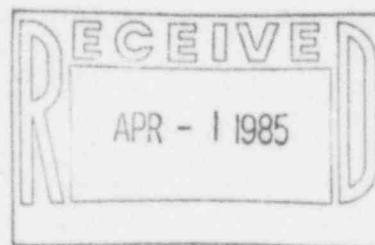


The Light company

Houston Lighting & Power P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

March 29, 1985
ST-HL-AE-1218
File No.: G12.230

Mr. Robert D. Martin
Regional Administrator, Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Final Report Concerning
Bostrom-Bergen Anchor Bolt Material Substitution

Dear Mr. Martin:

On March 1, 1985, pursuant to 10CFR50.55(e), Houston Lighting & Power notified your office of an item regarding anchor bolt material substitution by Bostrom-Bergen. Enclosed please find our Final Report on this item.

If you should have any questions on this item, please contact Mr. Michael E. Powell at (713) 993-1328.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. H. Goldberg".

J. H. Goldberg
Group Vice President, Nuclear

JSP/yd

Attachment: Final Report Concerning
Bostrom-Bergen Anchor Bolt Material Substitution

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cc:

Hugh L. Thompson, Jr., Director
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

N. Prasad Kadambi, Project Manager
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20814

Claude E. Johnson
Senior Resident Inspector/STP
c/o U.S. Nuclear Regulatory Commission
P. O. Box 910
Bay City, TX 77414

Dan Carpenter
Resident Inspector/South Texas Project
c/o U.S. Nuclear Regulatory Commission
P. O. Box 2010
Bay City, TX 77414

M. D. Schwarz, Jr., Esquire
Baker & Botts
One Shell Plaza
Houston, TX 77002

J. R. Newman, Esquire
Newman & Holtzinger, P.C.
1615 L Street N.W.
Washington, DC 20036

Director, Office of Inspection
and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

E. R. Brooks/R. L. Range
Central Power & Light Company
P. O. Box 2121
Corpus Christi, TX 78403

H. L. Peterson/G. Pokorny
City of Austin
P. O. Box 1088
Austin, TX 78767

J. B. Poston/A. vonRosenberg
City Public Service Board
P. O. Box 1771
San Antonio, TX 78296

Brian E. Berwick, Esquire
Assistant Attorney General for
the State of Texas
P. O. Box 12548, Capitol Station
Austin, TX 78711

Lanny A. Sinkin
3022 Porter Street, N.W. #304
Washington, D.C. 20008

Oreste R. Pirfo, Esquire
Hearing Attorney
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Charles Bechhoefer, Esquire
Chairman, Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. James C. Lamb, III
313 Woodhaven Road
Chapel Hill, NC 27514

Judge Ernest E. Hill
Hill Associates
210 Montego Drive
Danville, CA 94526

Mr. Ray Goldstein, Esquire
1001 Vaughn Building
807 Brazos
Austin, TX 78701

Citizens for Equitable Utilities, Inc.
c/o Ms. Peggy Buchorn
Route 1, Box 1684
Brazoria, TX 77422

Docketing & Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 & 2
Final Report Concerning
Bostrom-Bergen Anchor Bolt Material Substitution

I. Summary

During a recent anchor bolt testing program, twelve anchor bolts, all supplied by Bostrom-Bergen (B-B) on the same purchase order, were identified as being made of A-36 material rather than the specified A-193 material. Eight of the bolts had been installed and four remained in the storage yard.

A calculation has demonstrated that the eight installed bolts are acceptable for use as is. The four bolts in storage will be scrapped.

A material verification of fifteen other groups of B-B supplied anchor bolts in storage was performed. The material verification as well as a review of design drawings, shop drawings and CMTR's for all installed A-193 anchor bolts supplied under the same purchase order revealed no other cases of mistaken material substitution. This is considered to be an isolated occurrence.

Although it has been shown that no safety hazard exists for the eight installed bolts, it is not clear where the remaining four bolts could have been utilized. Therefore, this item was considered potentially reportable.

II. Description of Deficiency

Bostrom-Bergen (B-B) supplied twelve (12) bolts fabricated of A-36 material instead of the specified A-193 material. Eight (8) of these bolts have already been installed as platform anchor bolts in the secondary shield wall of Unit 2 in a location for which the design drawing required A-193 anchor bolts. The remaining four of the twelve bolts were found in storage.

The twelve bolts in question are marked with the B-B "mark number" of A8014 which designates the B-B drawing number. Documentation traceable to these bolts including shop detail drawings, shop travelers, a certified material test report (CMTR), and a request for stored items (RSI) was reviewed. It was conclusively established that the bolts were supplied by B-B and that the shop drawing correctly specified A-193. However, the shop traveler and CMTR specified A36 material and the Texas Nuclear Alloy Analyzer (TNAA) testing verified that A36 material was used to fabricate the twelve bolts.

Fifteen other groups of anchor bolts, each group with a different mark number, were supplied by B-B in the same purchase order as the twelve bolts and were available in storage. Bechtel has completed a material verification for the bolts in all fifteen additional groups. The verification consisted of comparing the Bechtel design drawings with

the B-B shop detail drawings, the CMTR's, and test results from the onsite TNAA. TNAA testing was performed on one bolt from each of fourteen groups that have all bolts with the same heat number. All of the bolts in the fifteenth group were tested because the bolts come from more than one heat. No additional instances of mistaken material substitution by B-B were discovered.

To further ensure that appropriate bolt material was utilized by B-B, documentation pertaining to all groups of installed A-193 anchor bolts provided under the same purchase order were reviewed. This consisted of ten (10) additional mark numbers that required A-193 with each group consisting of approximately thirty (30) bolts. The review again compared the design drawing, shop drawing and CMTR's. The material verification completed on the additional installed mark numbers further substantiated TNAA results from previous anchor bolt testing. No additional instances of material substitution were discovered during this review.

The cause of the material substitution is not known. HL&P and BEC have conferred extensively with B-B during the investigation of this deficiency and conclude that this case represents an isolated occurrence and does not indicate a trend or a generic problem with B-B supplied anchor bolts.

III. Corrective Action

The four (4) remaining bolts from mark number A8014 will be scrapped. Bechtel has performed a design calculation that demonstrates that the eight (8) A-36 bolts installed in the Unit 2 RCB are acceptable for use as is.

IV. Recurrence Control

Because of the extensive investigation, verification and material testing performed as a result of this deficiency, HL&P and Bechtel conclude that this is an isolated occurrence involving only twelve anchor bolts. No recurrence control is necessary.

V. Safety Analysis

This deficiency is reportable pursuant to 10CFR50.55(e) because the four (4) remaining bolts could have been used in an application for which A-193 bolts were required. Therefore, a safety hazard has been assumed to have existed and corrective action has been taken to scrap the bolts.