EMPLOYEE CONCERNS

SPECIAL PROGRAM

VOLUME 5
WELDING CATEGORY

SUBCATEGORY REPORT 50100
BROWNS FERRY NUCLEAR PLANT

UPDATED

TVA

NUCLEAR POWER

TVA EMPLOYEE CONCERNS
SPECIAL PROGRAM

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Preface, Glossary, and List of Acronyms
for ECTG Subcategory Reports

HISTORY OF REVISION

REV NUMBER	PAGES REVISED	REASON FOR CURRENT REVISION
3	i	To clarify that one or more attachments will help the reader find where a particular concern is evaluated

Preface

This subcategory report is one of a series of reports prepared for the Employee Concerns Special Program (ECSP) of the Tennessee Valley Authority (TVA). The ECSP and the organization which carried out the program, the Employee Concerns Task Group (ECTG), were established by TVA's Manager of Nuclear Power to evaluate and report on those Office of Nuclear Power (ONP) employee concerns filed before February 1, 1986. Concerns filed after that date are handled by the ongoing ONP Employee Concerns Program (ECP).

The ECSP addressed over 5800 employee concerns. Each of the concerns was a formal, written description of a circumstance or circumstances that an employee thought was unsafe, unjust, inefficient, or inappropriate. The mission of the Employee Concerns Special Program was to thoroughly investigate all issues presented in the concerns and to report the results of those investigations in a form accessible to ONP employees, the NRC, and the general public. The results of these investigations are communicated by four levels of ECSP reports: element, subcategory, category, and final.

Element reports, the lowest reporting level, will be published only for those concerns directly affecting the restart of Sequoyah Nuclear Plant's reactor unit 2. An element consists of one or more closely related issues. An issue is a potential problem identified by ECTG during the evaluation process as having been raised in one or more concerns. For efficient handling, what appeared to be similar concerns were grouped into elements early in the program, but issue definitions emerged from the evaluation process itself. Consequently, some elements did include only one issue, but often the ECTG evaluation found more than one issue per element.

Subcategory reports summarize the evaluation of a number of elements. However, the subcategory report does more than collect element level evaluations. The subcategory level overview of element findings leads to an integration of information that cannot take place at the element level. This integration of information reveals the extent to which problems overlap more than one element and will therefore require corrective action for underlying causes not fully apparent at the element level.

To make the subcategory reports easier to understand, three items have been placed at the front of each report: a preface, a glossary of the terminology unique to ECSP reports, and a list of acronyms.

Additionally, at the end of each subcategory report will be a Subcategory Summary Table that includes the concern numbers; identifies other subcategories that share a concern; designates nuclear safety-related, safety significant, or non-safety related concerns; designates generic applicability; and briefly states each concern.

Either the Subcategory Summary Table or another attachment or a combination of the two will enable the reader to find the report section or sections in which the issue raised by the concern is evaluated.

The subcategories are themselves summarized in a series of eight category reports. Each category report reviews the major findings and collective significance of the subcategory reports in one of the following areas:

- management and personnel relations
- industrial safety
- construction
- material control
- operations
- quality assurance/quality control
- welding
- engineering

A separate report on employee concerns dealing with specific contentions of intimidation, harassment, and wrongdoing will be released by the TVA Office of the Inspector General.

Just as the subcategory reports integrate the information collected at the element level, the category reports integrate the information assembled in all the subcategory reports within the category, addressing particularly the underlying causes of those problems that run across more than one subcategory.

A final report will integrate and assess the information collected by all of the lower level reports prepared for the ECSP, including the Inspector General's report.

For more detail on the methods by which ECTG employee concerns were evaluated and reported, consult the Tennessee Valley Authority Employee Concerns Task Group Program Manual. The Manual spells out the program's objectives, scope, organization, and responsibilities. It also specifies the procedures that were followed in the investigation, reporting, and closeout of the issues raised by employee concerns.

ECSP GLOSSARY OF REPORT TERMS*

classification of evaluated issues the evaluation of an issue leads to one of the following determinations:

Class A: Issue cannot be verified as factual

Class B: Issue is factually accurate, but what is described is not a problem (i.e., not a condition requiring corrective action)

Class C: Issue is factual and identifies a problem, but corrective action for the problem was initiated before the evaluation of the issue was undertaken

Class D: Issue is factual and presents a problem for which corrective action has been, or is being, taken as a result of an evaluation

Class E: A problem, requiring corrective action, which was not identified by an employee concern, but was revealed during the ECTG evaluation of an issue raised by an employee concern.

collective significance an analysis which determines the importance and consequences of the findings in a particular ECSP report by putting those findings in the proper perspective.

concern (see "employee concern")

corrective action steps taken to fix specific deficiencies or discrepancies revealed by a negative finding and, when necessary, to correct causes in order to prevent recurrence.

criterion (plural: criteria) a basis for defining a performance, behavior, or quality which ONP imposes on itself (see also "requirement").

element or element report an optional level of ECSP report, below the subcategory level, that deals with one or more issues.

employee concern a formal, written description of a circumstance or circumstances that an employee thinks unsafe, unjust, inefficient or inappropriate; usually documented on a K-form or a form equivalent to the K-form.

evaluator(s) the individual(s) assigned the responsibility to assess a specific grouping of employee concerns.

findings includes both statements of fact and the judgments made about those facts during the evaluation process; negative findings require corrective action.

issue a potential problem, as interpreted by the ECTG during the evaluation process, raised in one or more concerns.

K-form (see "employee concern")

requirement a standard of performance, behavior, or quality on which an evaluation judgment or decision may be based.

root cause the underlying reason for a problem.

*Terms essential to the program but which require detailed definition have been defined in the ECTG Procedure Manual (e.g., generic, specific, nuclear safety-related, unreviewed safety-significant question).

Acronyms

AI	Administrative Instruction
AISC	American Institute of Steel Construction
ALARA	As Low As Reasonably Achievable
ANS	American Nuclear Society
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
BFN	Browns Ferry Nuclear Plant
BLN	Bellefonte Nuclear Plant
CAQ	Condition Adverse to Quality
CAR	Corrective Action Report
CATD	Corrective Action Tracking Document
CCTS	Corporate Commitment Tracking System
CEG-H	Category Evaluation Group Head
CFR	Code of Federal Regulations
CI	Concerned Individual
CMTR	Certified Material Test Report
COC	Certificate of Conformance/Compliance
DCR	Design Change Request
DNC	Division of Nuclear Construction (see also NU CON)

DNE	Division of Nuclear Engineering
DNQA	Division of Nuclear Quality Assurance
DNT	Division of Nuclear Training
DOE	Department of Energy
DPO	Division Personnel Officer
DR	Discrepancy Report or Deviation Report
ECN	Engineering Change Notice
ECP	Employee Concerns Program
ECP-SR	Employee Concerns Program-Site Representative
ECSP	Employee Concerns Special Program
ECTG	Employee Concerns Task Group
EEOC	Equal Employment Opportunity Commission
EQ	Environmental Qualification
EMRT	Emergency Medical Response Team
EN DES	Engineering Design
ERT	Employee Response Team or Emergency Response Team
FCR	Field Change Request
FSAR	Final Safety Analysis Report
FY	Fiscal Year
GET	General Employee Training
HCI	Hazard Control Instruction
HVAC	Heating, Ventilating, Air Conditioning
II	Installation Instruction
INPO	Institute of Nuclear Power Operations
IRN	Inspection Rejection Notice

L/R	Labor Relations Staff
M&AI	Modifications and Additions Instruction
MI	Maintenance Instruction
MSPB	Merit Systems Protection Board
MT	Magnetic Particle Testing
NCR	Nonconforming Condition Report
NDE	Nondestructive Examination
NPP	Nuclear Performance Plan
NPS	Non-plant Specific or Nuclear Procedures System
NQAM	Nuclear Quality Assurance Manual
NRC	Nuclear Regulatory Commission
NSB	Nuclear Services Branch
NSRS	Nuclear Safety Review Staff
NU CON	Division of Nuclear Construction (obsolete abbreviation, see DNC)
NUMARC	Nuclear Utility Management and Resources Committee
OSHA	Occupational Safety and Health Administration (or Act)
ONP	Office of Nuclear Power
OWCP	Office of Workers Compensation Program
PHR	Personal History Record
PT	Liquid Penetrant Testing
QA	Quality Assurance
QAP	Quality Assurance Procedures
QC	Quality Control
QCI	Quality Control Instruction

QCP	Quality Control Procedure
QTC	Quality Technology Company
RIF	Reduction in Force
RT	Radiographic Testing
SQN	Sequoyah Nuclear Plant
SI	Surveillance Instruction
SOP	Standard Operating Procedure
SRP	Senior Review Panel
SWEC	Stone and Webster Engineering Corporation
TAS	Technical Assistance Staff
T&L	Trades and Labor
TVA	Tennessee Valley Authority
TVTLC	Tennessee Valley Trades and Labor Council
UT	Ultrasonic Testing
VT	Visual Testing
WBECSP	Watts Bar Employee Concern Special Program
WBN	Watts Bar Nuclear Plant
WR	Work Request or Work Rules
WP	Workplans

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1.0 CHARACTERIZATION OF ISSUES

1.1 Introduction

The characterization of issues for this subcategory report are derived from 63 Employee Concerns. Of the 63 Employee Concerns, 7 were specific to BFN (49 specific to WBN, 3 specific to BLN, 3 specific to SQN, 1 non plant specific). The Employee Concerns were divided into 13 similar issues and were investigated by the Weld Project, Quality Technology Company (QTC) and/or the Nuclear Safety Review Staff (NSRS). Each of the 13 issues was addressed by a Weld Project Evaluation Report which will be provided to the USNRC as a portion of the Weld Project effort. IR4

1.2 Description of Issues

1.2.1 Control of Welding Filler Material

1.2.2 Inspection of Welds Through Carbo-Zinc Primer

1.2.3 Welder Qualification and Continuity

1.2.4 Availability of Inspection Tools

1.2.5 Inspector Training and Certification

1.2.6 Welder Training and Experience

1.2.7 Surface Grinding of Welds

1.2.8 Adequacy of Welding Equipment

1.2.9 Structural Steel Preweld Inspection

1.2.10 Welder Qualification

1.2.11 Weld Repair Not Meeting ASME Code Requirements

1.2.12 Structural Support Welds

1.2.13 Weld Inspection Procedures

2.0 METHODOLOGY

The procedure and specification histories of Browns Ferry Nuclear Plant from the beginning of construction to the present were reviewed. These procedures and specifications were compared with the construction codes that were in effect during each phase of the procedure history. The Browns Ferry Weld Project Phase I Report was reviewed. The expurgated text of the concerns was compared with the requirements IR4

defined in the construction codes and the commitments made in the Topical Report (TVA-TR-75-1A). A review was made of quality indicators such as USNRC Inspection Reports and TVA audit and deficiency reporting documents issued over the life of the plant. As appropriate to the issues, discussions were held with cognizant TVA Construction, Engineering, Quality and Craft Supervisory personnel.

