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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF INSPECTION AND ENFORCEMENT
Victor Stello, Jr., Director

In the Matter of	)	
	)	
Gulf States Utilities Company	)	Docket Nos. 50-458
(River Bend Station Units 1 and 2)	)	50-459
	)	(10 CFR 2.206)

DIRECTOR'S DECISION UNDER 10 CFR 2.206

By petition dated July 21, 1980, the Union of Concerned Scientists (UCS) "on behalf of an individual who wishes to remain anonymous*," requested pursuant to 10 CFR 2.206 of the Commission's regulations that the U.S. Nuclear Regulatory Commission (NRC) halt the construction of the River Bend Station Units 1 and 2 of the Gulf States Utilities (GSU) Company. This request has been considered under the provisions of 10 CFR 2.206 of the Commission's regulations. Notice of receipt of the petition was published in the Federal Register on August 25, 1980 (45 FR 56476). An initial decision denying a request for immediate action to halt construction activities at the River Bend units was forwarded to the UCS on August 18, 1980.

According to the UCS petition, the individual who wishes to remain anonymous (hereinafter referred to as the alleger) identified what were defined as "dangerous practices that arise from the fact that the plant is being built on an accelerated schedule, and, under pressure from that schedule, the project engineering management has taken certain shortcuts that would lead to dangerous conditions if not checked before plant cutover." The

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*UCS follow up letter of October 6, 1980 to Victor Stello.

alleger then provided UCS a number of examples of these "dangerous practices." These examples addressed problems in the qualification of various electrical cables and cable trays, the use of certain specifications prior to prescribed approval, the use of standards and guides that are still in the review process, and the use of two dissimilar cables in a run to a specific power supply.

A special inspection was conducted by the Office of Inspection and Enforcement (IE) on July 30-31, 1980 to investigate the examples provided by the alleger. The findings of the inspection were documented in the enclosed IE Inspection Report No. 50-458/80-08, dated August 19, 1980 (a copy of which is appended to this decision). Each of the examples identified by the alleger was addressed in that inspection report.

The findings in the inspection report revealed that the alleged problems or deficiencies did, indeed, exist. However, each had been previously identified by either the licensee or the contractor and, again in each instance, proper disposition had been initiated as required by the Quality Assurance Program of GSU. The IE inspection confirmed the fact that the Quality Assurance Program was functioning properly, nonconformances were identified, and proper dispositions thereof were undertaken. Consequently, there is no basis for NRC citations of noncompliance or deviation on these matters.

IE Inspection Report No. 50-458/80-08 and a request for additional information related to the allegations were forwarded in a letter to UCS by the Office of Inspection and Enforcement on September 5, 1980.

In a response dated October 6, 1980, UCS forwarded additional information to the Office of Inspection and Enforcement. The response included a September 27, 1980 letter from the alleger to UCS commenting on the inspection findings, as well as additional comments by UCS on these findings.

UCS questioned the NRC basis for declining to suspend construction immediately upon receipt of the UCS petition. As was stated in the August 18, 1980 letter to UCS declining to immediately halt construction, the significant fact in this case was the very early stage of plant construction. Construction at the River Bend Station was in such an early stage that none of the equipment in question had been installed but rather was still in the procurement and delivery process. Furthermore, prior to the August 18, 1980 letter, IE had completed a preliminary investigation of the quality assurance issues raised by UCS that did not indicate an inadequate quality assurance program at River Bend. In fact, all the allegations addressed situations that had already been identified and properly dealt with by the licensee or its contractor. Thus, the quality assurance program was functioning properly by identifying deficiencies or engineering problems and tracking them for adequate resolution.

The UCS letter of October 6, 1980 also noted that the findings of IE Inspection Report No. 50-458/80-08 did not address the concern that scheduling pressures might be contributing to lax practices. This point was further discussed during a telephone conference call on October 21, 1980 between NRC, UCS, and the alleger.

As a result of the conference call, NRC agreed to perform an additional investigation to assess the effect of scheduling pressures. This investigation was performed on October 29-31, 1980. The investigation included interviews with eleven members of the engineering staff, and the findings confirmed that pressure on electrical/drawing engineers to meet schedules did exist, but not to the extent that it would cause engineers to sacrifice or compromise quality. Details of the areas covered by the investigation are documented in the enclosed IE Inspection Report No. 50-458/80-11, dated November 18, 1980 (a copy of which is appended to this decision).

