



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NOTICE OF NONCONFORMANCE

NAC International, Inc.
Docket Nos. 71-0015, 72-1018

Based on results of a U.S. Nuclear Regulatory Commission inspection conducted on September 23-26, 1996, it appears that certain of your activities were not conducted in accordance with NRC requirements (Refer to Inspection Report No. 71-0018/96-210 - 72-1015/96-209 for details).

1. 10 CFR 71.103, "Quality assurance organization," states: "The licensee shall clearly establish and delineate in writing the authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components."

Contrary to the above, an unqualified Quality Assurance (QA) administrative staff member was allowed to approve Document No. 260, "Design Control Procedure," instead of the QA Manager. (Reference Paragraph 3.2.1 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

2. 10 CFR 71.105, "Quality assurance program," states: "The licensee shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained."

Contrary to the above, certification records showing that personnel who performed annual maintenance on Model NAC-LWT's in Taiwan were Certified Cask Operators were not available. In addition, the same individuals were also not listed on the NAC Cask Qualification/Training Record. (Reference Paragraph 4.4 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

3. 10 CFR 71.107, "Package design control," states: "The licensee shall establish measures to assure that applicable regulatory requirements and the package design . . . are correctly translated into specifications, drawing, procedures, and instructions. . . . measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the materials, parts, and components of the packaging. . . . These measures must include the establishment of written procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews The licensee shall subject design changes . . . to design control measures commensurate with those applied to the original design."

Contrary to the above, the following instances were identified where design control was unacceptable:

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- A. Leak test requirements specified in Certificate of Compliance No. 71-9225 for the Model NAC-LWT packaging were not translated into a maintenance procedure. The packaging leak test was deleted from the NAC-LWT SAR and the Annual Maintenance Procedure, Document No. 315-P-03. (Reference Paragraph 3.2.2.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- B. An independent review of a design calculation package SF 487-001 was not completed. The design calculation package was not approved by the Functional Manager nor the Project Manager authorizing the start of the review work and it did not have the Project Manager's approval signature closing the design effort. (Reference Paragraph 3.2.2.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- C. Work Request and Report GRR.17 did not have evidence of required design review. Furthermore, Work Request and Report GRR.17 did not have required management approval signatures for initiation of work. (Reference Paragraph 3.2.2.C of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- D. Work Request and Report N95-12 did not contain a design results synopsis and was not approved by the Project Manager. (Reference Paragraph 3.2.2.D of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- E. Work Requests and Reports GRR.4, GRR.5, and GRR.12 were completed without obtaining final management approval signatures. (Reference Paragraph 3.2.2.E of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- F. The design modification review for a Model NAC-LWT alternate drain pipe did not include a review of associated materials and parts. There were no records available documenting which Model NAC-LWTs had the alternate drain pipe installed. (Reference Paragraph 3.3.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- G. Work Request and Report N95-12, for a design modification source term calculation, did not contain the Project Manager's nor Functional Manager's approval signatures. (Reference Paragraph 3.3.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- H. Modification to a design calculation package STC-57 did not have Project Manager and Functional Manager approval signatures. (Reference Paragraph 3.3.C of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

4. 10 CFR 71.111, "Instructions, procedures, and drawings," states: "The licensee shall prescribe activities affecting quality by documented instructions, procedures, or drawings . . . and shall require that these instructions, procedures, and drawings be followed."

Contrary to the above, the following instances were identified where procedures were not followed:

- A. NAC did not have procedures for using the Audit Finding Reports and Audit Finding Logs. Audit Finding Report Nos. 96/E-04-F-01 through 07 were not completed and the 1996 Audit Finding Log was not current. (Reference Paragraph 2.5 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- B. A Computer Output Cover Sheet was not used in support of design activities as required by NAC Document No. 260, "Design Control." (Reference Paragraph 3.2.4.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- C. Master Logs were not used as required by NAC Document No. 204, "Controlled Documents." (Reference Paragraph 3.2.4.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- D. Purchase Order Requests for Purchase Order Nos. 96-00418 and 96-00418 were not signed by the QA Manager. The test activity required by Purchase Order No. 96-00418 was not identified as safety related. (Reference Paragraph 4.5.1.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- E. The Receiving Inspection Report for torque wrench Serial No. 01347 was not signed by the QA Manager. The torque wrench was used in maintenance activities. (Reference Paragraph 4.5.1.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

5. 10 CFR 71.115, "Control of purchased material, equipment, and services," states: "The licensee shall establish measures to assure that purchased material, equipment, and services . . . conform to the procurement documents. These measures must include . . . provisions for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery."

Contrary to the above, an unapproved vendor was used to calibrate a 50 - 400 lb. torque wrench as documented in Purchase Order No. 96-0050. (Reference Paragraph 4.6 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

6. 10 CFR 71.121, "Internal inspections," states: "The licensee shall establish and execute a program for inspection of activities affecting quality . . . to verify conformance with the documented instructions, procedures, and drawings"

Contrary to the above, manufacturing Traveler Serial No. 01749 for the fabrication of MTR baskets for the Model NAC-LWT contained recorded dimensions that were not within specified tolerances. (Reference Paragraph 3.2.5 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

7. 10 CFR 71.131, "Nonconforming materials, parts, or components," states: "The licensee shall establish measures to control materials, parts, or components which do not conform to the licensee's requirements in order to prevent their inadvertent use or installation."