3.0 ISSUES, FINDINGS, AND CONCLUSIONS

3.1 Control of Welding Filler Material

The concerns stated that weld rods are not required to be kept in rod ovens after issue; questioned the adequacy of weld rod control; questioned the quality of E-7018 coated electrodes; and questioned the administrative practices for the return of unused and waste welding materials.

Portable rod ovens are used at BFN to protect certain high strength electrodes from moisture absorption from the atmosphere. The most commonly used electrodes (E7018) are not required to be issued in portable ovens. Rather, the atmospheric exposure time limits prescribed by the Structural Welding Code, AWS D1.1 are adhered to. In the event that electrodes are exposed to the atmosphere beyond the specified time limit, they are disposed of.

The investigation of this issue did not indicate a problem with control of filler material. Controls are in place to ensure that only qualified welders are issued welding materials and that welders use weld filler materials specified for the work being performed. Unused and waste filler material is controlled by a procedure more stringent than the applicable code requirements.

The quality of coated electrodes has not been a problem at BFN. However, one lot of coated electrodes was returned to the vendor from Watts Bar for a concentricity problem. Welding electrodes from this lot were not issued at Browns Ferry.

Welding filler material used for permanent plant installations at BFN is purchased and tested in accordance with the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Sections II and III. Additionally, TVA performs operability tests beyond the code requirements for all electrodes not already having a satisfactory performance history with TVA.

The administrative practices for return of unused and waste filler material are not technically significant. This part of the filler material control issue is generically evaluated in Management Practices Subcategory 70200, and is not addressed further by this report. |R4

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-01-BFN. |R4

3.2 Inspection of Welds Through Carbo-Zinc Primer

Evaluation showed that this issue is not applicable to Browns Ferry. In early 1982 General Construction Specification G-29C, Process Specification 3.C.5.4 was revised to permit certain reinspections of structural welds which had been primed. This process specification is site unique to Watts Bar, and was never implemented at BFN.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-02-BFN |R4

3.3 Welder Qualification and Continuity

The concerns stated the possibility that one welder's test plate could be completed by another welder; the possibility of welding being performed by an unqualified individual; questioned the adequacy of the basis for welder qualification continuity updates; and questioned maintenance of welder qualifications for personnel whose duties do not regularly require welding.

No one except the Weld Test Supervisor is allowed to enter the test booth while a test is in process. If the Supervisor leaves the test shop for any reason, he collects all weld rod, making it impossible for one welder to work on another's test coupon.

There have been isolated occurrences of welders performing work outside their limits of qualification, i.e., diameter and thickness, or when their qualification continuity for the work could not be verified.

These isolated instances were identified and corrected through the ongoing quality assurance activities. They do not represent a breakdown in the welder qualification program at BFN. Browns Ferry uses manually prepared documents to verify and suspense welder qualification and continuity. The repeated manual preparation of listings to control continuity inevitably leads to error and

omission. CATQ 50103-BFN-01 recommends that all TVA nuclear activities adopt a uniform computerized system comparable to that used at BLN and WBN in order to minimize the likelihood of a welder working outside of his parameters or allowing a qualification to expire.

Corrective Action Plan

Effective July 1, 1987, BFN implemented Site Director's Standard Practice (SDSP) 13.9, "Welding/Brazing/Soldering Filler Material Issue and Welder/Brazer/Solderer Qualification Computer Program." The computer program is seen as a program enhancement and is similar to the ones at BLN and WBN.

The program is used in conjunction with existing Site Procedures SDSP 13.2, "Welding, Brazing and Soldering Filler Material Control at Browns Ferry Nuclear Plant" and SDSP 13.4, "Welder, Brazer and Solderer Qualification and Continuity at Browns Ferry Nuclear Plant."

Welder qualification continuity is based on the welder's utilizing the welding process(es) for which they were previously qualified within the specified time limit. TVA uses the issue of weld filler material as evidence of process usage. This is a widely used practice throughout the nuclear construction industry, and is not in violation of code or commitment.

Welder qualification continuity for personnel whose duties normally do not require welding is not a violation of code or commitment. Many welders progress to Foreman or higher, and continue to weld occasionally to maintain proficiency. This may be done on production work or at the weld test shop. In maintenance of these qualifications, the required code and procedural controls apply.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-03-BFN. IR4

3.4 Availability of Inspection Tools

These concerns state either that inspection tools were never issued, or that inspection tools were not issued prior to 1979.

Inspection tools, locally manufactured and commercially procured, were available to the inspectors throughout construction and operation. While not all inspectors had a full set of tools at all times, any tool necessary for a given task was available upon request.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-04-BFN. |R4

3.5 Inspector Training and Certification

The concerns questioned the adequacy of inspector training; qualification of inspectors for the tasks assigned; and exceptions to ANSI N45.2.6 as specified in the Topical Report. Additionally, one concern states that welding inspectors should also be welders. The question of the adequacy of inspector training evolved from concerns which state that personnel with no prior experience are permitted to inspect welds after training periods of two weeks to two months. TVA did issue limited weld inspection certifications based in part on two weeks on the job training. These certifications were limited to verification of weld size, length and location only. Training and testing were appropriate to the limits of this certification. Such limited certifications are in accordance with the Nuclear Quality Assurance Program.

The BFN ISI Group was requested to assist in the USNRC Bulletin 79-14 pipe support walkdown. The inspectors received special training for the visual weld examination portion of the walkdown. When the program actually began, it was learned that the inspectors were expected to perform tasks for which they were not trained or certified. These inspectors were removed from the assignment, and did not actually perform any work for which they were not qualified.

It is true that the TVA program for certification of welding inspectors would not meet the requirements of ANSI N45.2.6. TVA welding inspectors have historically been treated as nondestructive examination (NDE) personnel under the guidelines of the American Society for Nondestructive Testing Recommended Practice SNT-TC-1A, rather than under the rules of ANSI N45.2.6. SNT-TC-1A does not mandate specific experience requirements, and does not specifically deal with visual inspection. It is intended to be used as a guide for employers in establishing their own written practices for qualification and certification of NDE personnel. The TVA practice of using SNT-TC-1A satisfies TVA's commitments as stated in the Topical Report (TVA-TR-75-1A).

There is no code or regulatory requirement for a welding inspector to also be a welder.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-06-BFN |R4

3.6 Welder Training and Experience

The concerns questioned the qualification of subjourneymen for the work to which they are assigned and the adequacy of the TVA welder training program. IR4

The primary purpose of the subjourneyman is to free the journeyman from trade related tasks which do not effectively utilize his skills. It is possible, however, for the subjourneyman to progress beyond the menial tasks to those requiring a higher degree of skill. This includes becoming a qualified welder. With appropriate training and experience, the subjourneyman may become a qualified welder through satisfactory performance testing under the rules of AWS D1.1 and/or ASME Section IX. These rules establish the ability of the welder to deposit sound weld metal within the parameters of the same performance qualification tests taken by journeyman welders.

The TVA Welder Training Program, a voluntary off-duty course, was offered at BFN approximately during the years 1974 through 1976. The length of training was dependent on the progress of the individual trainee. When sufficient competence was demonstrated, the trainee was given a performance qualification test in accordance with the rules of the governing code. This test was the same test as that given to journeyman welders, with acceptance standards governed by AWS D1.1 and ASME Section IX. The governing codes, industry standards or regulatory requirements do not quantify the experience required of a welder. The code specified performance qualification test is the measure of a welder's capability to deposit sound weld metal.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-07-BFN. IR4

3.7 Surface Grinding of Welds

The concerns questioned the surface grinding of welds and raised the issue of excessive circumferential shrinkage in stainless steel welded joints.

The concerns state that surface grinding of pipe welds may mask surface defects and stainless steel butt welds seem to have excessive metal removed. Grinding of welds is not a violation of codes, standards or BFN procedures. Rather, in many cases these standards require grinding to obtain suitable surfaces for the proper interpretation of the specified NDE and to eliminate or reduce surface defects.

The construction codes, specifications and procedures do not quantify an acceptance criteria for circumferential shrinkage in welded butt joints. Distortation, including shrinkage is inherent in stainless steel weldments. This distortation is controlled through application of sound engineering practices in development of the detailed weld procedure specifications and design detail. Factors considered are material type and thickness, filler material size, heat input (amperage), and maximum interpass temperature. TVA has implemented detailed welding procedures to minimize distortion and warping when welding stainless steels.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-11-BFN. IR4

3.8 Adequacy of Welding Equipment

These concerns stated that the welding machines did not have remote switches and suitable amperage settings.

Browns Ferry has, since beginning construction, used the Lincoln Idealarc TIG 300, K1312 welding machines. These machines are equipped with remote adjustment controls, and operate at a current output range of two to 375 amps. The TIG 300 is suitable for welding with either the shielded metal arc or the gas tungsten arc processes.

This concern was made generically applicable to BFN from WBN where some of the Lincoln Idealarc welding machines were removed from the power block and replaced with multigrid welding machines which generally do not have remote switches and amperage control gradients as fine as the Lincoln Idealarc welding machines. IR4

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-13-BFN. IR4

3.9 Structural Steel Preweld Inspections

This issue centers around the fact that TVA does not require 100% mandatory fitup inspection by certified welding inspectors on all structural joints. The foreman is responsible to ensure that the preweld requirements, including correct fitup are met prior to weld out. Certified inspectors monitor each foreman at least bi-weekly to ensure that the foremen are properly performing the required activities. This issue has been evaluated by NSRS, and determined not to be in violation of the Structural Welding Code or ANSI N45.2.5. It was also evaluated for all TVA nuclear sites after being reported (in a Bellefonte Quality Assurance Audit) to the USNRC under the provisions of 10 CFR 50.55(e), and again found to be an acceptable practice.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-16-BFN. |R4

3.10 Welder Qualification

This issue evolved from a misinterpretation of ASME Section IX, due to the omission of Article QW-302.3 from the 1974 edition.

The concern stated that welders qualified at Muscle Shoals may not have had the required number of bend tests. The same misinterpretation occurred at BFN, resulting in only two guided bend tests being performed for certain qualifications where four bend tests were required. The problem was identified through the ongoing Quality Assurance program, and corrected by retesting all of the affected welders. All of the retested welders were requalified. The production welds made by these welders were evaluated and found to be acceptable.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-24-BFN. |R4

3.11 Weld Repairs not Meeting ASME Code Requirements

This issue involves the practice of making temporary repairs by overlay welding and patching. The concern also mentioned the use of furmanite, a viscous sealing compound. The use of furmanite is addressed by Operations Subcategory Report 30800, and is not considered further by this report.

