ENCLOSURE 2

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1.0 INTRODUCTION

1.1 Purpose

This Site Standard Practice (SSP) defines the administrative, technical and quality controls used by Nuclear Engineering (NE) at Watts Bar Nuclear Plant (WBN) for the selective evaluation of previously procured items installed in the plant as safety-related spare and replacement parts.

This SSP also establishes the administrative, technical and quality requirements for the acceptance and dedication of parts procured as commercial grade items (CGI) for use as replacement items in safety-related basic components or as safety-related basic components.

AI-5.19 is superseded by this SSP.

1.2 Applicability

This procedure applies to the evaluation of items procured and processed through the Power Stores inventory for installation in the plant by maintenance activities.

This procedure also applies to the evaluation of items procured by Nuclear Construction and processed through the construction warehouse and installed in the plant prior to system turnover by construction personnel.

QA Level I, QA Level II, and QA Level III items installed in safety-related applications may be evaluated and/or qualified by this procedure. QA Level II items may be evaluated/accepted for safety-related use individually in a unique Previous Procurement Substantiation Process (PPSP) Package, or evaluated/accepted by generic dedication in a Generic PPSP.

Items found in the construction warehouse inventory that were installed into 10CFR50.49 equipment, will have an individual PPSP prepared for their application regardless of QA Level.

Items found in the construction warehouse inventory that are classified as Seismically Sensitive Electrically Active (SSEA) devices will be identified to the Seismic Equipment Qualification (SEQ) group. The RIP engineers will interface with SEQ to assure that the SSEA is adequately qualified.

2.0 DETAILS

2.1 Responsibilities

2.1.1 WBN Engineering Manager

Responsible for all technical aspects of the RIP Project, and the specification of technical and quality requirements. Monitors the engineering support functions of configuration control and material improvement. Responsible for engineering personnel training. Responsible for the closure of the RIP Corrective Action Plan (RIP-CAP).

2.1.2 WBN RIP Project Manager

The NE manager responsible for the implementation and performance of the RIP activities determined necessary to achieve the goal of closing the RIP-CAP. The RIP Project Manager is also responsible for directing and controlling the contractor support required to meet the task objectives.

2.1.3 RIP Task Manager

Responsible for supervising the day-to-day activities performed to meet the task's schedule for completion within the budgetary constraints. The Task Manager will also approve all the output documents of the RIP activities.

2.1.4 RIP Evaluator

An engineer who by virtue of his/her education, training and/or experience is deemed by the RIP Project Manager, or designee, to be qualified to perform the technical and quality evaluations described in this SSP.

2.1.5 RIP Independent Reviewer

An engineer who meets the requirements of a RIP Evaluator and is deemed by the RIP Project Manager, or designee, to be qualified to perform independent, secondary reviews of the work of the RIP Evaluators.

2.2 Background

Activities included in the RIP Project are all designed to support the closure of RIP-CAP.

- The RIP-CAP is the highest tier document controlling the RIP Project. It is a presentation to the NRC of what WBN intends to do to demonstrate that the items within the scope of RIP installed into the plant as spare or replacement items have not negated any previously determined seismic or environmental qualifications, nor degraded the capability of the host equipment to perform its safety-related function(s). Included as part of the RIP-CAP is the Safety-Evaluation Report (SER) from the NRC which is that agency's acceptance of the RIP-CAP. These two documents provide the agreed upon philosophical and technical approach that will be used to close the RIP-CAP. They are not intended to be used as working level documents.

2.2 **Background** (continued)

- There is a RIP Project Plan that provides organizational, budgetary, and scheduling support to the RIP Project. This document also includes an executive summary of the events and activities that have been accomplished in the past to support the closure of the RIP-CAP. This document is not intended to be used as a working level document.

- This temporary Site Standard Procedure is the only working level document that governs the day to day activities performed in the execution of the RIP Project toward closure of the RIP-CAP. No other documents are involved, by reference or inference.

2.3 **RIP Evaluation Process**

The evaluation process for maintenance and construction installed replacement items within the scope of RIP is illustrated in Appendix H.

2.3.1 **Items to be evaluated**

The Maintenance History Data Base will be utilized to determine safety-related maintenance installed items up to 1/23/89. The Quality Release/Conditional Release Logs will be utilized to determine safety-related maintenance installed items from 1/23/89 to 6/5/91. Items installed subsequent to 6/5/91 are considered satisfactorily controlled by the Procurement Engineering Group's (PEG) procedures and are outside the scope of this procedure.

2.3.2 **QA Level I Replacement Items**

Except for replacement parts for 10CFR50.49 components and SSEA replacement parts, Level I replacement items are considered acceptable and outside the scope of the RIP-CAP.

- QA Level I items are deemed acceptable if they have traceability through documentation and were procured from a vendor on the ASL, who has taken responsibility for 10CFR Part 21.

2.3.3 **QA Level II Replacement Items**

QA Level II items are the principal focus of the RIP evaluation effort. This procedure is primarily intended for evaluating the adequacy of installed QA Level II replacement parts. Based on previous experience, many QA Level II items have been installed in non-safety-related applications and may be downgraded as part of the safety classification process to QA Level III.

2.3.4 **QA Level III Replacement Parts**

Except for replacement parts intended for use in 10 CFR 50.49 components, Level III replacement items are considered acceptable and are outside the scope of the RIP-CAP.

QA Level III replacement items are reviewed for their effect on the host equipment's capability to perform its safety function. If there are no adverse effects caused by the failure(s) of the replacement item, then it is deemed to be QA Level III. The item may have been specified by part number and nomenclature only, and CGI acceptance would not have been required.

2.3.5 RIP Evaluations

The RIP Project will perform individual item evaluations as required to meet the goals and objectives of the overall program plan. These individual evaluations will be accomplished using the forms given in the Appendices to this SSP, and as detailed below.

- The RIP evaluation is started by filling out the coversheet. This is a form similar to the one shown in Appendix A. All the blanks should be filled in with the appropriate data or information down to the "Engineering Evaluation Summary" (Sheets Attached) section.

  The Engineering Evaluation Summary sheets should be filled in as deemed necessary and added.

- EPRI NP-5652 allows for the selection of critical characteristics for "generic application items" which are "typically commodity items which have a wide range of end uses in the plant." The RIP Project may perform generic evaluations as required for selected commodity items to meet the goals and objectives of the overall program plan. These generic evaluations will be accomplished using the forms given in the Appendices to this SSP, and the determination of critical characteristics will be based on the most severe end use application.

2.4 Technical Evaluation

The following generic process should be used, with modifications as necessary, to establish the technical and quality requirements against which the installed replacement items should be evaluated. Documentation of this process should be on the forms in the Appendices to this SSP.

2.4.1 Establish Safety Classification (Format App. B, pp 1 & 2)

NOTE *EPRI NP-6406 "Guidelines for the Technical Evaluation of Replacement Items in Nuclear Power Plants (NCIG-11)" provides additional details and guidance for safety classification. See also EPRI 6895 "Guidelines for the Safety Classification of Systems, Components and Parts Intended for Use in Nuclear Power Plants".*

A. Determine the system level safety functions by reviewing available documents, i.e., Q-List, system design criteria, the Final Safety Analysis Report (FSAR), and drawings, to identify the system safety-related function(s). Systems determined to perform safety-related functions, and all items that support, or would be detrimental from dysfunction, are considered to be safety-related.

B. Identify the following for the whole device component:

   (The whole device component might either be the host component for the replacement part or the actual replacement item.)

