolve corrective actions taken associated with the inspection, as well as, observations noted as part of the follow-up inspection dated July 20-23, 2010. The items addressed included the hiring of a QA Manager, review of non-conforming items and corrective action reports and records, a complete review of CI's operating procedure system, training outlines and records, the performance of an internal audit of CI's program, enhancements to CI's AVL, assessment of design control activities, enhancements to welding procedures, and training for shop personnel. As for the basis of CI's clarification concerning customer QA staff to be on site during key functional activities associated with the package fabrication, the NRC acknowledges that CI has requested CI's customer to conduct inspections prior to release. Subsequently, the NRC is aware that CI's customer has performed a satisfactory inspection as evident by CI's letter dated April 30, 2011. This completed Action Item 1 of the CAL.

Action 2 of the CAL stated that, you would obtain the services of an independent QA auditor to assess whether CI's QA program meets and is implemented in accordance with the requirements of Subpart H of 10 CFR Part 71. Once the audit is completed, CI was to provide the NRC a copy of the audit and attach a letter describing CI's plan, with completion dates, for addressing any audit deficiencies. CI provided this information in CI's letter dated July 12, 2010. The NRC recognizes that CI has hired an independent QA manger to assess CI's QA program for compliance to the requirements of Subpart H of 10 CFR Part 71. A copy of the report has been provided which documents areas of CI's program audited and that necessary corrections have been made and re-audited for compliance. This completed Action Item 2 of the CAL.

Action 3 of the CAL stated that, CI would notify the NRC for the purposes of a re-inspection upon completion of the actions called for in items 1 and 2. CI will not fabricate any packages until such time as the NRC completes a re-inspection. Additionally, CI must indicate to the NRC that it has addressed all of the inspection findings as well as any subsequent internal audit deficiencies. On July 9, 2010, CI requested a NRC re-inspection in order to begin fabrication of contracts for customers, who are depending upon the Versa-Pac to meet shipment schedules. On July 20-23, 2010, the NRC performed this re-inspection to assess the observations identified at the time of February's inspection and to evaluate actions taken in response to CAL NMSS 2010-001. The inspection noted certain areas of improvement and in others a lack of sufficient

objective evidence in support of corrective actions taken to certain previously identified issues. As a result, CI's compliance with all aspects of the QA program remained a concern and that the conditions of the CAL remained in effect. On August 18, 2010, CI provided responses including objective evidence in support of the NRC inspection. On September 13, 2010, CI met with NRC management to present status of actions taken to previous inspections and to assure full implementation of its QA program prior to fabrication. On September 28-30, 2010, the NRC performed a third inspection of CI in which the team determined that the corrective actions taken were acceptable, and in others marginal but acceptable, and some continued enhancements were needed. The NRC has determined that no single deficiency represented a significant adverse condition. These actions complete Action Item 3 of the CAL.

Action 4 of the CAL stated that, CI would provide a production schedule for the Versa-Pac packagings for the purposes of the NRC to conduct an inspection of actual fabrication processes to assure adequate implementation of CI's QA program. CI provided this information in a letter dated September 13, 2010. Further, a copy of the update production schedule has been provided (Letters dated April 19 and 30, 2011) indicating that 50 units are to be delivered by the second quarter of 2011. This completes Action Item 4 of the CAL.

The NRC inspection team assessed that, overall, CI's implementation of its NRC-approved QA program was adequate. However, CI's continued noncompliance with certain aspects of its QA program remains a concern in the functional areas of its QA program that formed the basis for NRC approval of the program. The team determined that CI's implementing procedures for the Versa-Pac shipping container need further development and strengthening, particularly with regard to CI's QA organization and independence of personnel who verify that an activity is performed correctly. However, the actions CI has taken regarding the correction of its QA program as it relates to the CAL appear to be acceptable and no additional information is required at this time. CAL NMSS-2010-001 is considered closed.