TVA does use mechanical and welded patches to temporarily contain leakage. At Browns Ferry, this has occurred principally in the fire protection system. These patches are not intended or used to substitute for proper repairs in accordance with the code and regulatory requirements. The affected piping is replaced as soon as practicable.

TVA also makes repairs to ASME piping by using welded overlays. Stainless steel piping in boiling water reactors is susceptible to intergranular stress corrosion cracking (IGSCC). Overlay welding is the most commonly used practice to correct for IGSCC. With regard to overlay welding, the USNRC has issued Safety Evaluation Reports to allow Units 1 and 3 to be returned to power in their repaired condition.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-25-BFN. |R4

3.12 Structural Support Welds

The concern questions the adequacy of the structural support welds. The concerned individual stated that the process followed today with regard to welding and weld inspection is more detailed and that the original welds would not meet today's requirements.

The concern is factual, in that some of the support welds do not meet the visual acceptance criteria required by the original installation specification (AWS D1.0-1966). Whether or not this is a problem requires engineering evaluation. Also, relative to supports, the process (program) is now clearly defined, where prior to mid-1983 some support welds were not subject to the controls of the Quality Inspection Program.

Field construction at BFN began in September, 1966. It should be noted that construction of BFN was largely completed prior to the TVA commitment to 10 CFR 50, Appendix B in July, 1972.

Discussion with cognizant DNE (Weld Project) personnel revealed that the Welding Project Phase II reinspection of structural supports was an engineering biased sample representative of welding performed over the life of the plant. These inspections included groups of large bore, small bore, instrument pipe and tubing supports, conduit and cable tray supports, HVAC duct supports, and electrical equipment and instrument supports.

Preliminary results of the weld reinspection indicate that the discrepancies identified were largely configurational, i.e., weld size, length and location. It was noted, however, that some of the supports also had rejectable discontinuities in one or more welds. Engineering analysis of these results has thus far shown that, with the exception of instrumentation piping supports, the identified discrepancies are not design significant, i.e., the support welds are suitable for service. The suitability for service of the instrumentation piping support welds is being evaluated, and has not been established to date. Corrective Action will be tracked on CATD 50132-BFN-01. |R4 |R4

Corrective Action Plan

Evaluation of the results of the Welding Project reinspection show that the attributes of presence, size, length, and location are the significant attributes affecting welding serviceability. The other attributes (undercut, lack of fusion, etc.) were sometimes present but did not contribute significantly to any overstresses in welds. Thus the action outlined in this Corrective Action Program is needed to provide sufficient confidence in any future engineering stress evaluation of structures at BFN.

The actions specified are required based on the results of the Welding Project basis sample reinspections and a review of welding-related employee concerns. In order to incorporate this at BFN, the following should be included in an engineering procedure and/or in each program/activity that considers structural adequacy:

1. Identify that the purpose of the engineering data collection is for use in evaluation of structures.

2. Define the training and qualification requirements of the personnel performing the engineering data collection. The training should be similar to that used for Mechanical Maintenance Instruction 99 (MMI), Instruction for the Implementation of Phase I, NRC IE Bulletins 79-14 Units I, II, and III, which appears to have the basic requirements included.

3. Specify that the engineering data collection will consist of the weld presence, type, size, length and location. The data collectors should also be aware of such indications as burn through, missing welds, excessive slag, etc. and document their presence for consideration in the structural evaluation. IR4

4. The data collection criteria should be the same tolerance as specified in G29C Process Specification 3.C.5.4 for size, length, and location.

Documentation shall consist of:

1. A means to identify the item from which the data has been taken.

2. A structural sketch indicating presence or lack thereof along with type, size, length, location, and those indications deemed necessary by the engineer of all welds for the identified item. IR4

3. A date and sign off by the data collector.

4. The engineering data collected should be included in a calculation package and a statement made concerning its acceptability.

5. The calculation should be documented in accordance with BFN procedure.

6. Document and retain training records.

Furthermore, it is felt that this need not be backfitted to the cable tray and conduit supports already completed because the United Engineers and Constructors' evaluation should be the basis for Unit 2 restart and the unresolved safety issue A-46, Seismic Qualification of Equipment in Operating Plants, the basis for long-term qualification (both programs address welding) of cable tray and conduit supports.

Action to prevent recurrence is not required, in that Standard Practice 6.2; and later Site Director Standard Practice 13.1 place all safety related welding at BFN under an inspection program. This program has been in effect since mid-1983. IR4

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-32-BFN. IR4

3.13 Weld Inspection Procedures

The concerns questioned the adequacy of weld inspection procedures and the adequacy of the inspection criteria; inspection of welding and brazing on HVAC ductwork; and the reporting of defects.

Adequate inspection criteria has been available at BFN since the beginning of construction. Initially, inspection was performed by direct application of the governing codes. A system of procedures evolved and at the time TVA committed to compliance with 10 CFR 50 Appendix B, these procedures contained or made reference to all of the detail and criteria necessary to facilitate weld inspections.

The HVAC ductwork at BFN was fabricated and erected by mechanical means. In mid 1986, welded modifications to the sheet metal ductwork were specificed. At that time, TVA emplaced a procedure which included all of the necessary inspection requirements.

The concerns relating to reporting of defects state that the NDE Inspectors can only use a Notice of Indication for inservice defects, and a Maintenance Request for preservice defects. The Notice of Indication is the specified form for reporting of all defects identified within the scope of a defined examination. The Maintenance Request is used to report all observations by any plant personnel, outside the scope of a defined examination. This practice is in accordance with the Nuclear Quality Assurance Manual.

Complete details of the evaluation of this issue are discussed in Weld Project Evaluation Report WP-35-BFN. IR4

4.0 COLLECTIVE SIGNIFICANCE

Through the subcategory overview of the evaluation report findings and the subsequent integration of information, no new significant items were identified. IR4

The evaluation report investigations and the subcategory overview indicated that the welding procedures and the practices used at BFN were consistent with good industry practices used throughout the country even though a few quality problems appeared. IR4

TVA's welding control practices at BFN were adequate and reflected common industry practices. Some problems were identified, as one would expect with the size of the operation and the time frame, and were addressed by the ongoing QA program and the Weld Project Evaluation Report Investigations. IR4

5.0 CAUSE

The cause of a perceived problem or the cause of a problem which initiated a CATD is limited to the cause identified in the evaluation report. IR4

6.0 CORRECTIVE ACTION

No corrective action is specified as a result of this subcategory report. Corrective actions for problems or perceived problems are limited to the issued CATDs as a portion of the Weld Project Evaluation Reports. IR4 Discussion of enhancements to the existing TVA system, other than CATD 50103-BFN-01, will be deferred to the category report. CATD 50103-BFN-01 was issued as a program enhancement. This enhancement recommends that BFN (and all TVA Nuclear Sites) adopt a uniform computerized system comparable to the system used at WBN and BLN in order to minimize the likelihood of a welder working outside his parameters or allowing a qualification to expire.

7.0 ATTACHMENTS

A. Subcategory Summary Table

B. Summary of Issues

8.0 REFERENCE

A. Welding Project Evaluation Reports IR4

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
OMP - ISSS - RMM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

PAGE - 1
RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
EX -85-039-00101 T50146	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	WI-85-053-004	QTC	WBNP: THERE ARE NO PORTABLE OVENS FOR STORING WEL D ROD AFTER IT HAS BEEN ISSUED TO THE WELDER AND THE WELD ROD IS NOT ADEQUATELY ACCOUNTED FOR WHEN IT IS RETURNED, I.E. ROD STUBS AND UNUSED ROD. CO NST. DEPT. CONCERN. CI HAS NO FURTHER INFORMATION . NO FOLLOWUP REQUIRED. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-234-00101 T50027	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	WELD RODS ARE NOT REQUIRED TO BE KEPT IN ROD OVENS AFTER ISSURANCE TO STEAMFITTER WELDERS. THE ROD CAN BE KEPT UNHEATED FOR 8 HOURS AT A TIME IN A LE ATHER POUCH. (SQN ISSUES ADDRESSED IN RPT WP-01-SQ N R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-247-00101 T50022	WE	50312	S	WBN	1 N N Y N 2 NA NA SR NA	IN-85-284-001	QTC	7018 RODS (PURCHASED) ARE OF POOR QUALITY. THIS CO NTRIBUTES TO POROSITY AND PINHOLES. (SQN ISSUES AD DRESSED IN RPT WP-12-SQN R2)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50412	S	WBN	1 N N N Y 2 NA NA NA SR			
04	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
OHP - ISSS - RHH

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EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

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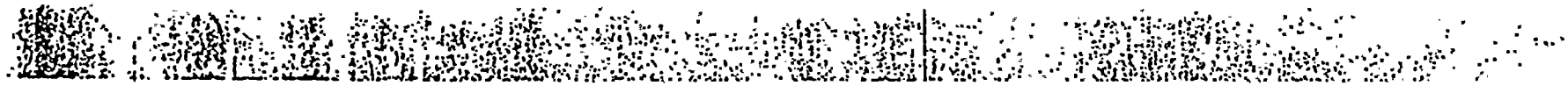
CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-352-00201 T50040	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	NO PORTABLE OVENS ARE USED ON WATTS BAR. WELD ROD CAN BE KEPT OUT OF OVEN FOR AN ENTIRE SHIFT AND RETURNED TO OVEN FOR LATER USE. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-424-00101 T50041	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	NO PORTABLE OVENS USED/REQUIRED ON WATTS BAR. THE ROD OFTEN COLLECTS MOISTURE AND SHOULD NOT BE USED. (SQN ISSUES ADDRESSED IN WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-424-00401 T50040	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	QA TRAINING CLASS, 6-5-85, INFORMED CRAFT THAT STEAMFITTERS COULD WITHDRAW AND CONTROL WELD ROD IF THEY HAD A WELDER SIGNED WELD SLIP AND THE WEDERS CARD. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			



REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
ONP - ISSS - RHM

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EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-424-00601 T50040	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	NO ACCOUNTABILITY OF WELD ROD DURING ISSUANCE OR RETURN OF UNUSED ROD AND STUBS. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-424-00701 T50102	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	LACK OF WELD ROD CONTROL: WELDORS GET ADDITIONAL ROD FROM OTHER WELDORS RATHER THAN GOING BACK TO THE ROD ROOM FOR MORE. SITE POLICY ALLOWS LEAVING ROD WITH OTHER WELDORS, OR LETTING SUB-JOURNEYMEN CHECK-OUT ROD AND RETURN ROD. (CAN ALSO LEAVE ROD IN TOOL BOXES). THE ROD ROOM DOES NOT COUNT ROD WHEN IT IS ISSUED, AND DOES NOT REQUIRE ACCOUNTING FOR ROD STUBS. OCCASSIONALLY, WELDORS ARE REPRIMANDED FOR NOT TURNING IN ROD WITHDRAWAL SLIPS, EVEN THOUGH (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-426-00101 T50065	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	PORTABLE OVENS ARE NOT REQUIRED. WELD ROD IS KEPT OUT OF OVEN FOR AN ENTIRE SHIFT. NO FOLLOW-UP. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-441-00301 T50040	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	NO PORTABLE OVENS ON WATTS BAR. THE ROD SOMETIMES COLLECTS MOISTURE BY THE END OF THE SHIFT AND CAN NOT BE USED. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-453-00901 T50030	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	WELDERS FREQUENTLY GIVE WELD ROD TO OTHER WELDERS. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-454-00401 T50030	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA	EX-85-021-001	QTC	WELDERS FREQUENTLY GET ROD FROM EACH OTHER INSTEAD OF WITHDRAWING FOR ROD ROOM. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			