   1. Component safety-related function(s) that support the system safety function(s).

2.4 Technical Evaluation (continued)

2. Any credible failure mechanisms that could prevent the accomplishment of a safety-related function.

3. A Safety Classification for the whole device if a safety-related function or credible failure mechanism would prevent, impede, or degrade the performance of an identified safety-related function.

   a. Safety classifications available are:

      - QA Level I: If the whole device component was procured in accordance with an established, documented, and audited Quality Assurance Program by the vendor to acceptable nuclear industry standards, the vendor was on the TVA Approved Suppliers List, and proper documentation was provided at the time of the procurement.

      - QA Level II: If the whole device component could not be procured as in QA Level I above, then a commercial grade item (CGI, See 2.5.1) could be procured, and dedicated to use in the safety-related application involved, (See 2.5.4.)

      - QA Level III: These are whole devices subject to limited QA and quality-related items that have attributes that are specifically required to meet engineering or regulatory requirements which are not BASIC COMPONENTS. If a QA Level II replacement part being evaluated is determined to have applications in only QA Level III components, the part shall be downgraded to QA Level III using its end use application as the justification.

NOTE *Critical characteristics are not necessary for QA Level III items, nor is an equivalency evaluation required.*

C. Identify for each evaluated replacement part within a SAFETY-RELATED whole device component, the following:

1. The SAFETY-RELATED functions of the replacement item as they relate to the SR function(s) of the whole device component.
2. Any CREDIBLE FAILURE MECHANISMS that could prevent, impede, or degrade the performance of the replacement part's SAFETY-RELATED functions, or otherwise cause the failure of the whole device component to perform its intended SR function(s).
3. A Safety Classification for the replacement part if a SAFETY-RELATED function or CREDIBLE FAILURE MECHANISM would cause the replacement part to prevent, impede, or degrade the performance of a SAFETY-RELATED function.

   a. The replacement item shall be designated as "BASIC COMPONENT" or "NOT A BASIC COMPONENT." (on Appendix B, page 1)

2.4 **Technical Evaluation** (continued)

b. Safety classifications available for the replacement part(s) are the same as in 2.4.1.B.3.a above.

D. IDENTIFY items as non-SAFETY-RELATED but included in a SAFETY-RELATED application as QA Level III. It must be shown that these items have no credible failure mechanisms that could affect the ability of the replacement part, whole device component, or associated SAFETY-RELATED components to perform their SAFETY-RELATED function(s).

E. Document the process of determining the host component's and replacement item's Safety Classifications using the forms similar to those given in Appendix B of this SSP.

2.4.2 Suitability for Application Analysis (Forms at Appendix B pages 3 and 4).

A. Like-for-Like Evaluation

- Replacement items that can be shown to be like-for-like replacements (see definition) do not require a full technical evaluation. "If a supplier can furnish a like-for-like replacement, only minimal technical evaluation may be required," (See EPRI NP-5652, paragraph 1.2.) The original manufacturer designed the CGI part to perform its intended function in the host equipment when it was included in the host equipment's original design. If the replacement part can be demonstrated to be <u>identical</u> to the original part, there is no need to perform an equivalency evaluation by comparing design requirements to critical characteristics for design (See NRC Generic Letter 91-05 and EPRI NP-6406.)

- If the replacement item is not identical to the original (an alternative item with design or manufacturing changes), then a technical equivalency evaluation is required.

B. Determination of Critical Characteristics for Design (Reference Appendix B, pages 4 and 5.)

- Determination of the critical characteristics for design begins with identifying the requirements of the original part being replaced. This is found by review of the original procurement documents, original specifications prepared by NE, or original shop drawings provided by the vendor.

- Information on the critical characteristics for design can also be obtained from vendor literature, such as catalogs, data sheets, specification sheets, shop drawings, test sheets, etc., or obtained by discussing the design criteria of the item with the vendor/manufacturer.

2.4.2 Suitability for Application Analysis (Reference Appendix B page 4). (continued)

° The critical characteristics for design of the original part are determined by investigating its **function** and **operating** parameters within the host equipment. These should be identified with the acceptance criteria so an equivalency evaluation can be performed and selected critical characteristics can be measured and verified later. Typically, the minimum set of critical characteristics for design will include:

- Part Number -
  The manufacturer's part number, along with a traceable history of any part number changes.

- Material -
  Material of construction is normally required as an attribute to be evaluated in spare or replacement items reviews.

- Dimensional characteristics inherent to the part (Fit) -
  Only those dimensions critical to the part's form and function with respect to its SAFETY-RELATED functional requirements are necessary to conform to prescribed specifications, or other controlling documents. (If the dimensions of an item are prescribed by a national standard, such as an ANSI Standard, i.e., bolts, nuts, pipe fittings, the standard can be identified in lieu of actual dimensions and/or tolerances.)

- Configuration prescribed by the location and function of the part in the whole device (Form) -
  Only those configuration characteristics critical to fit and function are required to conform to prescribed specifications, or other controlling documents.

- Performance characteristics (Operability/Function) -
  Those attributes that allow a part to perform the function in the way it was intended. Performance attributes typically involve measurable characteristics such as accuracy, load rating, or horsepower, or time-based functions, such as closure/opening time, delay time, etc., (incomplete list.)

C. Equivalency Evaluation of the Replacement Item (Reference Appendix B, pages 4 and 5)

If an installed item was not identical to the item being replaced, evidence should be documented to verify that an adequate equivalency evaluation was performed. The process for performing an equivalency evaluation is described below:

° The critical characteristics for design of the original item should be identified first. Next, the specific attribute/variable (e.g., type of material, actual design dimensions) should be listed for each critical characteristic for design of the original item and the replacement item. For those critical characteristics for design where the attributes/variables are different between the original and replacement item, a technical evaluation of the differences is required.

2.4.2 Suitability for Application Analysis (Reference Appendix B page 4). (continued)

- If there are differences in certain attributes/variables, but the replacement item is still capable of performing its designed safety function, the replacement item and the original item shall be considered equivalent. For example, a material substitution from 304 to 304L stainless steel may have no impact on the replacement item performing its safety function. The resolution of any differences shall be documented. If the differences cannot be reconciled, then one of the following actions must be taken:

  1. Remove the replacement item and substitute an equivalent alternate item.

  2. Initiate a Design Change Notice (DCN) to allow the use of the installed nonequivalent replacement part.

2.5 Acceptance Process

2.5.1 Verification that the Item is Commercial Grade

A. Spare and replacement parts for use in SAFETY-RELATED applications may have been procured from vendors who maintained established, documented, and audited Quality Assurance Programs acceptable to nuclear industry standards, (i.e., 10 CFR 50, Appendix B, ANSI N45. 2, etc.), and who accepted the responsibility of 10 CFR 21. Installed spare and replacement items procured from vendors of this type, who were listed on the TVA's Approved Suppliers List at the time, and who provided adequate documentation (i.e., CMTRs, MTRs, Certificates of Compliance, etc.), indicate that the spare and replacement items were procured as QA Level I. This is sufficient to provide a high level of assurance that the items were acceptable spare or replacement items that would not degrade the capability to the host equipment to perform its intended SAFETY-RELATED function(s).

B. If at the time of procurement the spare or replacement item was subject to the requirements in A above, i.e., nuclear unique, the procurement should have been to the QA Level I requirements. However, some purchases were made with the misconception that QA Level II was acceptable (without documentation) as well as more economical. If the replacement item should have been procured to QA Level I requirements, but was specified as QA Level II on the procurement contract, it must be investigated and evaluated to determine if the documentation needed was actually included with the shipment and retained in the procurement documentation package, or is still available from the vendor.

   If the replacement item was not procured to the requirements of QA Level I, but the item was installed in a SAFETY-RELATED application, then the item must be evaluated for acceptance, and dedicated to its SAFETY-RELATED end use. TVA must accept responsibility for Part 21 from the time the item was dedicated.