The final UCS comment in its October 6, 1980 letter raised the question whether Gulf States Utilities would or would not accept Regulatory Guide 1.131 "Qualification Tests of Electric Cables, Field Splices, and Connections for Light-Water-Cooled Nuclear Power Plants." This Regulatory Guide has been issued for comment only. The River Bend PSAR commits GSU to IEEE Standard 383 "Type Test of Class IE Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations." The PSAR does not commit GSU to Regulatory Guide 1.131. A licensee is not required to commit to a Regulatory Guide that has been issued only for comment nor is he required to meet the positions of a final Regulatory Guide unless he voluntarily committed to meet them or the positions have been incorporated into a regulation. It is the understanding of my staff that GSU will review the final version of the Regulatory Guide for adoption when issued; in the interim, the current practice of meeting the requirements of IEEE Standard 383 is acceptable.

Finally, NRC staff reviewed the health and safety items identified in the September 27, 1980 letter from the alleger that was attached to the UCS response of October 6, 1980. The staff's analysis is contained in the Appendix to this Decision. The analysis finds no merit in any of the health and safety items.

The results of the investigations performed by the NRC staff, as described in the documents referenced above, demonstrate that no adequate basis exists to suspend construction of River Bend Station Units 1 and 2. Consequently, the UCS petition is hereby denied.

A copy of this Decision and its enclosures will be placed in the Commission's public document room at 1717 H Street, NW, Washington, DC 20555 and in the local public document rooms at the Audubon Library, West Feliciana Branch, Ferdinand Street, St. Francisville, Louisiana 70775 and at Louisiana State University, Government Documents Department, Baton Rouge, Louisiana 70803.

A copy of this Decision will also be filed with the Secretary of the Commission for review in accordance with 10 CFR 2.206(c) of the Commission's regulations.

As provided in 10 CFR 2.206(c) of the Commission's regulations, this Decision will constitute the final action of the Commission twenty-five (25)

days after the date of issuance unless the Commission, on its own motion, institutes a review of this Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

Victor Stello, Jr.

Director

Office of Inspection and Enforcement

Dated at Bethesda, Maryland

this 26 day of May 1981.

Enclosures:

1. Appendix
2. IE Inspection Report No. 50-458/80-08
3. IE Inspection Report No. 50-458/80-11

Appendix

NRC Staff Analysis of Questions Raised with Respect to the River Bend Station by an Anonymous Alleger in a Letter Dated September 27, 1980 to the Union of Concerned Scientists

The following include responses to the individual health and safety questions from the alleger's letter dated September 27, 1980. The alleger's questions dealing with excessive costs incurred by GSU are not proper considerations of this Commission when examining a nuclear facility with regard to its effect on public health and safety.* In some cases, the responses are reiterations of findings in IE Inspection Report Nos. 50-458/80-08 and 50-458/80-11. In all cases, the responses reflect the most current information as of March 5, 1981. The format of the analysis follows that of the September 27, 1980 letter with the allegation or question stated first and the staff response that follows:

Question

Will Okonite be permitted to ship power cable before satisfactory test results are available?

Answer

Qualification test results have been compiled and submitted by Okonite to Stone & Webster Engineering Company (SWEC) for review and approval. SWEC and Gulf States Utilities (GSU) concur that the results demonstrate the qualified life of the cable. Thus, these results are approved and Okonite is about to start cable production. No cable will be shipped prior to approval by SWEC. It may be noted that there is no statement in the GSU PSAR that qualification test results must be acceptable prior to shipment of the cable. Cable must be demonstrated to be qualified prior to use.

Question

In IE Report No. 50-458/80-08, the staff stated that site activities only involve splice identification and not qualification on cable splices. The alleger then asks how the site personnel will go about qualifying these splices.

Answer

Since the referenced report was issued, Okonite has committed to furnishing "rework free" cable. The applicable purchase specifications (241.234 and 241.240) have been revised to incorporate this requirement as follows:

*Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2) ALAB - 623, 12 NRC 670, 677-78 (1980)

1. Finished cable shall not contain conductor-to-conductor splices.

2. After the insulation is extruded onto the conductor, there shall be no repairs made to the insulation.

3. Cosmetic repairs, such as buffing, to improve the outer surface of the jacket is permitted. Removal/replacement of a section of jacketing is not permissible.