CATEGORY: WE WON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-501-00101 T50031	WE	50319	S	WBN	1 N N Y N 2 NA NA SR NA	IN-85-501-001	QTC	UNUSED BUNDLES OF WELD ROD FREQUENTLY FOUND IN TRA SH CANS I.E. TURBINE BLDG., 708', 729', AND 755' E LEVATIONS, UNIT #2 (15-20 RODS FOUND 6-7-85) (SQN ISSUES ADDRESSED IN RPT WP-19-SQN R1)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-672-00301 T50207	MP	70202	S	WBN	1 N N N N 2 NA NA NA NA		QTC	AT SHIFT END, WELD ROD SLIPS ARE TURNED IN. THE S LIPS ARE CHECKED THEN THROWN AWAY. IF THE ISSUE R OOM DETERMINES AT A LATER DATE THAT A WELDER DID N OT CONFORM TO "TURN IN" PROCEDURES, IT IS HIS WORD AGAINST THEIRS AND HE GETS THE WARNING LETTER. T HESE LETTERS HAVE BEEN ISSUED WITHOUT PROOF OF WRO NGDOING. CONSTRUCTION DEPT. CONCERN. (SQN ISSUES ADDRESSED IN RPT WP-01-SQN R3)
02	WE	50301	S	WBN	1 N N Y N 2 NA NA SR NA			
03	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
04	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
05	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -86-047-00101 T50110	WE	50314	S	WBN	1 N N Y N 2 NA NA SR NA		QTC	A SYSTEM IS NEEDED THAT VERIFYS THAT THE WELDER DI D RETURN THE UNUSED WELD ROD AND STUBS AND WILL PR OVIDE THE WELDER A RECEIPT SO THAT THE WELDER CAN PROVE HE DID RETURN THE MATERIAL IN CASE AN ERROR WAS MADE. CI HAS NO ADDITIONAL INFORMATION. CONS TRUCTION DEPARTMENT. (SQN ISSUES ADDRESSED IN RPT WP-14-SQN R1)
02	WE	50101	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50201	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50401	S	WBN	1 N N N Y 2 NA NA NA SR			

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
OMP - ISSS - RIM

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CATEGORY: HE NON QA/QC WELDING
SUBCATEGORY: 50101 TRACEABILITY, ACCOUNTABILITY, AND CONDITIONING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL / 2 SAF RELATED BF	BL	SQ	HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
HI -85-053-00401 T50135	HE	50301	S	HBH	1 N	N	Y	N	HI-85-053-004	QTC	HELD ROD CONTROL DOES NOT SATISFY CODE REQUIREMENTS. TVA ATTITUDE IS "ALL MATERIAL IS CODE MATERIAL". CONSTRUCTION DEPT CONCERN. CI HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT HP-01-SQN R3)
					2 NA	NA	SS	NA			
	02	HE	50101	S	HBH	1 Y	N	N	N		
						2 SS	NA	NA	NA		
	03	HE	50201	S	HBH	1 N	Y	N	N		
						2 NA	SS	NA	NA		
	04	HE	50401	S	HBH	1 N	N	N	Y		
						2 NA	NA	NA	SS		

16 CONCERNS FOR CATEGORY HE SUBCATEGORY 50101

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50102 INSPECTION OF WELDS THROUGH PAINT

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-458-00101 T50105	WE	50102	S	WBN	1 Y N N N 2 SS NA NA NA	IN-85-458-001	QTC	TVA USED IMPROPER INSPECTION CRITERIA FOR AWS WELD S - MEMO FROM KNOXVILLE (POSSIBLY ENDES, 1980 OR 1 981) ALLOWED INSPECTION THROUGH PAINT. INDIVIDUAL FROM KNOXVILLE (KNOWN) INVESTIGATED THIS, BUT RES ULTS ARE UNKNOWN. CI HAS NO MORE INFORMATION. (SQ N ISSUES ADDRESSED IN RPT WP-02-SQN R2)
02	WE	50202	S	WBN	1 N Y N N 2 NA SS NA NA			
03	WE	50302	S	WBN	1 N N Y N 2 NA NA SS NA			
04	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SS			
IN -86-019-00101 T50219	WE	50102	S	WBN	1 Y N N N 2 SR NA NA NA		QTC	CI IS CONCERNED THAT WELDS WERE ACCEPTED THROUGH C ARBO-ZINC. INSPECTORS WERE DIRECTED VIA MEMO TO A CCEPT WELDS THROUGH PAINT. CI COULD NOT PROVIDE A NY ADDITIONAL INFORMATION. UNIT 1. CONSTRUCTION DEPT. CONCERN. (SQN ISSUES ADDRESSED IN RPT WP-02-SQN R2)
02	WE	50202	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50302	S	WBN	1 N N Y N 2 NA NA SR NA			
04	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SR			
NS -85-001-00101 T50022	WE	50102	S	WBN	1 Y N N N 2 SR NA NA NA	NS-85-001-001	QTC	WELDS (AWS) INSPECTED SUBSEQUENT TO PROTECTIVE COA TING (CARBOZINC PRIMER) APPLICATION; FINAL VISUAL WELD EXAMINATION OF STRUCTURAL WELDS IN CATEGORY I STRUCTURES, INCLUDING PIPE HANGERS, CABLE TRAY SU PPORTS AND DUCT SUPPORTS; UNIT 1 & 2 (SQN ISSUES A DDRESSED IN RPT WP-02-SQN R2)
02	WE	50202	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50302	S	WBN	1 N N Y N 2 NA NA SR NA			
04	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SR			

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50102 INSPECTION OF WELDS THROUGH PAINT

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
PH -85-040-00101 T50203	WE	50102	S	WBN	1 Y N N N 2 SR NA NA NA	IN-85-458-001	QTC	QA HANGERS WERE FREQUENTLY PAINTED BEFORE THE WELDS WERE INSPECTED. AUX. BUILDING, REACTOR BUILDING #1, ELEV. 742'-0", & 745'-0". 1983. CONSTRUCTION DEPT. CONCERN. CI HAS NO FURTHER DETAILS. (SQN ISSUES ADDRESSED IN RPT WP-02-SQN R2)
02	WE	50202	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50302	S	WBN	1 N N Y N 2 NA NA SR NA			
04	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SR			
WI -85-013-00301 T50114	WE	50102	S	WBN	1 Y N N N 2 SS NA NA NA	WI-85-013-003	QTC	G29C (CONSTRUCTION SPECIFICATIONS)ALLOWED WELDS TO BE INSPECTED AFTER PAINTING FROM 1981 THROUGH THE END OF THE WELDING SAMPLING PROGRAM. THIS IS IN VIOLATION OF AWS D1.1. CI HAS NO MORE INFORMATION. (NOTE: THIS ITEM IS CURRENTLY UNDER INVESTIGATION BY ERT. THE REVISION WAS MADE TO SEPARATE THE ORIGINAL 003 CONCERN INTO TWO DISTINCT CONCERNS.) (SQN ISSUES ADDRESSED IN RPT WP-02-SQN R2)
02	WE	50202	S	WBN	1 N Y N N 2 NA SS NA NA			
03	WE	50302	S	WBN	1 N N Y N 2 NA NA SS NA			
04	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SS			
WI -85-030-00701 T50185.	WE	50116	S	WBN	1 Y N N N 2 SR NA NA NA		QTC	THE WBN FSAR COMMITS TVA TO THE REQUIREMENTS OF AWS D.1.1 FOR STRUCTURAL WELDING. CONTRARY TO THESE REQUIREMENTS, THE G-29C PROCESS SPECIFICATION WAS MODIFIED TO REFLECT LESS STRINGENT INSPECTION REQUIREMENTS (E.G. VISUAL INSPECTION OF WELDS THROUGH PAINT (CARBO ZINC PRIMER) AND NO DOCUMENTED INSPECTION BY CERTIFIED VISUAL INSPECTORS (FIT-UP, IN-PROCESS) PRIOR TO FINAL INSPECTION.) CI HAS NO ADDITIONAL INFORMATION. NUC. POWER DEPT. CONCERN. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50102	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50216	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50316	S	WBN	1 N N Y N 2 NA NA SR NA			
05	WE	50416	S	WBN	1 N N N Y 2 NA NA NA SR			
06	WE	50202	S	WBN	1 N Y N N 2 NA SR NA NA			
08	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SR			

CATEGORY: HE NON QA/QC WELDING
SUBCATEGORY: 50102 INSPECTION OF WELDS THROUGH PAINT

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ MB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
HI -85-030-00801 T50185	HE	50319	S	HBH	1 N N Y N 2 NA NA SR NA		QTC	THERE MAY HAVE BEEN THOUSANDS OF WELDS INSPECTED THROUGH CARBO-ZINC PRIMER. HOWEVER, TVA REPORTS INDICATE THAT ONLY 100-150 WELDS WERE INSPECTED IN THIS MANNER EVEN THOUGH THERE IS NO DOCUMENTATION IDENTIFYING WHICH WELDS WERE INSPECTED THROUGH CARBO-ZINC PRIMER. NUC. POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. (SQN ISSUES ADDRESSED IN RPT NP-19-SQN R1)
02	HE	50102	S	HBH	1 Y N N N 2 SR NA NA NA			
03	HE	50202	S	HBH	1 N Y N N 2 NA SR NA NA			
04	HE	50402	S	HBH	1 N N N Y 2 NA NA NA SR			
HI -85-041-00601 T50193	HE	50102	S	HBH	1 Y N N N 2 SS NA NA NA	EX-85-052-005	QTC	AHS WELD INSPECTOR(S) (UNKNOWN) DID NOT UNDERSTAND THE "5 MIL" PROVISION FOR INSPECTION OF COATED (CARBO-ZINC PRIMER) WELDS AS CONTAINED IN REVISIONS OF SPECIFICATION G-29C, PROCEDURE QCP-4.13, AND MEMORANDUM DATED NOVEMBER 1981. INSPECTOR(S) REFERRED TO CRITERIA AS "MILLIAMPS" AND THEREFORE COULD NOT HAVE IMPLEMENTED/INSPECTED FOR CONFORMANCE. CI HAS NO ADDITIONAL INFORMATION. NUC POWER DEPT. CONCERN. (SQN ISSUES ADDRESSED IN RPT NP-02-SQN R2)
02	HE	50202	S	HBH	1 N Y N N 2 NA SS NA NA			
03	HE	50302	S	HBH	1 N N Y N 2 NA NA SS NA			
04	HE	50402	S	HBH	1 N N N Y 2 NA NA NA SS			
HI -85-041-00801 T50193	HE	50102	S	HBH	1 Y N N N 2 SS NA NA NA	IN-85-458-001	QTC	PROCESS SPECIFICATION #3.C.5.4 OF G-29C PERMITTED INSPECTION OF AHS WELDS THROUGH COATING (CARBO-ZINC PRIMER) FOR ELEVEN MONTHS AFTER ENGINEERING EVALUATION/TEST SHOWED THAT WELD QUALITY (POROSITY, CRACKS, ETC) COULD NOT BE INSPECTED THROUGH PAINT. NUC POWER DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. (SQN ISSUES ADDRESSED IN RPT NP-02-SQN R2)
02	HE	50202	S	HBH	1 N Y N N 2 NA SS NA NA			
03	HE	50302	S	HBH	1 N N Y N 2 NA NA SS NA			
04	HE	50402	S	HBH	1 N N N Y 2 NA NA NA SS			