2.5.1 Verification the Item is Commercial Grade (continued)

C. Spare and replacement items intended for use in SAFETY-RELATED applications may have been unavailable in "nuclear grade," or in compliance with a Quality Assurance Program acceptable to the nuclear industry, or the manufacturer/supplier may have dropped the QA Program in between the original manufacture and the time when replacement items were required. Spare and replacement items in this category are, or may have become, commercial grade items (CGI). To be treated as a CGI, the item must meet the following definition of a CGI:

- Not subject to design or specification requirements that are unique to nuclear facilities, and
- Used in applications other than nuclear facilities, and
- Is to be ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (for example, a catalog.) (See EPRI NP-5652, paragraph 1.1.3).

NOTE *Caution must be exercised with respect to the first condition above, because in the 1970s several manufacturers and suppliers made special efforts to set up "nuclear grade" parts, with special part numbers, etc., assigned to otherwise commercial grade items. The key phrase here is: "design or specification requirements that are unique to nuclear facilities."*

D. Spare and replacement items intended for SAFETY-RELATED applications meeting all three of the criteria above, are deemed to be commercial grade items. QA Level II items are items procured as non-safety and then accepted to a SAFETY-RELATED end use using the evaluation and dedication processes detailed in this SSP. The acceptance is documented by use of the appropriate forms provided in the appendices to this SSP.

E. Complete Appendix B, page 2, to document that the QA Level II procured item meets the commercial grade item definition. If documentation exists from the vendor that substantiates the vendor provided the item under its nuclear quality assurance program meeting 10 CFR 50, Appendix B, the replacement item can be considered for reclassification to QA Level I. Before this reclassification occurs, it must be verified that the vendor was on TVA's Acceptable Suppliers List (ASL) at the time of procurement, and the vendor understood and accepted the responsibilities imposed by 10 CFR 21. If the replacement item is reclassified from QA Level II to QA Level I, the commercial grade acceptance process which follows will <u>not</u> be applicable.

2.5.2 Selection of Critical Characteristics for Acceptance (Reference Appendix C)

A. For replacement items purchased as commercial grade and accepted to a SAFETY-RELATED function, the critical characteristics for design that made the original part acceptable for its use should also be present in the replacement part. Certain critical characteristics for design are selected for verification during the acceptance process. When selecting the appropriate critical characteristics for acceptance, the replacement part's intended design safety functions should be considered. Using engineering judgment, the appropriate critical characteristics for acceptance should be selected for verification to provide reasonable assurance the item installed was the item specified. The technical evaluation and the acceptance process assure that the installed item will perform the SAFETY-RELATED functions required of the original part. The selected critical characteristics for acceptance and the associated acceptance criteria shall be documented on Appendix C.

NOTE *EPRI NP-5652 "Guideline for the Utilization of Commercial Grade items in Nuclear Safety-Related Applications (NCIG-07)" provides additional guidance for determining Critical Characteristics and how to verify them. All the information in NP-5652 is applicable to this SSP, as well as guidance conveyed in NRC Generic Letter 89-02 and NRC Generic Letter 91-05.*

NOTE *EPRI NP-5652 provides additional detail on ACCEPTANCE METHOD and ACCEPTANCE CRITERIA.*

2.5.3 Selecting Acceptance Method(s) (See Form at Appendix C)

A. The methods of acceptance to be employed in verifying selected critical characteristics in the replacement item are consistent with EPRI NP-5652. There are four acceptable methods of acceptance:

1. Special Inspections and Tests

2. Commercial Grade Survey of Supplier

3. Source Verification

4. Item/Supplier Performance History

B. In retrofitting the acceptance of replacement items installed into the plant, there are few, if any, of the previous procurements that provide documentation to support "Method 2: Commercial Grade Survey of Supplier," or "Method 3: Source Verification," or "Method 4: Supplier/Item Performance History." Thus, most evaluations for acceptance of previously procured items installed into the plant in SAFETY-RELATED applications will involve some form of "Method 1: Special Inspections and Tests."

C. Post-installation testing performed at the time the previously procured part was installed into the plant may be taken credit for if it can be demonstrated that the test verified in an acceptable manner one or more of the critical characteristics.

2.5.3 Selecting Acceptance Method(s) (See Form at Appendix C) (continued)

D. Receipt Inspection performed at the time the previously procured part was received may be used to verify part number, and possibly other critical characteristics if they are specifically included in the contract, and verified on the Inspection Report.

E. Other Quality Control, or Quality Assurance events or activities may be utilized if the procedures used demonstrate the controlled verification and/or acceptance of a specific attributes.

F. In some cases additional confirmation of the critical characteristics may be required that involve lab or bench testing of the part, or a sample lot taken from the total population of the parts. This testing may involve:

- Nondestructive inspections (NDI) such as configuration inspections, ultrasonic examination of wall thickness, dye penetrant examination for discontinuities, etc.

- Nondestructive testing (NDT) such as Rockwell/Brinnel Hardness Testing of metal parts, alloy identity checks, durometer hardness of rubber products, load testing of specific items to nondestructive tables, voltage readings, dialectric strength, current capacity, response time, temperature sensitivity, etc.

- Destructive testing which results in the sample part, or sample lot of parts, being unusable in the intended end use, and includes such examples as bolts stretched to ultimate yield, or loaded in shear until actual sheer occurs, flash point testing, or BTU rating tests (specific heat) of fuels, viscosity testing of greases, etc. This classification also includes burning samples of metals to determine composition (Material Test Report - MTR), and testing for leachable halogens in insulation or gasketing materials.

G. Appendix D illustrates the format for developing and documenting special tests. The test results shall be included in the dedication package along with documentation of which critical characteristics they were intended to verify, and an interpretation of how they achieved that verification.

H. Acceptance by ex post facto tests (See Forms for use at Appendices D, E, F, and G).

In some cases it may be required to retrofit the acceptance of CGIs by performing tests (NDI, NDT, or destructive) on representative samples of the installed items. To accomplish this, a representative sample lot must be gathered either from inventory or from the installed applications, or a combination of the two.

- Samples taken from inventory must have been purchased at approximately the same time as those already installed in the plant, on the same contract, from the same vendor, and the same lot as near as possible to determine, (same Receipt Inspection Report, for example).

2.5.3 Selecting Acceptance Method(s) (See Form at Appendix C) (continued)

- Samples taken from installed locations must be demonstrated to have been procured at the same time, from the same vendor, and the same lot, and must be replaced with acceptable items at the time of their removal from the plant. This replacement should be done by writing a Work Request.

- In some cases, under certain conditions, it may be possible to use parts in the sample lots taken from populations procured within a reasonably proximate time period, for example, within one year, if it can be verified that there is no significant differences in the part's design, material, or manufacturing process. Before this method is attempted, it should be discussed with management, and thoroughly documented with the rationale and justification for believing this approach is acceptable.

  Testing should be as in 2.5.3 above.

I. Appendix C should be completed to document by which acceptance method each critical characteristic was verified along with a reference to the verification document (e.g., special test/inspection procedure).

Appendix D should be utilized when a special test/inspection is required to verify one or more critical characteristics for acceptance. Appendix F should be used if the special test/inspection is to be performed by WBN QC.

Appendix E should be completed to document critical characteristics for acceptance verified by post-installation tests either at the time of installation or a later date.

2.5.4 Dedication

Dedication is the point in time after which a commercial grade item is accepted for a SAFETY-RELATED application and deficiency reporting (10 CFR 21) becomes the responsibility of the party performing the acceptance. (See Glossary of terms and Definitions in EPRI NP-5652.)

A. Commercial grade items intended for SAFETY-RELATED applications are acceptable for use in those applications only after the technical evaluation is complete and all the requirements for acceptance are met. If the CGI can be accepted by documentation reviews alone, then the process can be completed rather quickly, and the part made available for use in the plant. If there are conditional events or activities attached to the acceptance, such as post-installation tests, etc., then dedication for use in the SAFETY-RELATED application cannot occur until after the test is performed.

