

FLORIDA POWER CORPORATION

ST. PETERSBURG FLORIDA



April 12, 1971

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Kelly

Mr. John G. Davis, Director
Division of Compliance
U. S. Atomic Energy Commission
230 Peachtree Street N.W.
Atlanta, Georgia

Subject: Crystal River Unit #3
Reactor Building Liner
Construction Deviation
FPC File: 321-B4.2

Dear Mr. Davis:

In response to your letter of March 16, 1971, we wish to offer the following comments and present the current condition of and future changes in our Quality Program which will minimize the possibility of re-occurrence of the subject problem.

Regarding the actual deficiency, we wish to clarify that the responsibility for analysis of the liner was not that of Chicago Bridge and Iron, but that of Gilbert Associates as the Engineer. This is not offered as an excuse, but only to relieve Chicago Bridge and Iron of undue criticism in this matter. The following lists in chronological order the events leading up to and including the final disposition of the items.

1. On January 7, Chicago Bridge and Iron Quality Control reported a problem with the elevation of the toroconical section of the liner.
2. On January 16, Ring Number 1 erection was started with correction of the elevation of the toroconical section to await completion of this ring.
3. On January 22, Chicago Bridge and Iron proposed a 6 inch filler section to repair the deviation in elevation of the toroconical section.
4. On January 29, Chicago Bridge and Iron prepared SRP-1L repair procedure designed to correct this deviation.
5. On February 4, Chicago Bridge and Iron transmitted SRP-1L to Florida Power Corporation, Power Construction.

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6. On February 9, Florida Power Corporation, Power Engineering, transmitted SRP-1L to Gilbert Associates' Quality Assurance Department for approval.
7. On February 12, Gilbert Associates' Quality Assurance Department confirmed their and Gilbert Associates' Engineering acceptance of SRP-1L procedure to Florida Power Corporation, Power Engineering and same was transmitted to Florida Power Corporation, Construction Department.
8. On February 16, Florida Power Corporation, Power Construction Department, authorized the implementation of SRP-1L and work proceeded on the repair.
9. On March 3, Florida Power Corporation, Power Engineering, transmitted the knuckle "as-built" dimensions to Gilbert Associates' Engineering Department.
10. On March 16, Florida Power Corporation's Nuclear Project Manager requested Gilbert Associates' Engineering to make an analysis of the final "as-built" condition.
11. On March 19, Florida Power Corporation's Nuclear Project Manager received the Atomic Energy Commission letter regarding the apparent deviation.
12. On March 19, Gilbert Associates' Engineering released concrete in the area of the knuckle with due consideration for the knuckle plate problem.
13. On March 22, Gilbert Associates' Engineering reported the results of their analysis. Their conclusions of this analysis are as follows:

- "1. The stresses in the knuckle plate, under all conditions of loading as described in the FSAR, are well within allowable limits. The change in geometry did not significantly influence the stress level in the liner.
2. You stressed concern in Item 2 of your Inter Office letter about knuckle plate deflection due to weight of the shell. We analyzed this condition, assuming 100 feet of shell height and found the deflection to be insignificant (0.0135").

In general we feel that improper fabrication and erection is the cause of dimensional differences in the knuckle plate and based on our analysis we recommend that no corrective action is required in the 'as-built' knuckle plate."

From our review of these events, it appears that the area where our system needed correction was at Steps 6 and 7. All persons originally concerned with

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this item were not aware of the Procedure that only the Power Engineering Department of Florida Power Corporation could initiate an Engineering Analysis from Gilbert Associates' Engineering. These persons therefore accepted the approval of SRP-1L repair procedure by Gilbert Associates' Engineering transmitted through Gilbert Associates' Quality Assurance as the required approval of the "as-built" condition. We have taken the following steps to try to correct this problem.

1. Verbally, all Florida Power Corporation, Power Engineering Department Senior Power Engineers were reapprised of their responsibility to initiate Gilbert Associates' Engineering approval for all design changes or "as built" deviations which might affect design criteria.

As an added precaution, all Florida Power Corporation Construction Department supervisors were so advised as were Florida Power Corporation Quality Program Site personnel.

2. A block diagram has been issued reemphasizing responsibility for action regarding all deviations noted by the field.
3. On January 29, 1971, a contract was consummated with General Electric Space Division Apollo Systems. Within the framework of this contract, General Electric is providing manpower and technical assistance in the preparation of Quality Program Procedures that are commensurate with the requirements of AEC 10CFR50, Appendix B. These procedures are well along and approximately 24 are ready for approval. These will be issued for comment and approval by our Quality Programs Department.

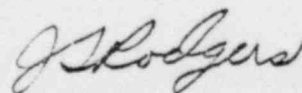
Procedures to delineate responsibilities in the subject area are included among those ready for approval. The subject block diagram will be included as a part of one of these procedures.

All of the data associated with this matter are on file at this office, and are available for your referral if you should so desire.

We hope that these steps will help to correct the apparent weakness in our Quality Program that led up to this deviation in our planned Procedure of Operation.

We also hope that because of our awareness and increased vigilance in this area, that this type of problem will not reoccur on the Crystal River Project.

Very truly yours,



J. T. Rodgers
Assistant Vice President &
Nuclear Project Manager