9 CONCERNS FOR CATEGORY HE SUBCATEGORY 50102

CATEGORY: ME NON QA/QC WELDING
SUBCATEGORY: 50103 WELDER PERFORMANCE QUALIFICATION CONTINUITY

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF	BL	SQ	WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
EX -85-021-00201 T50069	ME	50103	S	WBN	1 Y	N	N	N	IN-85-352-001	QTC	THERE IS NO METHOD/OBJECTIVE EVIDENCE TO VERIFY TH AT A WELDER HAS USED A SPECIFIC PROCESS WHEN THEIR WELD CARDS ARE STAMPED/UP-DATED BY QC. NO FOLLOW -UP REQUIRED - NO ADDITIONAL INFORMATION AVAILABLE . (SQN ISSUES ADDRESSED IN RPT WP-03-SQN R3)
					2 SR	NA	NA	NA			
02	ME	50203	S	WBN	1 N	Y	N	N			
					2 NA	SR	NA	NA			
03	ME	50303	S	WBN	1 N	N	Y	N			
					2 NA	NA	SR	NA			
04	ME	50403	S	WBN	1 N	N	N	Y			
					2 NA	NA	NA	SR			
HI -85-077-N1701	ME	50103	N	BFN	1 Y	N	N	N		NRC	NRC IDENTIFIED THE FOLLOWING CONCERN FROM REVIEW O F THE QTC FILE: "WELDING BY UNCERTIFIED WELDER AT BROWNS FERRY."
					2 SR	NA	NA	NA			
IN -85-346-00301 T50026	ME	50103	S	WBN	1 Y	N	N	N	IN-85-352-001	QTC	WELDER CERTIFICATIONS ARE UPDATED ON EVIDENCE OF R OD WITHDRAWAL SLIPS. THE PROCESS MAY NOT HAVE BEE N USED IN THE APPLICABLE TIME PERIOD, 90 DAY OR/80 DAY, DEPENDING ON ASME OR AWS. (SQN ISSUES ADDRES SED IN RPT WP-03-SQN R3)
					2 SR	NA	NA	NA			
02	ME	50303	S	WBN	1 N	N	Y	N			
					2 NA	NA	SR	NA			
03	ME	50403	S	WBN	1 N	N	N	Y			
					2 NA	NA	NA	SR			
IN -85-426-00201 T50065	ME	50103	S	WBN	1 Y	N	N	N	IN-85-352-001	QTC	UPDATING OF WELDER CERTIFICATIONS IS INADEQUATE IN THAT A WELDER IS ONLY REQUIRED TO PRESENT THEIR C ARD FOR UPDATING AND SOMETIMES IS ASKED TO RUN A B EAD- NEVER A COMPLETE WELD. NO FOLLOW-UP. (SQN IS SUES ADDRESSED IN RPT WP-03-SQN R3)
					2 SR	NA	NA	NA			
02	ME	50203	S	WBN	1 N	Y	N	N			
					2 NA	SR	NA	NA			
03	ME	50303	S	WBN	1 N	N	Y	N			
					2 NA	NA	SR	NA			
04	ME	50403	S	WBN	1 N	N	N	Y			
					2 NA	NA	NA	SR			

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
ONP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: HE NON QA/QC WELDING
SUBCATEGORY: 50103 WELDER PERFORMANCE QUALIFICATION CONTINUITY

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-480-00401 T50031	HE	50103	S	HBN	1 Y N N N 2 SR NA NA NA	IN-85-770-002	QTC	WELDER CERTIFICATION UPDATE IS INADEQUATE. PERSONNEL MAY WORK IN A POSITION THAT DOES NOT REQUIRE ANY WELDING FOR 5-6 YEARS BUT CERTIFICATIONS ARE CONTINUALLY UPDATED. WHEN THESE PERSONS RETURN TO WELDING NO TESTS ARE CONDUCTED. THEY JUST RUN STRINGERS TO UPDATE CERTIFICATIONS. (SQN ISSUES ADDRESSED IN RPT WP-03-SQN R3)
02	HE	50203	S	HBN	1 N Y N N 2 NA SR NA NA			
03	HE	50303	S	HBN	1 N N Y N 2 NA NA SR NA			
04	HE	50403	S	HBN	1 N N N Y 2 NA NA NA SR			
IN -85-725-X1401 T50167	HE	50319	S	HBN	1 N N Y N 2 NA NA SR NA	IN-85-725-X14	QTC	WELDER RECERTIFICATION PROGRAM HAD INADEQUATE SUPERVISORY OVERSIGHT: IT COULD HAVE BEEN POSSIBLE FOR A GOOD WELDER TO WELD THE TEST PLATES FOR AN INCAPABLE WELDER. DETAILS KNOWN TO QTC, WITHELD TO MAINTAIN CONFIDENTIALITY. (SQN ISSUES ADDRESSED IN RPT WP-19-SQN R1)
02	HE	50103	S	HBN	1 Y N N N 2 SR NA NA NA			
03	HE	50403	S	HBN	1 N N N Y 2 NA NA NA SR			
IN -85-725-X1501 T50167	HE	50319	S	HBN	1 N N Y N 2 NA NA SR NA	IN-85-725-X15	QTC	THE CONTROL OF WELDER RECERTIFICATION TEST PLATES WAS INADEQUATE: TEST PLATES BEGUN BY ONE WELDER COULD HAVE BEEN COMPLETED BY ANOTHER WELDER. DETAIL KNOWN TO QTC-WITHELD TO MAINTAIN CONFIDENTIALITY. (SQN ISSUES ADDRESSED IN RPT WP-19-SQN R1)
02	HE	50103	S	HBN	1 Y N N N 2 SR NA NA NA			
03	HE	50203	S	HBN	1 N Y N N 2 NA SR NA NA			
04	HE	50403	S	HBN	1 N N N Y 2 NA NA NA SR			

7 CONCERNS FOR CATEGORY HE SUBCATEGORY 50103

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

CATEGORY: HE HON QA/QC HELDING
SUBCATEGORY: 50104 INSPECTION TOOLS AT BFHP

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT\APPL 2 SAF RELATED BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-007-00101 T50001	HE	50104	S	HBH	1 Y N N N 2 SR HA HA HA		QTC	INSPECTION TOOLS FOR HELDING INSPECTORS HERE HEVER ISSUED. I.E. FILLET HELD SIZE GAGES, FIT-UP GUAG ES, ETC. (SQH ISSUES ADDRESSED IH RPT HP-04-SQH R2)
02	HE	50204	S	HBH	1 H Y H H 2 HA SR HA HA			
03	HE	50304	S	HBH	1 H H Y H 2 HA HA SR HA			
04	HE	50404	S	HBH	1 H H H Y 2 HA HA HA SR			
IH -85-134-00201 T50050	HE	50104	S	HBH	1 Y H H H 2 SS HA HA HA		QTC	UHTIL RECEHTLY (PAST 2 YEARS), TVA DID HOT PROVIDE QC IHSPECTORS HITH HELDIHG IHSPECTIOH TOOLS. SOH E IHSPECTORS PROVIDED THEIR OHH TOOLS BUT OTHERS D ID HOT. CI HAS PASSED AHAY, HO FURTHER DETAILS AV AILABLE. (SQH ISSUES ADDRESSED IH RPT HP-04-SQH R2)
02	HE	50204	S	HBH	1 H Y H H 2 HA SS HA HA			
03	HE	50304	S	HBH	1 H H Y H 2 HA HA SS HA			
04	HE	50404	S	HBH	1 H H H Y 2 HA HA HA SS			
IH -85-406-00301 T50013	HE	50104	S	HBH	1 Y H H H 2 SS HA HA HA		QTC	PRIOR TO 1979, HO HELD IHSPECTIOH TOOLS HERE ISSUE D TO IHSPECTORS. (SQH ISSUES ADDRESSED IH RPT HP-0 4-SQH R2)
02	HE	50204	S	HBH	1 H Y H H 2 HA SS HA HA			
03	HE	50304	S	HBH	1 H H Y H 2 HA HA SS HA			
04	HE	50404	S	HBH	1 H H H Y 2 HA HA HA SS			

3 CONCERNS FOR CATEGORY HE SUBCATEGORY 50104

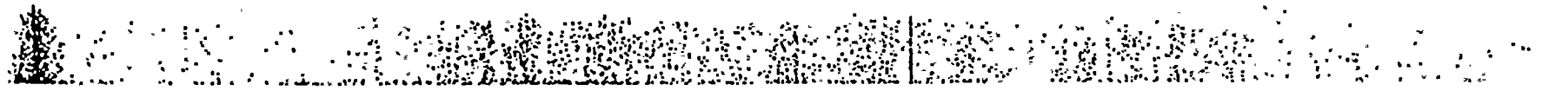
CATEGORY: HE NON QA/QC WELDING
SUBCATEGORY: 50106 TRAINING & CERTIFICATION OF CONST WELD INSPECTORS

