COMANCHE PEAK RESPONSE TEAM

ACTION PLAN

Item Number: VII.a.9

Title: Adequacy of Purchased Safety-Related Material and Equipment

Revision No.	0	1		
Description	Original Issue	Revised to Reflect Comment		
Prepared and Recommended by: Review Team Leader	J. L. Hansel	J. L. Hansel		
Date	3/13/86	9/18/86		
Approved by: Senior Review Team	John W. Beck	John W. Beck		
Date	3/13/86	9/18/86		

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Adequacy of Purchased Safety-Related Material and Equipment

1.0 DESCRIPTION OF ISSUE IDENTIFIED BY NRC

This Action Plan was initiated to address two (2) concerns.

The first concern was that the CPRT was not providing verification of material and equipment compliance with procurement/design requirements. This concern is documented on page 91, line 15 in the minutes of a public meeting held between the NRC and TUGCO on December 19, 1985 at Arlington, Texas.

The second concern was that vendor supplied equipment may not comply with specified procurement/design requirements. This concern was based on the findings of a reinspection of safety-related electrical penetrations installed at CPSES. The reinspection was performed as a result of NRC expressed concerns with these electrical penetrations. The specifics of this concern are discussed in TUGCO Significant Deficiency Analysis Report CP 86-10.

2.0 ACTION IDENTIFIED BY NRC

Action was not specified by the NRC in correspondence.

3.0 BACKGROUND

The Quality of Construction and QA/QC Adequacy Program originally covered construction activities and in general did not cover procurement activities. One exception to this was ISAP VII.a.4, "Audit Program and Auditor Qualification" which included TUGCO supplier QA audits within its scope. Use will be made of information from ISAP VII.a.4 during implementation of this ISAP.

The Design Adequacy Program (DAP) covers key aspects of the CPSES design activities, including design-related aspects of the CPSES procurement program. The DAP evaluation will verify the adequacy of A/E furnished specifications, calculations, and drawings. In addition the DAP will evaluate vendor documentation (e.g., drawings, test reports, etc.) to verify compliance with CPSES design requirements and FSAR commitments.

This ISAP as revised will verify the compliance of the physical characteristics of purchased safety-related material and equipment with procurement and design requirements specified by TUGCO and/or the vendor. The ISAP will also assure that the current procurement

3.0 BACKGROUND (Cont'd)

program and storage/maintenance program (warehouse only) contain the essential elements for controlling safety-related materials and equipment and that the current programs are being effectively implemented. The results of the implementation of this action plan will provide useful input to the Quality of Construction and QA/QC Adequacy Program, and will provide the basis for responding to the expressed NRC concerns in Section 1.0 of this ISAP.

The methodology of Revision 0 of this ISAP was to perform the following:

- A documentation review of current and historical program documents which address the receipt inspection and storage/maintenance (warehouse only) of safety-related material and equipment; and

- A documentation review of selected receipt inspection and associated storage and maintenance (warehouse only) records.

The rationale for this approach was that if deficiencies were found in either documentation review, the root cause and generic implication analysis would reveal potential equipment and/or material concerns which would expand the evaluation to include a reinspection of the specific equipment and/or material.

Implementation of ISAP VII.a.9 Revision "0" was put in a hold status prior to completion of either of the documentation review efforts. The information gathered will be used in the analysis of the result of Revision 1 to ISAP VII.a.9.

4.0 CPRT ACTION PLAN

4.1 Scope and Methodology

4.1.1 The primary objective of this action plan is to evaluate selected safety-related purchased material and equipment installed at CPSES for compliance with procurement requirements and physical design characteristics of the material or equipment specified by TUGCO and/or the vendor.

A second objective of this action plan is to evaluate the adequacy and implementation of the current CPSES procurement system, and storage/maintenance program (warehouse only).

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(Cont'd)

4.0 CPRT ACTION PLAN (Cont'd)

The completion of this action plan will provide reasonable assurance that purchased safety-related materials and equipment installed at CPSES satisfy procurement requirements and physical design characteristics specified by TUGCO and/or the vendor.

The completion will also assure that the current QA/QC program contains the required elements for control of purchased materials and equipment and that the current programs are being effectively implemented.

The following tasks will be implemented to achieve these objectives:

- Select procured material/equipment to be evaluated;
- Develop equipment and material reinspection and document review checklists based on review of the applicable procurement specification, TUGCO/vendor design drawings and other pertinent documents;
- Perform field inspection of selected safety-related equipment;
- Evaluate selected materials by reviewing related quality records, such as certified material test reports and other tests performed during the construction activities;
- Develop checklists for the evaluation of the current procurement system, and storage/maintenance program (warehouse only);
- Evaluate the adequacy and proper implementation of the current procurement system and storage/maintenance program (warehouse only) by review of the applicable procedures and system documentation;
- Identify and evaluate deviations; and
- Write results report.