2.5.4 Dedication (continued)

B. In retrofitting acceptance of items, it is difficult to determine exactly how tests were performed and their impacts on verifying selected critical characteristics. Credit can be taken for signatures by Quality Assurance or Quality Control personnel involved at the time. Post-installation tests to Maintenance Instructions (MI), Surveillance Instructions (SI), etc., may be taken credit for if it can be demonstrated that the test did prove, or somehow verify, one or more of the selected critical characteristics of the replacement item. The signed Maintenance Request (MR) can be evidence that the MI of SI was performed.

2.6 Documentation

2.6.1 Acceptance Packages

A package shall be compiled which includes completed forms from the applicable appendixes of this SSP. The appropriate reviews shall be documented by signature and date on Appendix A. The package of completed forms will provide objective evidence that for each item evaluated:

- An adequate technical evaluation was performed to specify the correct requirements and demonstrate the item's suitability for its intended application, and
- The acceptance process was implemented
- The appropriate reviews of the forms included, as well as the entire package, have been made.

2.6.2 Other Documentation

A. Appendix G - Tagging Instructions: There may be a period during which the activities of RIP and some materials groups overlap. The Materials Improvement Project (MIP) group will eventually requalify all the material and replacement items found in inventory. If RIP evaluates and finds items acceptable, and if there are items remaining in stock, an Appendix G Tagging Instruction should be filled out to indicate that the parts have been accepted by RIP, and that an acceptance package exists.

B. If the evaluation of an item indicates the part is not acceptable for its SAFETY-RELATED end use, a Work Request shall be filled out by the RIP engineer to have the unacceptable item replaced in the plant with an acceptable item. The Work Request shall be sent to the appropriate plant group for tracking and monitoring. A copy of the documentation package demonstrating the acceptability of the new part and a copy of the Work Request shall be added to the package generated that found the installed part to be unacceptable.

2.7 Revisions

2.7.1 Revisions to PPSP packages prepared after issuance of this SSP, and in accordance with it, shall be made using the same guidelines, principles, and forms contained herein.

Administrative changes and corrections of typos may be made by line through, initial and date, and adding the correct information in close proximity. Other changes may be made in accordance with the site procedures.

2.7.2 There are numerous PPSP packages that have been prepared to various procedures, and various revisions of those procedures. The forms, format, and arrangement of these PPSP packages are different than those presented by this SSP.

Revisions made to prior PPSP packages will be made to the philosophy and approach of this SSP as much as possible. The forms in prior PPSP versions do not need to be replaced to meet the intent of this SSP. The forms in the prior PPSP packages may be revised by line through, initial and date, and add the correct information nearby.

If the forms in prior PPSP packages must be replaced they may be replaced with the forms from this SSP. It is recommended that the new form have the SSP identification in the upper right hand corner removed. Also, if the new **ATTACHMENT** designation appears it will create confusion, a notation should be added to clarify the forms usage.

3.0 RECORDS

3.1 QA Records

The following documents are QA records and are verified and then transmitted to Document Control and Records Management (DCRM) by the responsible organization in accordance with the DCRM program.

- Safety-related and quality-related Previous Procurement Substantiation Process (PPSP) Packages.

3.2 Non-QA Records

The following documents are non-QA records and are handled in accordance with the DCRM program.

- Engineering Procurement Packages not identified as a QA Record.

4.0 DEFINITIONS

ACCEPTABLE SUPPLIER LIST (ASL)

A list of suppliers who have been evaluated by Nuclear Quality Assurance (NQA) Materials and Procurement Quality Department (MPQD) and determined to have the required elements of the applicable QA program relative to the ITEM(s) or service(s) supplied.

ACCEPTANCE

The employment of methods to produce objective evidence which provides reasonable assurance that the ITEM received is the ITEM specified.

ACCEPTANCE CRITERIA

A limit or limits placed on the variation, including appropriate tolerances, permitted in the characteristics of an ITEM expressed in definitive engineering terms such as dimensional tolerances, chemical composition limits, density and size of defects, temperature ranges, time limits, operating parameters, and other similar characteristics.

ACCEPTANCE METHOD

Methods employed to produce objective evidence which provides reasonable assurance that an ITEM received conforms to specification requirements. Four methods are typically considered:

1. Special tests and inspections (including engineering evaluation)
2. Commercial Grade Survey of supplier.
3. Source verification
4. Acceptable supplier/ITEM performance record.

BASIC COMPONENT

A plant structure, system, component, or part thereof necessary to assure:

A. The integrity of the reactor coolant pressure boundary, or

B. The capability to shut down the reactor and maintain it in a safe shutdown condition, or

C. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referenced in 10 CFR 100.11. In all cases, "Basic Component" includes design, inspection, testing, or consulting services important to safety that are associated with the component hardware, whether these services are performed by the component suppliers or others.

NOTE *The term SAFETY-RELATED and the term BASIC COMPONENT are synonymous for the purposes of this SSP.*

4.0 DEFINITIONS (continued)

BULK ITEM PROCUREMENT REVIEW (BIPR)

Engineering review and evaluation of previously procured and installed bulk items used in safety-related applications. This review will address bulk commodity items procured without a specific end use as well as the procurement of bulk construction materials.

CERTIFICATE OF COMPLIANCE

A written statement, signed by a qualified individual, attesting that the ITEMs or services are per specified requirements and accompanied by additional information to substantiate the statement. (For ASME Code applications, the definition of "CERTIFICATE OF CONFORMANCE" shall apply when a CERTIFICATE OF COMPLIANCE is required.)

CERTIFICATE OF CONFORMANCE (COC)

A written statement, signed by a qualified party, certifying that ITEMs or services comply with specific requirements.

CLASS 1E

The classification of the electrical equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal, or otherwise are essential in preventing significant release of radioactive material to the environment.

COMMERCIAL GRADE ITEM (CGI)

An ITEM which satisfies all three of the following criteria:

1. Not subject to design or specification requirements that are unique to nuclear facilities or activities and

2. Used in application other than nuclear facilities or activities and

3. Ordered from the manufacturer or supplier on the basis of the specifications set forth in the manufacturer's published product description (for example, a catalog).

COMMODITY ITEM

An item having a generic application throughout a nuclear unit, which lends itself to bulk procurement (e.g., nuts, bolts, o-rings, resistors, etc.) Commodity items are usually procured in bulk quantities without a specific end use specified.

CONDITIONAL ACCEPTANCE (Conditionally Dedicated)

The process where Engineering has determined an ITEM has undergone the specified ACCEPTANCE process except for pre- or post-installation testing requirements. These ITEMs are released to the field for completion of the ACCEPTANCE process prior to plant or system operation. This process is sometimes referred to as "conditionally dedicated."

4.0 DEFINITIONS (continued)

CREDIBLE FAILURE MECHANISM

The manner by which an ITEM may fail, degrading the ITEM's ability to perform its safety-related function(s).

CRITICAL CHARACTERISTICS FOR ACCEPTANCE

Identifiable and measurable attributes/variable of a COMMERCIAL GRADE ITEM, which once selected to be verified, provide reasonable assurance that the ITEM received is the ITEM specified.

NOTE *CRITICAL CHARACTERISTICS FOR ACCEPTANCE are a subset of CRITICAL CHARACTERISTICS FOR DESIGN.*

CRITICAL CHARACTERISTICS FOR DESIGN

Those properties or attributes which are essential for the ITEM's form, fit and functional performance. CRITICAL CHARACTERISTICS FOR DESIGN are the identifiable and/or measurable attributes of a replacement ITEM which provides assurance that the replacement ITEM will perform its design function.