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ IIB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-476-00402 T50037	HE	50206	S	HBN	1 N Y N N 2 NA SR NA NA	EX-85-052-005	QTC	APPROX. 1980, TVA IMPLEMENTED A WELDING INSPECTORS TRAINING PROGRAM AND PEOPLE WITH A GROCERY CLERK BACKGROUND WERE INSPECTING WELDS WITHIN TWO WEEKS. (SQN ISSUES ADDRESSED IN RPT WP-06-SQN R0)
03	HE	50106	S	HBN	1 Y N N N 2 SR NA NA NA			
04	HE	50306	S	HBN	1 N N Y N 2 NA NA SR NA			
05	HE	50406	S	HBN	1 N N N Y 2 NA NA NA SR			
IN -85-981-00102 T50111	HE	50206	S	HBN	1 N Y N N 2 NA SR NA NA	EX-85-052-005	QTC	WELDING INSPECTORS WERE INADEQUATELY TRAINED PIROR TO 1981, I.E., PERSONNEL WITH NO EXPERIENCE INVOLVING WELDING WERE SENT TO A TWO WEEK TRAINING CLASS AND THEN FUNCTIONED AS A WELDING INSPECTOR. CI HAS NO MORE INFORMATION. NO FOLLOW UP REQUIRED. (SQN ISSUES ADDRESSED IN RPT WP-06-SQN R0)
03	HE	50106	S	HBN	1 Y N N N 2 SR NA NA NA			
04	HE	50306	S	HBN	1 N N Y N 2 NA NA SR NA			
05	HE	50406	S	HBN	1 N N N Y 2 NA NA NA SR			
SQN-86-035-00101	HE	50106	N	BFN	1 Y N N N 2 SS NA NA NA		NSRS	DURING THE INTERVIEW CONTACT THE CI STATED AND LATER DOCUMENTED THAT THE CI AND FELLOW ISI INSPECTORS WERE ASKED TO PERFORM WELD INSPECTIONS WITHOUT BEING QUALIFIED.
SQN-86-035-00201	HE	50106	N	BFN	1 Y N N N 2 SS NA NA NA		NSRS	DURING AN INTERVIEW CONTACT THE CI STATED AND LATER DOCUMENTED THAT THE CI AND FELLOW ISI INSPECTORS WERE REMOVED FROM PERFORMING WELD INSPECTIONS BECAUSE THEY WERE NOT QUALIFIED. AFTER THEY WERE REMOVED FROM THE JOB THEY WERE REPLACED BY INSPECTORS ALSO NOT QUALIFIED.

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50106 TRAINING & CERTIFICATION OF CONST WELD INSPECTORS

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
WI -85-041-00202 T50103	WE	50206	S	WBN	1 N Y N N 2 NA SS NA NA	EX-85-052-005	QTC	QUALIFICATION/TRAINING OF INSPECTORS FOR STRUCTURAL (AWS) WELD VISUAL EXAMINATION IS QUESTIONABLE; LEVEL II CERTIFICATION IS GRANTED WITH ONLY TWO MONTHS OF OJT, WHICH IS NOT DOCUMENTED; THE TOPICAL REPORT HAS "BASTARDIZED" ANSI N45.2.6, REGARDING QUALIFICATION OF INSPECTION/EXAMINATION PERSONNEL. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED. (SQN ISSUES ADDRESSED IN RPT WP-06-SQN R0)
03	WE	50106	S	WBN	1 Y N N N 2 SS NA NA NA			
04	WE	50306	S	WBN	1 N N Y N 2 NA NA SS NA			
05	WE	50406	S	WBN	1 N N N Y 2 NA NA NA SS			
WI -85-081-00702 T50237	WE	50206	S	WBN	1 N Y N N 2 NA SR NA NA	EX-85-052-005	QTC	CI EXPRESSED THAT WELDING INSPECTORS ARE NOT QUALIFIED FOR THE JOB. CI STATED THAT AN INSPECTOR NEEDED TO BE A WELDER SO THE INSPECTOR WOULD KNOW WHAT TO LOOK FOR IN A GOOD WELD. CI DECLINED TO PROVIDE ANY ADDITIONAL INFORMATION. CONSTRUCTION DEPARTMENT CONCERN. NO FOLLOW UP REQUIRED. (SQN ISSUES ADDRESSED IN RPT WP-06-SQN R0)
03	WE	50106	S	WBN	1 Y N N N 2 SR NA NA NA			
04	WE	50306	S	WBN	1 N N Y N 2 NA NA SR NA			
05	WE	50406	S	WBN	1 N N N Y 2 NA NA NA SR			

6 CONCERNS FOR CATEGORY WE SUBCATEGORY 50106



REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
OMP - ISSS - RIM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50107 WELDER TRAINING PROGRAM FOR CONST AND WELDING INSP

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
EX -85-008-00101 T50051	WE	50107	S	WBN	1 Y N N N 2 SR NA NA NA	EX-85-010-002	QTC	SUBJOURNEYMEN USED TO DO WORK THAT THEY'RE NOT QUALIFIED TO DO. THEY NEEDN'T HAVE ANY SPECIFIC TRAINING, BUT DO WORK (EG PIPE FIT-UPS AND WELDS ON 1/4" LINES) NORMALLY DONE BY A JOURNEYMAN WITH 5 YEARS MINIMUM EXPERIENCE. SUBJOURNEYMEN REQUIRE CLOSER TECHNICAL SUPERVISION THAN TVA PROVIDES. WHEN CRAFTS COMPLAIN, THEY ARE "CHEWED OUT" BEYOND ALL REASONABLE LIMITS. NO MORE DETAILS KNOWN. (SQN ISSUES ADDRESSED IN RPT WP-07-SQN R1)
02	WE	50207	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50307	S	WBN	1 N N Y N 2 NA NA SR NA			
04	WE	50407	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-706-00101 T50064	WE	50107	S	WBN	1 Y N N N 2 SR NA NA NA		QTC	WELDERS WHO WENT THROUGH TVA'S WELDER TRAINING PROGRAM HAVE INSUFFICIENT TRAINING AND EXPERIENCE TO HANDLE ALL VARIABLES INVOLVED TO PERFORM ADEQUATE WELDS FOR A NUCLEAR INSTALLATION. THIS INADEQUACY HAS CREATED A LOT OF REWORK. CI HAS NO MORE DETAILS. (SQN ISSUES ADDRESSED IN RPT WP-07-SQN R1)
02	WE	50207	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50307	S	WBN	1 N N Y N 2 NA NA SR NA			
04	WE	50407	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -86-158-00601 T50180	WE	50314	S	WBN	1 N N Y N 2 NA NA SR NA		QTC	UNTIL 1973 TVA DID NOT LET THEIR APPRENTICESHIP PEOPLE WELD. DURING THAT YEAR, EVEN WITH TWO OR THREE MONTHS EXPERIENCE, AN APPRENTICE COULD TAKE THE TEST, PASS, AND BE ABLE TO WELD IN THE FIELD. THE SYSTEM HAS WORKED THAT WAY EVEN SINCE 1973. CONST. DEPT. CONCERN. C/I HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT WP-14-SQN R1)
02	WE	50107	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50207	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50407	S	WBN	1 N N N Y 2 NA NA NA SR			

3 CONCERNS FOR CATEGORY WE SUBCATEGORY 50107

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50111 SURFACE GRINDING OF WELDS

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-282-00202 T50014	WE	50111	S	WBN	1 Y N N N 2 SR NA NA NA	IN-85-282-002	QTC	UNTIL RECENTLY, TVA WELD INSPECTORS REQUIRED ALL P IPE WELDS TO BE SURFACE GROUND TO A SMOOTH FINISH. THE CONCERN IS THAT SMOOTH GRINDING MAY ACTUALLY MASK A SURFACE DEFECT WHICH WOULD OTHERWISE BE DE TECTABLE. NO FURTHER DETAILS WERE AVAILABLE. (SQN ISSUES ADDRESSED IN RPT WP-11-SQN R1)
03	WE	50234	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50311	S	WBN	1 N N Y N 2 NA NA SR NA			
05	WE	50411	S	WBN	1 N N N Y 2 NA NA NA SR			
IN -85-299-00301 T50188	WE	50319	S	WBN	1 N N Y N 2 NA NA SR NA		QTC	SS WELDS SEEM TO HAVE EXCESS METAL REMOVED AT BUTT WELD JOINTS, ALSO THE WELDS EXHIBIT EXCESSIVE SHR INKAGE AT JOINTS. THIS CONCERN IS GENERIC BUT HAV E EXAMPLES. THIS HAS BEEN NOTICED FOR THE PAST 6 YEARS IN BOTH UNITS. DETAILS KNOWN TO QTC, WITHHEL D DUE TO CONFIDENTIALITY. CONSTRUCTION DEPT CONCE R. (SQN ISSUES ADDRESSED IN RPT WP-19-SQN R1)
02	WE	50234	S	WBN	1 N Y N N 2 NA SR NA NA			
03	WE	50111	S	WBN	1 Y N N N 2 SR NA NA NA			
04	WE	50432	S	WBN	1 N N N Y 2 NA NA NA SR			
05	WE	50411	S	WBN	1 N N N Y 2 NA NA NA SR			

2 CONCERNS FOR CATEGORY WE SUBCATEGORY 50111

CATEGORY: HE NON QA/QC WELDING SUBCATEGORY: 50113 SUITABILITY OF WELDING EQUIPMENT

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-247-00201 T50022	HE	50113	S	HBN	1 Y N N N 2 SR NA NA NA		QTC	WELDING MACHINES (MCKAY & HOBART) USED IN FIELD BY STEAM FITTERS HAVE 2 SETTINGS 50 & 100 AMPS BOTH OF WHICH ARE UNSUITABLE FOR WELDING WITH 3/32" ROD . THIS CONTRIBUTES TO POROSITY AND PINHOLES. (SQN ISSUES ADDRESSED IN RPT WP-13-SQN R0)
02	HE	50213	S	HBN	1 N Y N N 2 NA SR NA NA			
03	HE	50313	S	HBN	1 N N Y N 2 NA NA SR NA			
04	HE	50413	S	HBN	1 N N N Y 2 NA NA NA SR			
IN -85-303-00101 T50021	HE	50113	S	HBN	1 Y N N N 2 SR NA NA NA		QTC	ALL THE WELDING MACHINES SHOULD HAVE REMOTE SWITCH ES SO THAT THE TUNGSTEN TIP DOESN'T HAVE TO TOUCH THE BASE METAL TO START THE WELD. PRESENTLY THE N ON-HOBART WELDERS, WHEN USED, MAY CAUSE TUNGSTEN T O BE LEFT IN THE WELD. (SQN ISSUES ADDRESSED IN RP T WP-13-SQN R0)
02	HE	50213	S	HBN	1 N Y N N 2 NA SR NA NA			
03	HE	50313	S	HBN	1 N N Y N 2 NA NA SR NA			
04	HE	50413	S	HBN	1 N N N Y 2 NA NA NA SR			