Question

If SWEC, indeed, accepts with no exceptions Regulatory Guide 1.131, which was issued some years after the PSAR was issued, are we to believe that GSU and its agents accept with no objection ex post facto rule-making?

Answer

As noted in the body of the Decision, there is no requirement that GSU commit to or meet the conditions of a draft Regulatory Guide. The current practices of GSU in this area are acceptable.

Allegation

The alleger claims that a specification violation occurred with respect to thermocouple extension wire and that SWEC revised the specification to accommodate the vendor.

Answer

The specification was not revised to accommodate the vendor, but rather to clarify the necessary traceability requirements. The revised specification now requires the tests and documentation to provide that traceability. The revision was made in accordance with good engineering practice. The vendor must certify that its conductor meets the specification requirements. Certified Mill Test Reports (CMTRs) on raw copper that is 99.999% pure, including conductor resistance tests, are to be received with each cable shipment. The vendor further attests to this traceability by certificates of conformance in accordance with ASTM Standard B33.

Question

Is the procedure of specification revision referred to above acceptable to the NRC?

Answer

Revising the specifications, procedures, instructions, etc., is an acceptable procedure to NRC. The revisions must be properly reviewed and controlled, proper engineering judgment must be exercised, and quality and safety are not to be compromised.

Question

The alleger states that a number of "Nonconformance and Disposition" (N&D) reports have been issued against cable trays delivered to the site. The alleger notes that one such report had not been dispositioned over two months after issuance and asks, "Does SWEC routinely take over two months to disposition an N&D?"

Answer

The normal length of time to obtain an engineering disposition to N&Ds is one to two weeks. Procedures have been established that provide for monitoring the status of N&Ds by the Quality Systems Division. If an N&D has been awaiting disposition for a period of thirty days or more, immediate action is required to provide a status of the N&D and either to complete the disposition or describe why it is not practical to provide a disposition at that time.

In the case of the N&D in question, it was impractical to provide a disposition until seismic acceptablity of the proposed repairs was evaluated. Under no circumstances should QA approve an N&D disposition that would be adverse to quality for the sake of expediency, regardless of the age of the N&D.

Question

How can the licensee assure that these nonconforming cable trays will not be used as is, and how do they propose to deal with post installation damage?

Answer

Present project procedures, specifications, and inspection plans provide for both pre- and post-installation inspection by Field Quality Control (FQC). In addition, each individual damaged section of cable tray must have a reject tag affixed. The tray cannot be removed from storage until this tag has been removed by FQC, indicating that the cable tray is acceptable for installation.

Question

The alleger notes that certain cable trays were shipped to the site before the vendor received a sign-off from a professional engineer (PE). The alleger's question on this activity relates to the waiver of PE sign-off of seismic calculations prior to shipment of cable tray: "Why isn't the operation monitored closely enough to cover this kind of sloppy activity and are there other items on site that are similarly uncovered by PE sign-off, despite specification requirements?"

Answer

An engineering "Release for Shipment" was given to the vendor prior to shipment of the cable tray. SWEC Procurement Quality Assurance inspectors had placed a "Hold on Shipment" because a professional engineer had not signed off on the seismic calculations from the vendor. The matter was referred to SWEC engineering and evaluated by the cognizant SWEC engineer. In his judgment, the calculations had already been reviewed and were considered adequate by the Stone & Webster Engineering Department. In addition, the vendor advised the cognizant engineer that the professional engineer's signature was forthcoming. The cognizant engineer then revised the specification requirement based on sound engineering judgment.

It is likely that there are other items on site that have similarly received an engineering evaluation prior to issuing a "Release for Shipment." This type of controlled process is good engineering practice and is subject to the controls established in the Quality Assurance Program.

Allegation

The alleger disagrees with the NRC staff statement in Inspection Report No. 50-458/80-08 that the use of two different types of cable in the same circuit at River Bend's run to the makeup water structure does not violate good engineering practice. The alleger suggests that the NRC will be hard pressed to find a competent cable engineer to endorse such a practice because, for one thing, in the case in question, the ground braids used on the two cables are made of different materials, which is definitely not a recommended practice. The alleger claims that the main rationale behind the decision to use two different sizes of cable for the run to the makeup water structure was to save money, and also suggests that it is highly doubtful that this design had the endorsement of the SWEC cable specialist.