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4.0 CPRT ACTION PLAN (Cont'd)

4.1.2 Safety-related procurements range from simple consumable materials such a reinforcing steel and weld rod to complex engineered equipment such as heat exchangers and motor control centers. Consequently, the measures established to assure that the procured material and equipment complies with the procurement and design requirements will vary significantly. The specific types of safety-related material/equipment to be reviewed will be selected by an approach designed to ensure that:

- The materials and equipment selected for evaluation, represent a reasonable cross section. The following points will be considered in the selection of equipment and material to be evaluated:
  - -- Design Complexity;
  - -- Method of manufacture or fabrication;
  - -- Type of Equipment;
  - -- The number of evaluation items in a given time frame is reasonably representative of the volume of delivery of procurred items for the same time period;
  - -- CPSES identified problem vendors;
  - -- ISAP VII.a.4 identified problem vendors;
  - -- NRC Vendor Branch problem vendors;
  - -- NRC I&E Bulletin problem vendors (10CFR50.55(e) and 10CFR21 items);
- A minimum of one (1) item will be inspected from each identified vendor. If the vendor manufactured/fabricated the equipment or material at different times in the history of CPSES, the list of selected items should include at least two (2) items, one (1) from the early deliveries and one (1) from the later deliveries.

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4.0 CPRT ACTION PLAN (Cont'd)

The above criteria provide a reasonable qualitative basis for selecting specific equipment and material for evaluation and provide assurance that a reasonable representation of CPSES equipment and material design specifications will be provided. Similar criteria were utilized to select items for evaluation during implementation of Revision "0" of this ISAP and thirty-five (35) CPSES design specifications were identified. Approximately thirty-five design specifications will be utilized for this ISAP revision, including many of those identified during the implementation of Revision "0". The thirty-five design specifications constitute about 20% of the total number (171) of safety-related design specifications. The selection criteria coupled with the substantial percentage (20%) of the total number of design specifications will provide a reasonable basis for reaching conclusions on the overall adequacy of the TUGCO procurement system for safety-related materials and equipment.

4.1.3 A reinspection checklist will be developed for each piece/type of material and equipment selected. The individual attributes to be included in each checklist will be determined by review of the applicable procurement specification and TUGCO/vendor design drawings in effect on the date of receipt at CPSES.

The reinspection checklists will, as a minimum, assure that the following general criteria are addressed for each piece/type of equipment:

- Chemical and physical properties conform to specified requirements;
- Important dimensions and other characteristics conform with drawings and specification; and
- Vendor supplied quality records are complete and acceptable for such things as major base metal repairs, etc..

Utilizing the equipment checklists, a field inspection of the selected equipment will be performed to verify compliance with procurement requirements and physical design characteristics specified by TUGCO and/or the vendor.

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4.0 CPRT ACTION PLAN (Cont'd)

Identified discrepancies from the procurement specification and/or TUGCO/vendor design drawings will be researched through available job-site records to determine:

- Whether the discrepancy was the result of an authorized modification (NCR, DCA, etc.), or
- Whether the discrepancy can be reasonably attributed to on-site construction or testing activities, or
- Whether the discrepancy most likely existed at the time of receipt and was not detected and corrected during manufacturing inspection, vendor surveillance and receipt inspection.

Those discrepancies determined to have resulted from construction and/or testing activities occurring after the equipment was receipt inspected will be documented as "Out-of-Scope" in accordance with the CPRT Program Plan.

Those discrepancies which cannot be reasonably attributed to authorized modifications or construction/testing activities, will be considered to have existed prior to acceptance at CPSES and will be documented as manufacturing deviations.

Materials such as weld rod, cement, reinforcing steel, etc. are generally inaccessible for reinspection because these materials are consumed or altered in some manner during the construction process. Those materials selected will be evaluated utilizing the above material checklists.

A procurement program review checklist will be developed and will contain general criteria to evaluate the current QA/QC program documentation for compliance with the requirements of 10CFR50 Appendix "B" Criteria IV, VII, X, and XII and SAR section 17.1.4, 17.1.7, 17.1.10 and 17.1.13. The CPSES documents to be reviewed are the current CPSES FSAR, TUGCO QA Plan, B&R QA Plan and the TUGCO/B&R implementing procedures and instructions.