2 CONCERNS FOR CATEGORY HE SUBCATEGORY 50113

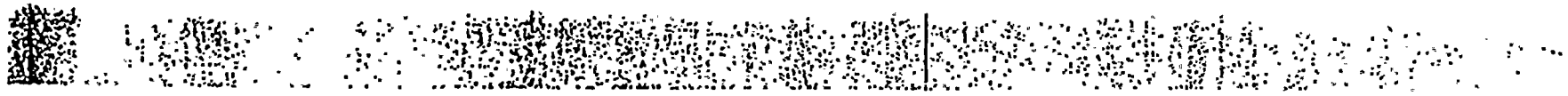
REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
OHP - ISSS - RHH

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50116 PERFORMANCE OF PRE-WELD INSPECTION

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
BEM-85-001-00101 T50227	WE	50116	S	BLH	1 Y N N N 2 SR NA NA NA		QTC	BELLEFONTE - THE GENERAL CONST. SPEC. G-29C, PROCESS SPEC. O.C.1.1 IS IN CONFLICT WITH THE TVA QUALITY ASSURANCE COMMITMENTS AS STATED BY THE TVA TOPICAL REPORT, TVA-TR75-1A, IN THAT PROCESS SPEC. O.C.1.1, SECTION 6.0 ALLOWS UNCERTIFIED WELDER FOREMEN, WHO HAVE DIRECT RESPONSIBILITY FOR THE INSTALLATION, TO PERFORM PREWELD INSPECTIONS. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50216	S	BLH	1 N Y N N 2 NA SR NA NA			
03	WE	50316	S	BLH	1 N N Y N 2 NA NA SR NA			
04	WE	50416	S	BLH	1 N N N Y 2 NA NA NA SR			
BEM-85-001-00201 T50227	WE	50116	S	BLH	1 Y N N N 2 SR NA NA NA		QTC	BELLEFONTE - UNCERTIFIED WELDER FOREMEN ARE REQUIRED BY TVA TO PERFORM PREWELD INSPECTIONS ON INSTALLATIONS THEY ARE DIRECTLY RESPONSIBLE FOR WHICH IS A VOILATION OF ANSI REQUIREMENTS. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50216	S	BLH	1 N Y N N 2 NA SR NA NA			
03	WE	50316	S	BLH	1 N N Y N 2 NA NA SR NA			
04	WE	50416	S	BLH	1 N N N Y 2 NA NA NA SR			
BFM-85-001-00101 T50221	WE	50116	S	BLH	1 Y N N N 2 SR NA NA NA		QTC	BELLEFONTE - THE GENERAL CONST. SPEC. G-29C, PROCESS SPEC.O.C.1.1 IS IN CONFLICT WITH THE TVA QUALITY ASSURANCE COMMITMENTS AS STATED BY THE TVA TOPICAL REPORT, TVA-TR75-1A, IN THAT PROCESS SPEC. O.C.1.1, SECTION 6.0 ALLOWS UNCERTIFIED WELDER FORMEN, WHO HAVE DIRECT RESPONSIBILITY FOR THE INSTALLATION, TO PERFORM PREWELD INSPECTIONS. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50216	S	BLH	1 N Y N N 2 NA SR NA NA			
03	WE	50316	S	BLH	1 N N Y N 2 NA NA SR NA			
04	WE	50416	S	BLH	1 N N N Y 2 NA NA NA SR			



CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50116 PERFORMANCE OF PRE-WELD INSPECTION

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
BFM-85-001-00201 T50221	WE	50116	S	BFN	1 Y N N N 2 SR NA NA NA		QTC	BROWN'S FERRY - UNCERTIFIED WELDER FOREMEN ARE REQ UIRED BY TVA TO PERFORM PRE-WELD INSPECTIONS ON IN STALLATIONS THEY ARE DIRECTLY RESPONSIBLE FOR WHIC H IS A VIOLATION OF ANSI REQUIREMENTS. NUCLEAR PO WER CONCERN. CI HAS NO FURTHER INFORMATION. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50216	S	BFN	1 N Y N N 2 NA SR NA NA			
03	WE	50316	S	BFN	1 N N Y N 2 NA NA SR NA			
04	WE	50416	S	BFN	1 N N N Y 2 NA NA NA SR			
WBM-85-001-00102 T50227	WE	50116	S	WBN	1 Y N N N 2 SR NA NA NA		QTC	WATTS BAR - THE GENERAL CONST. SPEC. G-29C, PROCES S SPEC. G.C.1.1 IS IN CONFLICT WITH THE TVA QUALIT Y ASSURANCE COMMITMENTS AS STATED BY THE TVA TOPIC AL REPORT, TVA-TR75-1A, IN THAT PROCESS SPEC. G.C. 1.1, SECTION 6.0 ALLOWS UNCERTIFIED WELDER FOREMEN , WHO HAVE DIRECT RESPONSIBILITY FOR THE INSTALLAT ION, TO PERFORM PREWELD INSPECTIONS. NUCLEAR POWE R CONCERN. CI HAS NO FURTHER INFORMATION. (SQN IS SUES ADDRESSED IN RPT WP-16-SQN R2)
03	WE	50216	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50316	S	WBN	1 N N Y N 2 NA NA SR NA			
05	WE	50416	S	WBN	1 N N N Y 2 NA NA NA SR			
WBM-85-001-00201 T50227	WE	50116	S	SQN	1 Y N N N 2 SR NA NA NA		QTC	SEQUOYAH - UNCERTIFIED WELDER FOREMEN ARE REQUIRED BY TVA TO PERFORM PREWELD INSPECTIONS ON INSTALLA TIONS THEY ARE DIRECTLY RESPONSIBLE FOR WHICH IS A VIOLATION OF ANSI REQUIREMENTS. NUCLEAR POWER CO NCERN. CI HAS NO FURTHER INFORMATION. (TRANSFERRE D TO WBN-85-001-003, CONCERN WAS ADDRESSED BY WELD ING CATEGORY BEFORE TRANSFER WAS DOCUMENTED, AND W ILL NOT BE INPUT TO GN CATEGORY, SQN ISSUES ADDRES SED IN RPT WP-16-SQN R2)
02	WE	50216	S	SQN	1 N Y N N 2 NA SR NA NA			
03	WE	50316	S	SQN	1 N N Y N 2 NA NA SR NA			
04	WE	50416	S	SQN	1 N N N Y 2 NA NA NA SR			

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
ONP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY
SUBCATEGORY: 50116 PERFORMANCE OF PRE-WELD INSPECTION

CATEGORY: WE NON QA/QC WELDING

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
III -85-030-00701 T50185	WE	50116	S	WBN	1 Y N N N 2 SR NA NA NA		QTC	THE WBN FSAR COMMITS TVA TO THE REQUIREMENTS OF AWS D.1.1 FOR STRUCTURAL WELDING. CONTRARY TO THESE REQUIREMENTS, THE G-29C PROCESS SPECIFICATION HAS MODIFIED TO REFLECT LESS STRINGENT INSPECTION REQUIREMENTS (E.G. VISUAL INSPECTION OF WELDS THROUGH PAINT (CARBO ZINC PRIMER) AND NO DOCUMENTED INSPECTION BY CERTIFIED VISUAL INSPECTORS (FIT-UP, IN-PROCESS) PRIOR TO FINAL INSPECTION.) CI HAS NO ADDITIONAL INFORMATION. NUC. POWER DEPT. CONCERN. (SQN ISSUES ADDRESSED IN RPT WP-16-SQN R2)
02	WE	50102	S	WBN	1 Y N N N 2 SR NA NA NA			
03	WE	50216	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50316	S	WBN	1 N N Y N 2 NA NA SR NA			
05	WE	50416	S	WBN	1 N N N Y 2 NA NA NA SR			
06	WE	50202	S	WBN	1 N Y N N 2 NA SR NA NA			
08	WE	50402	S	WBN	1 N N N Y 2 NA NA NA SR			

7 CONCERNS FOR CATEGORY WE SUBCATEGORY 50116

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
ONP - ISSS - RMM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50124 WELDER PERFORMANCE QUALIFICATION

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
JLH-85-002	01	WE	50124	S SQN	1 Y N N N 2 SS NA NA NA		OECP	THIS CONCERN WAS NOT DOCUMENTED PER SQA166 BUT HAS BEEN INCLUDED IN THE EMPLOYEE CONCERN LOG. WELDERS FROM MUSCLE SHOALS MAY NOT HAVE RECEIVED THE APPROPRIATE NUMBER OF BEND TESTS WHEN TAKING WELD QUALIFICATION TESTS. (SQN ISSUES ADDRESSED IN RPT WP-24-SQN R0)
	02	WE	50203	S SQN	1 N Y N N 2 NA SS NA NA			
	03	WE	50324	S SQN	1 N N Y N 2 NA NA SS NA			
	04	WE	50424	S SQN	1 N N N Y 2 NA NA NA SS			

1 CONCERNS FOR CATEGORY WE SUBCATEGORY 50124

REFERENCE - ECPS120J-ECPS121C
FREQUENCY - REQUEST
ONP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

RUN TIME - 11:45:02
RUN DATE - 12/17/87

CATEGORY: HE NON QA/QC WELDING
SUBCATEGORY: 50125 EFFECTS OF WELD REPAIRS NOT MEETING ASME CODE

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
2850162005	01	OP 30803	S	NPS	1 Y Y Y Y 2 SS SS SS SS		NRC	TVA MAKES REPAIRS TO THEIR NUCLEAR PLANTS WHICH ARE NOT IN ACCORDANCE WITH ASME CODES, SUCH AS OVERLAYS, PATCHES, AND EVEN FURMATITE (SOPHISTICATED GLUE). (SQN ISSUES ADDRESSED IN RPT WP-25-SQN R0)
	02	HE 50125	S	NPS	1 Y N N N 2 SS NA NA NA			
	03	HE 50236	S	NPS	1 N Y N N 2 NA SS NA NA			
	04	HE 50325	S	NPS	1 N N Y N 2 NA NA SS NA			
	05	HE 50425	S	NPS	1 N N N Y 2 NA NA NA SS			

1 CONCERNS FOR CATEGORY HE SUBCATEGORY 50125

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50132 ADEQUACY OF STRUCTURAL SUPPORT WELDS

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
BFN-85-019-00101	WE	50132	N	BFN	1 Y N N N 2 SS NA NA NA		NSRS	DURING AN EXIT INTERVIEW THE CI EXPRESSED HIS CONCERN THAT MANY WELDS AND HANGERS ARE QUESTIONABLE WITH RESPECT TO THEIR ADEQUACY. THE PROCESS FOLLOWED TODAY WITH REGARD TO WELDING AND WELD INSPECTION IS MORE DETAILED AND THAT ORIGINAL WELDS IN QUESTION WOULD NOT PASS CURRENT REQUIREMENTS.