DEDICATION

The point in time after which a COMMERCIAL GRADE ITEM is accepted for a SAFETY-RELATED application and deficiency reporting becomes the responsibility of the party performing the ACCEPTANCE.

ENGINEERING ANALYSIS

A process of mathematical or other logical reasoning that leads from stated premises to the conclusion concerning specific capabilities of equipment and its adequacy for the application. An analysis may be utilized to verify a CRITICAL CHARACTERISTIC FOR DESIGN.

ENVIRONMENTAL QUALIFICATION (EQ)

The process of documenting that a component has been manufactured using materials which are capable of withstanding the operational stresses, both normal and post-accident, which are induced by the component's environment at its installed location, and that it will be capable of performing its required accident mitigating function.

EQUIVALENCY EVALUATION

A technical evaluation performed to confirm that an alternate replacement ITEM (not identical to the original) will satisfactorily perform its intended function once in service. This term is synonymous with "Equal-To-or-Better-Than" evaluation.

HOST (OR PARENT) EQUIPMENT

That equipment or component which receives and provides lodgment for the ITEM being procured or houses the ITEM for which services are procured. For example, a valve is the host for a procured valve stem.

4.0 DEFINITIONS (continued)

INDEPENDENT REVIEW

Review completed by personnel not having direct responsibility for the work function under review, regardless of whether they operate as a part of an organizational unit or as individual staff members.

NOTE *The INDEPENDENT REVIEW shall be performed by an NE Engineer (or other knowledgeable individual authorized by the PEG Manager or designee), other than the Engineer who prepared the procurement document, who has access to pertinent information and has an adequate understanding of the requirements and intent of the procurement document to ensure adequacy, correctness, and completeness of technical and quality requirements. The Independent Reviewer must not be the preparer's direct Supervisor.*

If in an exceptional circumstance, the engineer's supervisor is the only person technically qualified to perform the review, the design verification review will be conducted by the supervisor provided that:

1. The other provisions of the Regulatory Guide 1.64 and ANSI N45.2.11 Section 6.1 are satisfied.

2. The justification is individually documented and APPROVED in advance by the supervisor's management.

3. Quality Assurance will audit the use of supervisors as design verifiers to guard against abuse.

INFORMATION ONLY (IO)

A stamp used to indicate a status given to documents supplied by the vendor to give immediate general information about some material or equipment that the engineer may require. The stamp indicates that no detailed technical review of the document was performed. Normally, this stamp is used only to acknowledge receipt of the document by TVA and to distribute it to the affected groups and to the files for information.

ITEM

Any level of unit assembly, including structure, system, subsystem, subassembly, module, component, equipment, part, or material.

4.0 DEFINITIONS

LIKE-FOR LIKE REPLACEMENT

A replacement item which has identical physical and performance characteristics to the item being taken out of service, and:

(1) was purchased at the same time from the same vendor as the item being removed,

(2) was purchased at a different time from the same vendor and verified to be identical in design, material and manufacturing to the item being removed. (Generic Letter 91-05, NRC)

LIMITED QA PROGRAM

A system of special management controls which is applied to Nuclear Power (NP) special programs and special features in order to ensure that they are appropriately controlled (subset of quality related).

MAINTENANCE RECORDS

For the purpose of this SSP, considered to be any document which would identify those replacement components parts and items which were installed on Basic Component [i.e., Maintenance Request (MR), Surveillance Instructions (SIs), Change Control Package, etc.].

MAMS DESCRIPTION APPROVAL CODE (DA)

Indicates whether the item's description has been approved for procurement purposes, and, if so, what type of procurement process is approved.

A. "Y" DA Code - Indicates that the description (including the QA level) is correct, correct attachments (Materials Data Base contains all technical, documentation, and quality assurance requirements needed to procure the item) are issued with the Recommended Stock Reorder (RSR), and that the item is approved for automated procurement by NE and SQA.

B. "M" DA Code - Indicates that the description (including QA level) is correct and the item is approved for manual procurement which has received a review by NE and SQA.

C. "N" DA Code - Indicates that the description of the item has not been approved by NE and SQA.

MATERIALS MANAGEMENT SYSTEM (MAMS)

An integrated computer-oriented system which provides support for procurement of material and replacement parts.

MATERIALS IMPROVEMENT PROJECT (MIP)

Site project to quality for acceptance all current Power Stores inventory for use in the plant. The project supports the Quality Release Program.

4.0 DEFINITIONS (continued)

NON-SAFETY-RELATED EQUIPMENT

Equipment used in the plant which does not satisfy the safety-related definition.

ORIGINAL ITEM

An item which came as part of the structure or installed equipment. The installed structure or equipment is the licensing design baseline including any subsequent design or licensing commitment changes.

POST-INSTALLATION TESTS

Activities conducted after installation of a commercial grade item to verify required critical characteristics prior to placement in operation. An element of the "Special Tests and Inspection" method to accept an item for safety-related use.

PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS (PPSP)

The process used to verify that previous procurement for spare and replacement items have not or will not invalidate the seismic or environmental qualification of a Basic Component. Further, where QA Level I, II, and III procured items are reviewed, the process to ascertain and provide documented evidence that the procured item meets the technical and quality requirements for the specified applications.

PROCUREMENT DOCUMENT

Written form used to define the requirements which items or services must meet to be considered acceptable. Such forms include Contracts, Purchase Requisitions, Purchase Orders, Letters of Intent, Work Orders, Proposals, Drawings, Specifications, Instructions used to define requirements, ledger cards, TVA forms 2652, 201, 10606, 6124B, 4139, PI-005, 9625 and CL-850.

PROCUREMENT ENGINEERING GROUP (PEG) [FORMERLY CEG/MAG]

Provides engineering review and evaluation of all current and future procurements. This is for recurrence control and to support the Quality Release Program.

PROCUREMENT SPECIFICATION

Engineering specification containing technical and quality requirements for the procurement of an item or service.

NOTE *Quality Assurance Levels are for internal TVA use, only to receive, handle, and issue an item. They do not determine procurement or engineering requirements. They are defined as follows:*

QUALITY ASSURANCE LEVEL I

Those materials, components, and spare parts that are supplied to TVA as qualified for basic-component use.

4.0 DEFINITIONS (continued)

QUALITY ASSURANCE LEVEL II

Those materials, components, and spare parts that are supplied to TVA as commercial grade and dedicated by TVA for use as "Basic Components" [Quality Level I(B) at SQN].

QUALITY ASSURANCE LEVEL III

Those materials, components, and spare parts related to basic components, that do not affect the safety-related function of the basic components. Also includes any materials, components, or spare parts of limited QA and quality-related items that have attributes that are specifically required to meet engineering or regulatory requirements which are not basic components.

QUALITY ASSURANCE LEVEL 0 (NON-QA)

An item which does not have Nuclear quality requirements

REPLACEMENT ITEMS PROJECT (RIP)

A project to correct programmatic deficiencies in the control of the procurement and dedication process of commercial grade items for safety-related applications. It is responsible for determining that:

(1) All replacement items installed in 10CFR50.49 Environmentally Qualified components, and

(2) All QA Level I and Level II seismically sensitive, electrically active (SSEA) installed replacement parts, and

(3) Commercial grade replacement items installed in basic components have not negated any seismic or environmental qualifications, or otherwise degraded the capability of the basic component to perform its intended safety-related function(s).

Items as in (1) and (2) installed prior to June 5, 1991, are within the scope of the RIP program. Items installed after June 5, 1991, are not within the scope of the RIP program.

REPLACEMENT ITEMS PROJECT HISTORICAL RECORD

A maintenance history evaluation document identifying the potential for parts, device, equipment, or material replacement activity. RIP historical records are reviewed documented, in accordance with AI-1.37. [Historical records reviewed include Maintenance Requests (MRs), Surveillance Instructions (SIs), or Preventive Maintenance (PM)].