4.0 CPRT ACTION PLAN (Cont'd)

In addition, an evaluation of the implementation of the current procurement program activities will be performed. A checklist will be developed from the general program documents referenced above. The areas of evaluation will include:

- Preparation, review and control of procurement documents;
- Evaluation and approval of suppliers;
- Review and approval of vendor supplied documents, such as drawings, procedures, nonconformance reports, etc.;
- Manufacturing/vendor surveillance;
- Receiving Inspection; and
- Storage/Maintenance.

The completion of this evaluation will provide a level of confidence that purchased safety-related equipment and material comply with the applicable TUGCO/vendor physical design requirements, and that the current CPSES procurement and storage/maintenance (warehouse only) programs are acceptable and are being effectively implemented.

4.1.4 Discrepancies identified as a result of the equipment reinspections, or the evaluation of the current procurement system will be documented as either manufacturing deviations or QA/QC program deviations (respectively) and evaluated in accordance with CPRT program requirements.

4.2 Participant's Role and Responsibilities

The organizations and personnel that will participate in this effort are described below with their respective scopes of work.

4.2.1 Evaluation Research Corporation (ERC)

4.2.1.1 Scope

ERC is charged with the overall responsibility for performing this evaluation and preparation of the results.

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(Cont'd)

4.0 CPRT ACTION PLAN (Cont'd)

4.2.1.2 Personnel

Mr. J. L. Hansel	Review Team Leader
Mr. C. W. Vincent	Issue Coordinator

4.2.2 TUGCO

4.2.2.1 TUGCO will assist in identifying and locating applicable information and documentation to support the Review Team activities and will coordinate field reinspections with CPSES construction and operations groups.

4.2.2.2 Personnel

Mr. D. W. Snow	TUGCO QA/QC Coordinator
Mr. B. C. Scott	Equipment Reinspection Coordinator
Mr. T. Robinson	Construction Coordinator
Mr. Setty Segu	Engineering Coordinator
Mr. R. Gentry	Procurement Coordinator

Others as required.

4.3 Qualifications of Personnel

Inspectors certified to the requirements of USNRC Regulatory Guide 1.58 (Rev. 2) and ANSI N45.2.6 (1978) shall be used to perform the material and equipment inspections covered by this action plan. All other personnel associated with the analysis and evaluation of the systems and findings covered by this action plan shall be qualified in accordance with the requirements of the CPRT Program Plan.

4.4 Procedures

4.4.1 CPRT Program Plan

Appendix E to the CPRT Program Plan does not provide instructions for the classification and resolution of discrepancies resulting from a vendors failure to manufacture safety-related equipment and material in accordance with procurement and/or design requirements specified by TUGCO and/or the vendor.

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4.0 CPRT ACTION PLAN (Cont'd)

Therefore, the discrepancies identified during the implementation of this ISAP will be classified either as deviations or deficiencies, depending on the safety significance of the discrepancy. The definitions applicable to ISAP VII.a.9 are as follows:

a) Manufacturing Deviations

Any identified discrepancy related to the manufacture of safety-related equipment and/or material that has been determined to constitute a verified failure to manufacture safety-related equipment and/or material in accordance with procurement and/or design requirements specified by TUGCO and/or the vendor.

b) Manufacturing Deficiency

Any identified manufacturing deviation that has been determined to be safety significant.

c) Safety-Significant

See B.1.(E) and associated footnote of Appendix E for definition.

d) Programmatic Manufacturing Deficiency

A set of related manufacturing deviations that has been determined to constitute an adverse trend that is programmatic in nature.

4.4.2 Instructions and checklists which address, as a minimum, the items in paragraphs 4.1.3 and 4.1.4, will be developed as an integral part of this evaluation. These instructions and checklists will be retained in the ISAP working file.

4.5 Standards/Acceptance Criteria

Applicable standards and acceptance criteria for the evaluation of the current procurement system are contained in 10CFR50 Appendix B, Criteria IV, VII, X, and XIII the SAR Sections 17.1.4, 17.1.7, 17.1.10, and 17.1.18.

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4.0 CPRT ACTION PLAN (Cont'd)

Applicable acceptance criteria for the reinspection of purchased safety-related material and equipment are contained in the procurement specifications and TUGCO/vendor design drawings.

4.6 Decision Criteria

This action plan will be closed if no manufacturing deficiencies, QA/QC program deficiencies or adverse trends are identified.

If manufacturing deficiencies, QA/QC program deficiencies or adverse trends are identified, root cause and generic implication analyses will be conducted. Additional reviews and/or reinspections will be conducted as required based on the results of the root cause and generic implication analyses.