Answer

As documented in the enclosed IE Inspection Report No. 50-458/80-11, dated November 18, 1980, the use of direct bury cable does not violate good engineering practice. The use of direct bury distribution feeders is a widely accepted engineering practice. The design and cable specification requirements for this installation have been reviewed and endorsed by the responsible SWEC cable specialist. The copper versus bronze shields on the interface between the cable used in the plant and cable duct and the direct bury cable should not cause a problem if normal splicing and grounding techniques are applied as required by specifications and procedures.

Question

How will a cable tray with a rung removed, a permissible configuration for installation, be qualified for seismic considerations? The vendor, Husky Products, can prove the seismic capabilities of their tray with a rung removed either by analysis or by test, but, if they do it by analysis, then that too should be signed off by a PE. Also, if they have seismically proven their straight cable trays, how do we know that the fittings would meet the same criteria? Was a change to the PSAR submitted to NRC?

Answer

The vendor has submitted supplemental seismic calculations for cable tray rung removal to SWEC. These calculations have been reviewed and approved by Stone and Webster, the architect-engineer. All cable tray including straight runs, fixtures and accessories will be seismically qualified.

There is no need to change the PSAR since every applicant for a construction permit is required to include in the PSAR a description of the quality assurance program to be applied to the design and construction of the facility. The River Bend Quality Assurance Program, as discussed in Chapter 17 of the PSAR, is required to meet the requirements of Appendix B to 10 CFR 50. Criterion VII of Appendix B requires documentary evidence that material and equipment shall conform to the procurement requirements and shall be available at the nuclear power plant prior to installation or use. Thus, the site specification requirement is in accordance with the PSAR.

Allegation

Any comparison between what is called out in calculation E46H and what is now ordered from Anaconda in the specification and all addenda, as well as tables of reel assignments, will show that E46H is totally obsolete and that the cables have been ordered to conform to E120. E46H was performed several years ago and was correct when it was done, but since that time the circuit length estimates have changed, the loads have changed, and, indeed, even the cable impedance tables have changed. Thus, the SWEC contention that they are using an obsolete calculation to order 5 kV and 15 kV power cable is totally in error.

Answer

The approved calculation E46H was used by the licensee as a basis to initiate the purchase order for cable. It was anticipated that design changes could impact cable requirement; therefore, the licensee developed calculation E120 to address this impact. Since design changes are still taking place, calculation E120 is still not approved. The calculation will be approved when the final design changes are made. What NRC requires is that the applicant perform an analysis of the complete system from the switchyard down to the lowest voltage of the Class IE systems for the

worst-case conditions; that is, for the lowest grid voltage and the highest loading in plant. NRC also requires the applicant to determine by analysis that, given the worst-case condition, including a design basis accident and starting of large motor loads, the power quality at all the Class IE busses is within the normal range.

After that analysis is completed and the plant is in its preoperational stage, then the applicant is required to perform testing to measure the loads and the voltages at all the safety busses, and then enter the load measurements into his computerized analysis to compare the actual measured voltages against the voltages determined by analysis results and verify the validity of his model.

Question

How do they propose to meet the 400,000 Btu/hr flame test requirements, and when?

Answer

There is no known requirement to meet a 400,000 Btu/hr flame test. Neither Regulatory Guide 1.131 nor IEEE Standard 383, 1974 requires anything close to a 400,000 Btu/hr heat rate for flame testing.

Finally, the alleger states that NRC acknowledges eight items of noncompliance in IE Inspection Report No. 50-458/80-08 and yet a statement is made in the report that "no items of noncompliance or deviations have been identified." The response to this statement is provided in the body of the Decision.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76012

August 19, 1980

In Reply Refer To:
RIV
Docket No. 50-458/Rpt. 80-08

Gulf States Utilities
ATTN: Dr. E. Linn Draper, Jr.
Vice President-Technology
Post Office Box 2951
Beaumont, Texas 77704

Gentlemen:

This refers to the special inspection conducted by Mr. A. B. Beach of our staff on July 30-31, 1980, of activities authorized by NRC Construction Permit No. CPPR-145 for River Bend, Unit No. 1. The inspection consisted of an examination of the proceedings of your investigation into the concerns expressed by the Union of Concerned Scientists in their letter, dated July 21, 1980, to the U. S. Nuclear Regulatory Commission, and of the preliminary results of this investigation.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examination of representative records, interviews with personnel, and observations by the inspector.