REPLACEMENT ITEM

Any part, device, subassembly, component or piece of material installed as a unit into a host structure, system, or component to perform the function(s) of a part, device, subassembly, component or piece of material of like or similar design. (See also, definitions for: "Like-for-like Replacement," and "Similar Replacement.")

4.0 DEFINITIONS (continued)

SAFETY-RELATED COMPONENT

A plant structure, system, component or part therof, necessary to assure:

1. The integrity of the reactor coolant pressure boundary,

2. The capability to shutdown the reactor and maintain it in a safe shutdown condition, or

3. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite radiation exposures comparable to those referred to in 10CFR Part 100.11 (definition also applies to a basic component per 10CFR21).

All basic components (nuclear safety-related) and other critical (non-nuclear safety-related) items. All items marked "Q" on the WBN Q-List are considered safety-related.

SEISMIC/STRUCTURAL QUALIFICATION

The process of documenting that Category I and I(L) structures, systems and components are capable of withstanding design basic loading conditions (including normal, seismic, transient, and accident loads) in conformance with applicable design criteria.

SOURCE VERIFICATION

Activities witnessed at the supplier's facilities by the purchaser or its agent for specific items to verify that a supplier of a commercial grade item controls the critical characteristics of that item, as a method to accept the item.

SPECIAL TESTS AND INSPECTIONS

Activities conducted after receipt of a commercial grade item to verify one or more critical characteristics as a method to accept the item for safety-related use.

STANDARD RECEIPT INSPECTION

Activities conducted upon receipt of items, including commercial grade items, in accordance with ANSI N45.2.2-1978 or ANSI/ASME NQA-1-1986 and NQA-2-1986 to check such elements as the quantity received, part number, general condition of items, and damage.

SUPPLIER

The organization furnishing a commercial grade item or basic component. This could include an original equipment manufacturer, part manufacturer, or distributor.

TECHNICAL EVALUATION

An evaluation performed to assure that the correct requirements for an item are specified in a procurement document.

5.0 REFERENCES

5.1 Source Documents

A. ANSI N45.2.11, *Quality Assurance Requirements for the Design of Nuclear Power Plants.*

B. ANSI N45.2.13, *Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants*

C. TVA-NQA-PLN89-A *Nuclear Quality Assurance Plan*

D. STD-4.10.50 *Procurement of Materials, Components, Spare Parts and Services*

E. STD-6.4 *Equipment History and Failure Trending*

F. 10CFR21 *Reporting of Defects and Noncompliance*

G. NRC Generic Letter 89-02 "Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products."

H. NRC Generic Letter 91-05 "Licensee Commercial-grade Procurement and Dedication Programs"

5.2 Interface Documents

SS-E18.10.01 *Environmental Qualification Requirements for Safety-Related Electrical Equipment*

A. NEP 5.1 *Design Output*

B. NEP 5.2 *Review*

C. SSP-2.10 *Vendor Manual Control*

D. SSP-10.01 *Procurement of Materials and Services*

E. SSP-10.02 *Material Receipt and Inspection*

5.3 Other Documents

A. SSP-6.04 *Equipment History and Failure Trending*

B. SSP-6.09 *Repair/Replacement of ASME Section XI Components*

C. General Construction Specification G-29 *Process Specifications for Welding, Heat Treatment, Nondestructive Examination, and Allied Field Fabrication Operations*

D. General Engineering Specification G-62 *Material Documentation and Acceptability Requirements for ASME Section III Applications*

E. NUREG 0588, Environmental Qualification

5.3 **Other Documents** (continued)

Regulatory Guide 1.64 *Quality Assurance requirements for the Design of Nuclear Power Plants*

Regulatory Guide 1.89 *Environmental Qualification of Certain Electrical Equipment Important to Safety for Nuclear Power Plants*

5.4 **Developmental Documents**

A. EPRI NP-5638, Guidelines for Preparing Specifications for Nuclear Power Plants.

B. EPRI NP-5652, Guideline for the Utilization of COMMERCIAL GRADE ITEMs in Nuclear Safety Related Applications (NCIG-07.)

C. EPRI NP-6629, Guideline for the Procurement and Receipt of Items for Nuclear Power Plants.

D. EPRI NP-6895, Guideline for the Safety Classification of Systems, Components and Parts Intended for Use in Nuclear Power Plants.

E. EPRI NP-6406, Guidelines for the Technical Evaluation of Replacement Items in Nuclear Power Plants (NCIG-11.)

F. IEEE-323-1974, Standard for Qualifying CLASS 1E Equipment for Nuclear Power Generating Stations.

QA RECORD
QA LEVEL _____
( ) SR ( ) NSR

APPENDIX A
Page 1 of 1

PREVIOUS PROCUREMENT PACKAGE SUBSTANTIATION PROCESS

Package Cover Sheet (PPSP) Package No._____ Page No._____
Item Description _____

Supplements/Supersedes RIMS No _____

TOTAL PAGES: _____
Source: _____
TIIC Number: _____

ENGINEERING EVALUATION SUMMARY (SHEETS ATTACHED)

☐ TECHNICAL EVALUATION FORM (B) ☐ POST-INSTALLATION TESTING REQUIREMENT(E)
☐ CGI ACCEPTANCE FORMS (C) ☐ QC SPECIAL INSPECTION FORM (F)
☐ SPECIAL TEST/INSPECTION PROC (D) ☐ MATERIAL TAGGING INSTRUCTIONS (G)
☐ OTHER:

	R0	R1
PREPARED BY:	_____ DATE	_____ DATE
INDEPENDENT REVIEWER:	_____ DATE	_____ DATE
APPROVED BY:	_____ DATE	_____ DATE
QA :	_____ DATE	_____ DATE
RIMS NUMBER		

APPENDIX B
Page 1 of 5

TECHNICAL EVALUATION FORM

(PPSP) PACKAGE NUMBER: _____ PAGE NO._____
PROC. REF. ITEMS: _____ QA LEVEL _____
REF. DOCUMENT: _____

PART IA - REPLACEMENT ITEM END USE:

HOST EQUIPMENT

HOST EQUIPMENT DESCRIPTION: _____

UNID No(s) _____ System No._____

IDENTIFY POTENTIAL OR ACTUAL USES TO OBTAIN THE MOST STRINGENT CLASSIFICATION:
☐ BASIC COMP. ☐ NOT A BASIC COMP. ☐ 10 CFR 50.49 ☐ QUALITY RELATED
☐ SEISMIC

BASIS: _____

REFERENCES (Drawings, Tech. Manual, FSAR, etc.) Q-LIST NO._____REV.____

IF 10 CFR 50.49: EQ BINDER NO._____ REV._____

PART IB - ITEM DATA:

ITEM REQUESTED

TIIC or P/N(s) or PACKAGE ITEM NO.:_____
ITEM FUNCTION: _____

ITEM CLASSIFICATION BASED ON FUNCTION:
☐ BASIC COMP. (SAFETY-RELATED) - AS DESCRIBED ABOVE (BASIS NOT REQUIRED)
☐ NOT A BASIC COMP. - PROVIDE BASIS

BASIS: _____

REF. SPEC., DRAWING, PROCEDURE, ETC.: _____
OTHER _____
☐ SEE ATTACHED SHEET FOR ANALYSIS, BASIS FOR NON-BASIC COMPONENT STATUS
Failure Mode(s)_____

Failure Effect(s)_____

APPENDIX B
Page 2 of 5

TECHNICAL EVALUATION FORM

PPSP PACKAGE NUMBER: _____ Page No._____

SAFETY CLASSIFICATION: ( ) QA LEVEL CHANGE FROM ___ TO ___

HOST EQUIPMENT IS:

( ) NOT A BASIC COMPONENT but the item has specific quality-related attributes that are required to meet engineering or regulatory requirements - item QA level III.