1 CONCERNS FOR CATEGORY WE SUBCATEGORY 50132

CATEGORY: WE NON QA/QC WELDING
SUBCATEGORY: 50135 WELD INSPECTION PROCEDURES

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
IN -85-406-00201 T50013	WE	50135	S	WBN	1 Y N N N 2 SS NA NA NA		QTC	PRIOR TO 1979 THERE WAS NO SPECIFIC WELD INSPECTIO N CRITERIA FOR USE BY INSPECTION PERSONNEL. IT IS BELIEVED THAT THIS PROBLEM WAS VALID TVA SYSTEM W IDE- ALL PLANTS. (SQN ISSUES ADDRESSED IN RPT WP-0 9-SQN R1)
02	WE	50309	S	WBN	1 N N Y N 2 NA NA SS NA			
03	WE	50243	S	WBN	1 N Y N N 2 NA SS NA NA			
04	WE	50432	S	WBN	1 N N N Y 2 NA NA NA SS			
PH -85-012-X0301 T50077	WE	50135	S	WBN	1 Y N N N 2 SR NA NA NA	PH-85-012-X03	QTC	WELDING AND BRAZING INSPECTION OF SAFETY-RELATED H VAC DUCTWORK WAS DELETED SUBSEQUENT TO 1981 FROM T HE QA PROGRAM WITHOUT ADEQUATE JUSTIFICATION. WAT TS BAR UNITS 1 & 2, SAFETY RELATED DUCTWORK. ADDI TIONAL DETAILS ARE AVAILABLE IN FILE. (SQN ISSUES ADDRESSED IN RPT WP-05-SQN R1)
02	WE	50305	S	WBN	1 N N Y N 2 NA NA SR NA			
03	WE	50235	S	WBN	1 N Y N N 2 NA SR NA NA			
04	WE	50405	S	WBN	1 N N N Y 2 NA NA NA SR			
XX -85-102-00601 T50172	QA	80201	S	BFN	1 N N Y N 2 NA NA SR NA		QTC	BROWN'S FERRY: THE VISUAL EXAMINATION PROCEDURE WH ICH COVERS ASME SECTION II IS VERY NON SPECIFIC. NUCLEAR POWER DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOW UP REQUIRED.
03	WE	50135	S	BFN	1 Y N N N 2 SR NA NA NA			
04	WE	50243	S	BFN	1 N Y N N 2 NA SR NA NA			
05	WE	50432	S	BFN	1 N N N Y 2 NA NA NA SR			
06	QA	80252	S	BFN	1 N N Y N 2 NA NA SR NA			

CATEGORY: WE NON QA/QC WELDING SUBCATEGORY: 50135 WELD INSPECTION PROCEDURES

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION
XX -85-102-00701 T50172	WE	50243	S	BFN	1 N Y N N 2 NA SR NA NA		QTC	BROWN'S FERRY: NDE INSPECTORS CAN ONLY WRITE A NOTICE OF INSPECTION ON IN-SERVICE RELATED DEFECTS. PRESERVICE DEFECTS CAN ONLY BE IDENTIFIED BY A MAINTENANCE REQUEST. NUCLEAR POWER DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOW UP REQUIRED.
02	WE	50135	S	BFN	1 Y N N N 2 SR NA NA NA			
03	WE	50426	S	BFN	1 N N N Y 2 NA NA NA SR			
XX -85-102-01101 T50172	WE	50243	S	SQN	1 N Y N N 2 NA SR NA NA	I-85-735-SQN	QTC	SEQUOYAH: NDE INSPECTORS CAN ONLY WRITE A NOTICE OF INSPECTION ON IN-SERVICE RELATED DEFECTS. PRESERVICE RELATED DEFECTS CAN ONLY BE IDENTIFIED BY A MAINTENANCE REQUEST. NUCLEAR POWER DEPT. CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED. (SQN ISSUES ADDRESSED IN NSRS RPT I-85-735-SQN)
02	WE	50399	S	SQN	1 N N Y N 2 NA NA SR NA			
03	WE	50135	S	SQN	1 Y N N N 2 SR NA NA NA			
04	WE	50426	S	SQN	1 N N N Y 2 NA NA NA SR			

5 CONCERNS FOR CATEGORY WE SUBCATEGORY 50135

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
EX-85-039-001 IN-85-234-001 IN-85-247-001 IN-85-352-002 IN-85-424-001 IN-85-424-004 IN-85-424-006 IN-85-424-007 IN-85-426-001 IN-85-441-003 IN-85-453-009 IN-85-454-004 IN-85-501-001 IN-85-672-003 IN-86-047-001 WI-85-053-004	Lack of portable rod ovens to protect coated electrodes from moisture absorption. Inadequate control of weld rod. Poor quality E7018 electrodes Administrative practices for return of filler material.	The Browns Ferry program for control of welding filler material meets the requirements of ANSI/AWS D1.1 Section 4, ASME Section III NB-4000 and ASME Section XI IWB-4000. The quality of the electrodes purchased meets the requirements of ASME Section II and III. This issue has been addressed by Weld Project Evaluation Report WP-01-BFN.
IN-85-458-001 IN-86-019-001 NS-85-001-001 PH-85-040-001 WI-85-013-003 WI-85-030-007 WI-85-030-008 WI-85-041-006 WI-85-041-008	The Process Specification permitted inspection of AWS welds through coating of carbo-zinc primer. Thousands of welds may have been inspected through primer. There is no documentation to show which welds were involved. Inspectors did not understand the coating thickness limit for inspecting primed welds.	The Process Specification in question was site unique for Watts Bar, and was never implemented at Browns Ferry. The BFN specifications and procedures meet the requirements of ANSI/AWS D1.1. This issue has been addressed by Weld Project Evaluation Report WP-02-BFN.
EX-85-021-002 HI-85-077-N17 IN-85-346-003 IN-85-426-002 IN-85-480-004 IN-85-725-X14 IN-85-725-X15	The possibility exists that one welder could weld or complete a test plate for another welder. Welding by an uncertified welder.	No one except the Weld Test Supervisor is allowed to enter the test booth while a welder is being tested. There have been isolated instances of welders operating outside their

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
		limits of qualification.
	Inadequate basis for welders' qualification continuity updates.	These instances were identified and corrected by the ongoing Quality Assurance activities. The basis for qualification continuity updates satisfies requirements and parallels industry practice.
	Personnel whose duties do not require welding continue to have their qualification continuity updated.	Continuation of supervisory personnel qualifications is an acceptable practice.
		This issue has been addressed by Weld Project Evaluation Report WP-03-BFN.
IN-85-007-001 IN-85-134-002 IN-85-406-003	Availability of inspection tools.	Inspection tools were available throughout construction and operation.
		This issue has been addressed by Weld Project Evaluation Report WP-04-BFN.
IN-85-476-004 IN-85-981-001 SQN-86-035-001 SQN-86-035-002 WI-85-041-002 WI-85-081-007	Qualification of Welding Inspectors. Topical Report not in compliance with ANSI N45.2.6.	Welding Inspectors are qualified in accordance with the Nuclear Quality Assurance Manual. Welding Inspectors are qualified and certified using SNT-TC-1A as a guide, rather than ANSI N45.2.6. Appropriate exceptions to Regulatory Guide 1.58 are made in the Topical Report.
		This issue has been addressed by Weld Project Evaluation Report WP-06-BFN.

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
EX-85-008-001 IN-85-706-001 IN-86-158-006	Qualification and experience of Subjourneymen. Adequacy of TVA Welder Training Program.	Subjourneymen are utilized in accordance with the applicable labor agreement and good management practices. Welders are tested and qualified in accordance with AWS D1.1 and ASME Section IX. This issue has been addressed by Weld Project Evaluation Report WP-07-BFN.
IN-85-282-002 IN-85-299-003	Surface grinding of welds. Shrinkage of stainless steel butt joints. Surface grinding and shrinkage	Surface grinding of welds is provided for by the ASME, ANSI and AWS codes. Some shrinkage is inherent in girth butt welded joints in stainless steels. Heat input during welding is controlled by adherence to approved welding procedures. This issue has been addressed by Weld Project Evaluation Report WP-11-BFN.
IN-85-247-002 IN-85-303-001	Suitability of welding equipment.	The Lincoln IDEALARC TIG 300 welding machine was used at Browns Ferry. This machine features remote current adjustment, soft start, and current output range of two through 375 amperes. This issue has been addressed by Weld Project Evaluation Report WP-13-BFN.

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
BEM-85-001-001 BEM-85-001-002 BFM-85-001-001 BFM-85-001-002 WBM-85-001-001 WBM-85-001-002 WI-85-030-007	Foremen perform preweld inspections, which is not in accordance with the Topical Report, ANSI N45.2.5 and AWS D1.1.	AWS D1.1 allows preweld activity examinations to be on a sampling basis. Browns Ferry procedures and specifications mandated surveillance programs of all welding activities. Practice at Browns Ferry does not violate the TVA Topical Report or ANSI N45.2.5. This issue has been addressed by Weld Project Evaluation Report WP-16-BFN.
JHL-85-002	Welders from Muscle Shoals may not have had the appropriate number of bend tests.	All affected welders at BFN were requalified to the requirements of ASME Section IX. This issue has been addressed by Weld Project Evaluation Report WP-24-BFN.
2850162005	Weld repairs such as overlays, patches and Furmanite (viscous fluid sealant) not in accordance with the ASME Code.	Overlay welding is an acceptable method of making temporary repairs to correct for intergranular stress corrosion cracking. TVA's plan for use of overlays was approved by the USNRC. Temporary mechanical and welded patches are used to contain leakage. They do not substitute for permanent repairs in accordance with applicable codes.

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
		This issue has been addressed by Weld Project Evaluation Report WP-25-BFN. Use of viscous fluid sealant is outside the scope of the Weld Project, and has been addressed by Subcategory 30800
BFN-85-019-001	Many welds and hangers are questionable with respect to adequacy. Original welds would not meet today's requirements.	This issue is factual in that some of the support welds do not meet the visual inspection criteria. This issue has been addressed by Weld Project Evaluation Report WP-32-BFN.
IN-85-406-002 PH-85-012-X03 XX-85-102-006 XX-85-102-007 XX-85-102-011	No specific inspection criteria prior to 1979. Welding and brazing inspection of safety related dnu twork was deleted from the QA program. NDE Inspectors can only write a Notice of Inspection for inservice related defects. Preservice defects can only be identified by a Maintenance Request.	During initial construction, direct application of the codes provided all of the necessary inspection criteria. At the time of commitment to 10CFR50 Appendix B, a procedure system was in place and provided all of the necessary inspection criteria. HVAC at BFN was fabricated and erected using mechanical means. When welding modifications were specified, an appropriate procedure for inspection was emplaced.

CONCERN	DESCRIPTION OF ISSUES	COMMENTS
		The Notice of Indication is used to report defects identified within the defined scope of an inspection, inservice or preservice. The Maintenance Request is used to report observations identified outside the defined scope of an inspection. This system is in compliance with the Nuclear Quality Assurance Manual. This issue has been addressed by Weld Project Evaluation Report WP-35-BFN.