Contrary to the above, a nonconforming Model NAC-LWT having a non-rotating bushing was placed in service. (Reference Paragraph 4.2 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

8. 10 CFR 71.133, "Corrective action," states: "The licensee shall establish measures to assure that conditions adverse to quality . . . are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures must assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to the above, during the NRC inspection at NAC on November 13-16, 1989, a violation was identified regarding the requirements of 10 CFR 21.6(a). Required Part 21 documents were not posted at the time of the November 1989 inspection. NAC committed to perform a 'Quarterly' review of required postings to assure they are in place. However, records of the quarterly review of Part 21 postings were not available. (Reference Paragraph 2.3 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

9. 10 CFR 71.135, "Quality assurance records," states: "The licensee shall maintain sufficient written records to describe the activities affecting quality. The records . . . must include closely related specifications such as required qualifications . . . of equipment."

Contrary to the above, the following instances were identified where QA records were unacceptable:

- A. Calculations on design analysis sheets for Work Request and Report No. GRR.4 were incorrectly changed using line-outs, "white-out," and nonpermanent methods (e.g., changes made in pencil). These changes were made without any indication as to who made the changes or when the changes were made. (Reference Paragraph 3.2.6 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- B. The Equipment History Card for torque wrench Serial No. 01347 was not updated to reflect the calibration performed as directed by Purchase Order No. 96-0050. (Reference Paragraph 4.5.2.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

- C. The Calibration Certificate for torque wrench Serial No. 01347, which was calibrated as directed by Purchase Order No. 96-0050, was not available to the inspectors. (Reference Paragraph 4.5.2.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

- 10. 10 CFR 72.146, "Design control," states: "The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews For the verifying or checking process, the licensee shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization."

Contrary to the above, the following instances were identified where independent review of design information was unacceptable:

- A. An NAC supervisor, who did not have sufficient independence from the original design effort, approved a design package. (Reference Paragraph 3.2.3.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- B. The signatures of the Independent Reviewer, Functional Supervisor, and Project Manager were missing from the Work Request and Report for the design calculation packages STC-75, "Quasi-Static Limiter Design Analysis," and STC-79, "Inner Lid Bolt Torque and Preload." The signatures of the individual performing the work and the Independent Reviewer were missing from the Work Request and Report for the design calculation package STC-570, "Design and Structural Evaluation of Revised Outer Lid." (Reference Paragraph 3.2.3.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
- C. The reviewer of calculation packages STC-153, "PT-71 Vibration Analysis," STC-571, "Test Plan and Equipment for 1/4 Scale Quasi-Static Test," and STC-572, "1/4 Scale Quasi-Static Test and Reports," did not have sufficient independence. One individual signed as the Independent Reviewer and Functional Supervisor. (Reference Paragraph 3.2.3.C of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

- 11. 10 CFR 72.150, "Instructions, procedures, and drawings," states: "The licensee shall prescribe activities affecting quality by documented instructions, procedures, or drawings . . . and shall require that these instructions, procedures, and drawings be followed."

Contrary to the above, the following instances were identified where procedures were not followed or were deficient:

- A. A modification to a Certification of Verification/Validation sheet required by NAC Document No. 262, "Computer Software Control," was not controlled. (Reference Paragraph 3.2.7.A of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

- B. NAC Employee Training/Indoctrination Records were not used as required by NAC Document No. 414, "Indoctrination and Training." (Reference Paragraph 3.2.7.B of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
 - C. Additional required computer input information was not addressed in Section IV of the NAC "RBCUBED" software manual. (Reference Paragraph 3.2.7.C of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
 - D. File comparison worksheets generated to document satisfactory installation at individual personal computers were not present for personal computers installed in August and September of 1996. (Reference Paragraph 3.2.7.D of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
 - E. Work Request and Report Log No. N96-1 did not contain the required Project Manager's approval signature prior to execution of the work as required by NAC Document No. 260, "Design Control." (Reference Paragraph 3.2.7.E of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
 - F. Work Request and Report Log No. N96-2 incorrectly classified a computer program as a Category 1 program on the required Computer Resources Manual sheet. The computer program was actually verified as a Category 2 program. (Reference Paragraph 3.2.7.F of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
 - G. After Revision 1 of Work Request and Report Log No. N96-1 was closed out, additional work was performed on a personal computer. However, the Software Log did not specify the nature of the additional work. (Reference Paragraph 3.2.7.G of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)
12. 10 CFR 72.152, "Document control," states: "The licensee shall establish measures to control the issuance of documents such as . . . drawings, including changes, which prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed."

Contrary to the above, NAC Document No. 215, "Procedure for Preparation of Drawings," did not define actions to be taken to ensure drawing changes were properly captured in other affected documents. (Reference Paragraph 3.2.8 of Inspection Report No. 71-0018/96-210 - 72-1015/96-209.)

NAC International, Inc.

Docket Nos. 71.0018, 72.1015

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to Susan F. Shankman, Chief, Transportation Safety and Inspection Branch, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each nonconformance: (1) the reason for the nonconformance, or if contested, the basis for disputing the nonconformance, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further noncompliances, and (4) the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

Dated at Rockville, Maryland

This 18th day of November 1996