( ) A BASIC COMPONENT:

REPLACEMENT ITEM IS:

( ) NOT A BASIC COMPONENT - procure item QA level III.

( ) NOT A BASIC COMPONENT - procure item non-QA.

( ) A BASIC COMPONENT:

( ) ITEM IS A BASIC COMPONENT - QA Level I.

QA level I, COMPLETE PARTS IV AND V.

( ) ITEM IS A COMMERCIAL GRADE ITEM - QA Level II

- Perform Critical Characteristics for Design Determination (Appendix B, Page 5)
- Perform like-for-like verification (Appendix B, Page 4)
- Perform Engineering Evaluation of Changes (Appendix B, Page 6)
- Perform Critical Characteristics for Acceptance Analysis (Appendix C)
- If special tests/inspections are required - complete the Test Procedure forms (Appendix D, pages 1 and 2)
- If post-installation testing is required - complete the Test Requirement sheet (Appendix E)
- If special QC inspections are required to verify critical characteristics for acceptance, complete Appendix F
- If items remain in stock - temporary tagging should be accomplished using Appendix G.

APPENDIX B
Page 3 of 5

PPSP No. _____ Page No._____

VERIFICATION OF LIKE-FOR-LIKE STATUS
COMMERCIAL GRADE DEDICATION

Like-for-Like Determination (Check all that apply)

_____ Part number of the replacement item is the same as the original item.

_____ Item was procured at the same time as the original item from the same vendor/manufacturer

_____ TVA has verified there has been no changes in the design, materials, or manufacturing processes of the item since the original item was procured

_____ Commodity item procured to a National Standard

Method of verification:

_____ Vendor contact: Source _____

_____ Document review: Reference _____

_____ Physical inspection: Describe _____

_____ Other:_____

_____

Like-for-Like Determination by:_____ Date_____

_____ Item cannot be declared as a Like-for-Like because of:

_____ Design changes

_____ Material changes

_____ Manufacturing process changes

_____ Change in vendor/manufacturer

Equivalency Disposition

_____ Evidence indicates that an adequate equivalency evaluation was performed either by TVA or the manufacturer

_____ A technical equivalency evaluation must be performed for the replacement item - complete remainder of Appendix B

Basis: _____

_____

_____

APPENDIX B
Page 4 of 5

TECHNICAL EVALUATION FORM

PPSP NUMBER: _____ Page No _____

CRITICAL CHARACTERISTICS FOR DESIGN/EQUIVALENCY EVALUATION

From the item being replaced, determine the critical characteristics that are Identifiable and/or Measurable Properties or Attributes which are important to the item's or the Host Equipment's Performance of its Safety-Related Function(s). Also list critical characteristics that provide assurance that the Environmental and/or Seismic Qualifications have not been negated.

CRITICAL CHARACTERISTIC FOR DESIGN	ACCEPTANCE CRITERIA		REFERENCE/ SOURCE
	Original Item	Replacement	

APPENDIX B
Page 5 of 5

TECHNICAL EVALUATION FORM

PPSP Package Number _____ Page No_____

Evaluation Decision:

☐ Replacement Item is equivalent

☐ Replacement Item is not equivalent

Action Required: _____

_____

_____

_____

_____

_____

Disposition of Stock Material: - ☐ N/A ☐ See Internal Notes (Appendix A)

_____

EQ Binder # _____ DCN Request RIMS No._____ MR _____

Procurement/Design Spec _____ Drawing _____ Vendor Manual _____

Other _____

Distribution:

( ) DCN Required ( ) DCR Initiated

APPENDIX C
Page 1 of 2

COMMERCIAL GRADE ITEM ACCEPTANCE

PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS

PPSP Package No. _____ Page No _____

COMMERCIAL GRADE DETERMINATION

AT THE TIME OF THE PROCUREMENT:

	TRUE	FALSE	
1.	☐	☐	The item was not subject to design or specification requirements that were unique to Nuclear facilities
2.	☐	☐	The item was used in applications other than Nuclear facilities and activities
3.	☐	☐	The item was ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (such as a catalog)

If the answer to all three questions are true, it is acceptable for the item to be procured as commercial grade and dedicated to a safety-related application.

If the answer to question 1 is false:

Did TVA choose to procure the item as CG? ☐ YES ☐ NO

Did the vendor/supplier provide documentation? ☐ YES ☐ NO

Is the documentation adequate to support upgrade to QA Level I? ☐ YES ☐ NO

APPENDIX C
Page 2 of 2

PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS

PPSP Package No _____ Page No_____

CRITICAL CHARACTERISTICS FOR ACCEPTANCE

For the replacement item, select the CRITICAL CHARACTERISTICS FOR ACCEPTANCE that are Identifiable and/or Measurable Properties or Attributes that once verified provide reasonable assurance the item received (installed) is the item that was specified. Select these from the CRITICAL CHARACTERISTICS FOR DESIGN listed on Appendix B, page 5 and also include applicable product identification characteristics.

CRITICAL CHARACTERISTICS	ACCEPTANCE CRITERIA	ACCEPT METHODS (1)	REFERENCE/ SOURCE

(1)
1 STI - Special Tests and Inspections
1 PIT - Post-Installation tests and Inspections
2 - Commercial Grade Survey
3 - Source Verification
4 - Acceptable Supplier/Item Performance Record

ENGINEERING EVALUATION

PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS

APPENDIX D
Page 1 of 2

SPECIAL TEST/INSPECTION PROCEDURE

PPSP Package No. _____ Page No. _____

TIIC No. _____

Item Description _____

PURPOSE: _____

SCOPE: _____

JUSTIFICATION: _____

ASSUMPTIONS: _____

POPULATION SIZE _____ SAMPLE SIZE _____ SOURCE _____

INVESTIGATION REQUIRED [ ] NDI [ ] NDT [ ] DESTRUCTION TEST

TYPE OF TEST(S) _____

TESTING LAB(S) _____

PERFORM TEST(S) TO: _____

SOURCE: _____

ENGINEERING EVALUATION

PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS

APPENDIX D
Page 2 of 2

SPECIAL TEST/INSPECTION PROCEDURE

PPSP Package No. _____ Page No. _____

ADDITIONAL
REQUIREMENTS: _____

SOURCE: _____

CRITICAL CHARACTERISTICS BEING VERIFIED:	ACCEPTANCE CRITERIA	RESULTS SAT/UNSAT

TESTED BY: _____ DATE _____

TEST RESULTS RECEIVED (DATE) _____

REVIEW/EVALUATION/ANALYSIS OF TEST RESULTS:

_____

BY: _____ DATE: _____

ALL ASSUMPTIONS RESOLVED [ ] YES [ ] NO

Based on the Test Results:

ITEM IS [ ] ACCEPTABLE [ ] UNACCEPTABLE/INDETERMINATE

Based on the conformity of the critical characteristics verified above.

APPENDIX E
Page 1 of 1

POST-INSTALLATION TEST REQUIREMENT SHEET

PPSP PACKAGE NUMBER: _____ Page No _____

TIIC or P/N's _____

When required to verify a Critical Characteristic for Acceptance, the following post-installation testing, part conditioning, and/or calibration must be completed prior to declaring the part acceptable for safety-related use and declaring the component, containing the item, operational.

Critical Characteristic For Acceptance	Instruction or Procedure Including Acceptance Criteria	If previously performed, show rev. and date of test

If procedures are referenced above, the originating engineer certifies, by signature below, that these procedures have been reviewed and do verify the critical characteristic(s) as selected and listed above.

_____
Originating Engineer Signature/Section/Date
Extension _____

Work/Testing criteria planned on:

MR No./Workplan No:
_____

_____ _____
Planner/Date Ext.

All test(s) have been performed and results are acceptable. Component can be declared operational.