No items of noncompliance or deviations were identified during this inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If the report contains any information that you believe to be proprietary, it is necessary that you submit a written application to this office, within 20 days of the date of this letter, requesting that such information be withheld from public disclosure. The application must include a full statement of the reasons why it is claimed that the information is proprietary. The application should be prepared so that any proprietary information identified is contained in an enclosure to the application, since the application without the enclosure will also be placed in the Public Document Room. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

W. C. Seidle, Chief
Reactor Construction and
Engineering Support Branch

Enclosure:
IE Inspection Report No. 50-458/80-08

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report No. 50-458/80-08

Docket No. 50-458 Category A2

Licensee: Gulf States Utilities
Post Office Box 2951
Beaumont, Texas 77704

Facility Name: River Bend Station, Unit No. 1

Inspection at: Stone and Webster Engineering Operations Center
Cherry Hill, New Jersey

Inspection Conducted: July 30-31, 1980

Inspector: A. B. Beach, Reactor Inspector, Projects Section — Date: 8/18/80

Reviewed: C. R. Oberg, Reactor Inspector, Projects Section — Date: 8/18/80

Approved by: for W. A. Crossman, Chief, Projects Section — Date: 8/18/80

R. E. Hall, Chief, Engineering Support Section — Date: 8/18/80

Inspection Summary:

Inspection on July 30-31, 1980 (Report No. 50-458/80-08)
Areas Inspected: Special, announced inspection of the licensee's investigation into the concerns expressed by the Union of Concerned Scientists in their letter to the U. S. Nuclear Regulatory Commission, dated July 21, 1980. The inspection involved thirteen inspector-hours by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

November 18, 1980

In Reply Refer To:
RIV
Docket No. 50-458/Rpt. 80-11

Gulf States Utilities
ATTN: Dr. E. Linn Draper, Jr.
Vice President-Technology
Post Office Box 2951
Beaumont, Texas 77704

Gentlemen:

This refers to the investigation conducted by Mr. R. K. Herr and Mr. L. E. Martin of our staff on October 29-31, 1980, of activities authorized by NRC Construction Permit No. CPPR-145 for River Bend, Unit No. 1.

The investigation was based on allegations from an annonymous source, that were passed through the Union of Concerned Scientists during a conference call on October 21, 1980. The annonymous source alleged that Stone and Webster supervisors were creating schedules and applying pressures to subordinate engineers to meet those schedules and thereby possibly compromising good engineering practices and, creating improper specification requirements for buried cable for the River Bend Nuclear Project. The investigation and our findings are discussed in the enclosed investigative report. No items of noncompliance or deviations were identified during this investigation.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed investigation report will be placed in the NRC's Public Document Room. If the report contains any information that you believe to be proprietary, it is necessary that you submit a written application to this office, within 20 days of the date of this letter, requesting that such information be withheld from public disclosure. The application must include a full statement of the reasons why it is claimed that the information is proprietary. The application should be prepared so that any proprietary information identified is contained

in an enclosure to the application, since the application without the enclosure will also be placed in the Public Document Room. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Sincerely,

Karl V. Seyfrit
Director

Enclosure:
IE Investigation Report No. 50-458/80-11

cc:
Stone & Webster Engineering Corporation
ATTN: Mr. N. B. Cleveland
Vice President, Quality Assurance
P. O. Box 2325
Boston, Massachusetts 02107

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Investigation Report No. 50-458/80-11

Docket No. 50-458

Licensee: Gulf States Utilities
P. O. Box 2951
Beaumont, Texas 77704

Category A 2

Facility: River Bend Station, Unit No. 1

Inspection at: Stone & Webster Engineering Operation Center
Cherry Hill, New Jersey

Investigation Conducted: October 29-31, 1980

Investigator: R. K. Herr — 7 NOV 1980
R. K. Herr, Investigation Specialist — Date

Inspector: Lawrence Martin — 11/10/80
Lawrence Martin, Reactor Inspector
Project Section, RC&ES Branch — Date

Approved by: Karl V. Seyfrit — 11/17/80
Karl V. Seyfrit, Director Region IV — Date

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