_____ _____
Cognizant Engineer/Date Ext.

*cc: Modifications Manager
Maintenance Supervisor
QC Materials: Attachment to Special Receipt Inspection Requirement Sheet/Contract File

APPENDIX F
Page 1 of 1

QC SPECIAL INSPECTION REQUIREMENT SHEET

PPSP PACKAGE NUMBER: _____ Page No. _____

TIIC or P/N's _____

( ) Material Tagging At Receipt Is Required. Complete Appendix G.

Critical Char For Acceptance	Instruction or Procedure Including Acceptance Criteria	QC INITIALS/DATE	
		SAT	*UNSAT

☐ Engineering Inspection At Receipt Is Required.

_____
Originating Engineer Signature/Section/Date
Extension _____

QC Inspection Performed ____ SAT
____ UNSAT

_____
QC Inspector / Date

*Remarks _____

Upon completion attach this Form to the QC Inspection Report and document SAT or UNSAT under Special Inspections.

APPENDIX G
Page 1 of 1

MATERIAL TAGGING INSTRUCTIONS

PPSP PACKAGE NUMBER: _____ Page No. _____

TIIC or P/Ns_____

TAGGING INSTRUCTIONS:

After the completion of an acceptable receipt inspection the material **shall** be tagged with the following identification:

QA LEVEL _____

NOTE Normally one tag need be specified except when a 10 CFR 50.49 item is "CONDITIONALLY DEDICATED," or if "SPECIAL TAGGING" is required.

☐ 10 CFR 50.49
(Items qualified for use in 10 CFR 50.49 applications.)

☐ SAFETY-RELATED CONDITIONALLY DEDICATED
(Items requiring a functional test prior to acceptance. A FUNCTIONAL TEST REQUIREMENT SHEET Appendix E - **shall** be attached to the material and verified.)

☐ QUALITY RELATED
(Items falling into the program as described in the WBN Q-List)

☐ SAFETY RELATED

☐ SAFETY RELATED - CGI

☐ SPECIAL TAGGING
(Engineer to specify any specific requirements or restriction to be tagged on the material, as stated below)

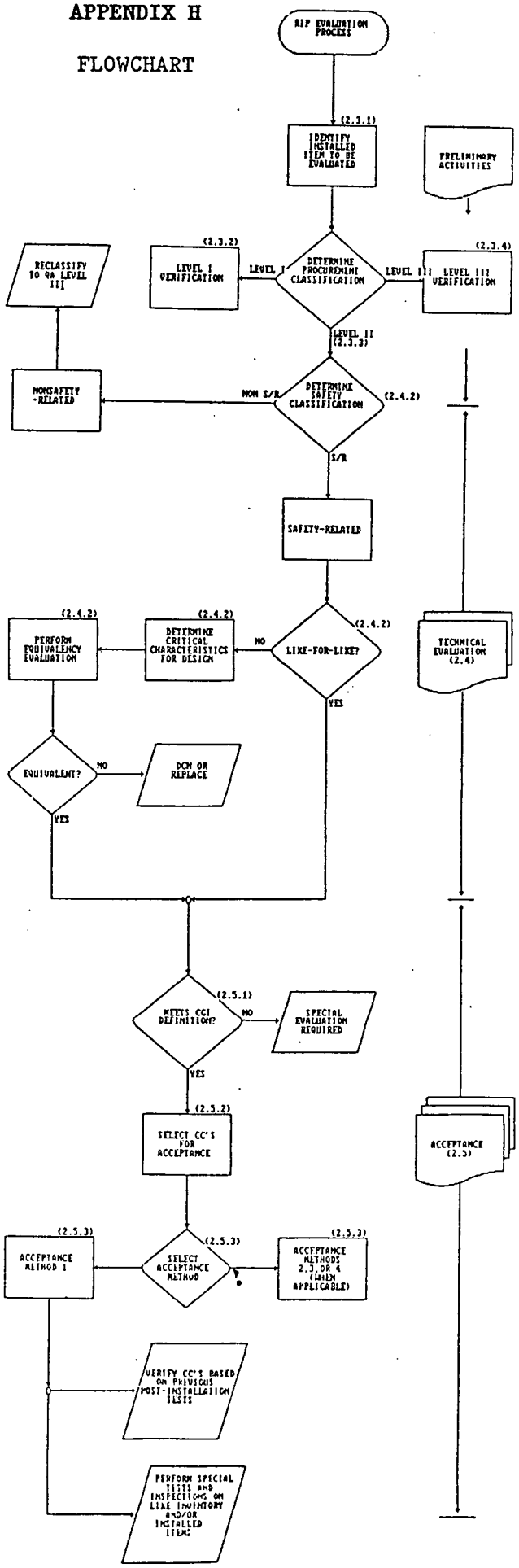
_____
_____
_____
_____
_____

TAGGING SPECIFIED BY:

Engineer _____ / _____
Signature Date

APPENDIX H

FLOWCHART



REVISION LOG

REVISION NUMBER	IMPLEMENTATION DATE	DESCRIPTION OF REVISION
0		Initial issue.

SOURCE NOTES

Page 1 of 1

None

APPENDIX D
Page 1 of 2

REQUIRED BY TECH SPECS? ☐ Yes ☒ No QUALITY-RELATED? ☒ Yes ☐ No REQUIRED USE OF TAs? ☐ Yes ☒ No

WBN PROCEDURE CONTROL FORM SSP-2.03

SECTION 1: REQUEST

Procedure No.	Rev	Title
SSP-10.C	0	EVALUATION OF INSTALLED SAFETY-RELATED REPLACEMENT ITEMS

☒ New Procedure ☐ Revision (markup attached) ☐ Cancellation ☐ Start 2 YR. Clock

Description: PROCEDURE PROVIDES GUIDANCE FOR THE EVALUATION OF RIP INSTALLED SAFETY-RELATED ITEMS. SCOPE IS THE POWER STORES WAREHOUSE AND THE CONSTRUCTION WAREHOUSE. DIRECTS THE PREPARATION OF PREVIOUS PROCUREMENT SUBSTANTIATION PROCESS (PPSP) PACKAGES.

Justification: REPLACES AI-5.19 USED FOR RIP REVIEWS, EVALUATIONS AND DEDICATIONS.

Phone #/Section 1903 / NE

Requestor: J.L. OVERTURF Date: 11/19/91 Supervisor R. M. Johnson Date 11/19/91

SECTION 2: DISPOSITION

☐ Minor Revision ☐ Major Revision ☐ Administrative Hold - Reason:
☒ New Procedure: No.:
☐ Limited-Duration Procedure Sponsor: R. M. Johnson

Periodic Review Documentation

☐ New 2 YR. Review - Turnover date _____ per PAI-5.01 or ~~SSP-8.8~~ for system _____ 1-15-92

☐ Performance Date _____ ☐ Technically Adequate ☐ Revision Required

Reviewer _____ Print Name & Initials | Sponsor: _____ Signature/Date

SECTION 3: RECOMMENDATION FOR APPROVAL

Sponsor R. M. Johnson

QA 1-14-92 1/14/92

PORC Member _____ Signature/Date

PORC Chairman Signature/Date 1-23-92 (2988)

~~Technical Reviewer~~ 1-15-92

~~Technical Reviewer~~ 1-15-92

Independent Reviewer

~~Technical~~ Reviewer 12/18/91 12-19-91 Signature/Date

QA to review revisions? ☒ Yes ☐ No
PORC to review revisions: ☒ Yes ☐ No

SECTION 4: APPROVAL

TRAINING REQUIRED? ☒ Yes ☐ No

ARM W L Elliott 1/23/92 Signature/Date

Plant Manager 1-23-92 Signature/Date

Implementation Date 2/13/92