

The Light company

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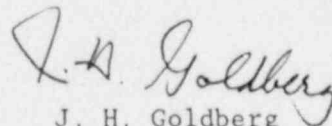
June 9, 1988
ST-HL-AE-2674
File No.: G2.4
10CFR2.201

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Response to Notice of Violation 8821-02

Houston Lighting & Power Company has reviewed Notice of Violation 8821-02 dated May 13, 1988, and submits the attached response pursuant to 10CFR2.201.

If you should have any questions on this matter, please contact Mr. M. F. Polishak at (512) 972-7071.



J. H. Goldberg
Group Vice President, Nuclear

SDP/hg

Attachment: Response to Notice of Violation 8821-02

LA/NRC/hg

A Subsidiary of Houston Industries Incorporated

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Houston Lighting & Power Company

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L4/NRC/hg

Response to Notice of Violation 8821-02

I. Statement of Violation

STP Quality Control Procedure (QCP) 12.1, Control of Measuring and Test Equipment (M&TE), paragraph 5.4.1 requires care shall be taken to assure the M&TE is handled and maintained in a manner suitable to minimize the possibility of conditions existing which may render the device inaccurate or otherwise unusable.

Contrary to the above, torque application was performed on mechanical fasteners for SDG "C" using a noncalibrated tool. The torque wrench used was current in its calibration; however, the universal joint adapter in use was not calibrated with the wrench nor was a mathematical computation performed for deviation of a torque penalty prior to use of the tool.

II. Reason for Violation

During installation of the "drake nut" locking device which is used to lock the articulated connecting rod fasteners, a universal joint was used in conjunction with a calibrated torque wrench to obtain a 15 ft. lb. torque on the locknuts. The universal joint was used due to the cramped quarters at the location of the locknuts. The universal joint was used at an angle not exceeding 15° from the horizontal.

The test engineer was questioned by the NRC inspector regarding the use of crowsfoot and universal joint attachments for torquing of fasteners. The test engineer stated that a torque penalty must be taken into account when using a crowsfoot attachment, but not when using a universal joint. Further investigation revealed that a torque penalty is also created when using a universal joint attachment for torque application.

III. Action Taken and Results Achieved

The use of universal joints at STP is not common practice, but can occur when restricted space or hard-to-reach fasteners are encountered. HL&P has reviewed the work instructions and has determined that the actions taken for this application are adequate. When it is necessary to utilize wrench adapters or attachments which could result in an actual torque at the fastener different from the torque indicated at the wrench, then the wrench and any such device(s) must be calibrated together as a unit in the configuration to be used in the field.

The Startup Engineer overseeing the work activity authorized the use of the universal joint for this application. His rationale for employing the universal was that at shallow angles ($\leq 15^\circ$) the universal has little or no impact on the applied torque. A review of this torque technique in this application has been made and it has been determined that the nuts were torqued to the specified value. This has been subsequently verified by testing in the M&TE lab.

IV. Steps Taken to Prevent Recurrence

As stated in IR 88-21 (498/499), STP QCP 12.1, M&TE, paragraph 5.4.1 and ASP-23 require that care shall be taken to assure the M&TE is handled and maintained in a manner suitable to minimize the possibility of conditions existing which may render the device inaccurate or otherwise unusable.

A review of procedures affected by universal joint attachments for torque applications has been completed (see attachment 1). These procedures have been revised to include the following clarification:

"Torque wrenches are calibrated and controlled in accordance with the Measuring and Test Equipment (M&TE) and tool control programs. When it is necessary to utilize wrench adapters or attachments which could result in an actual torque at the fastener different from the torque indicated at the wrench (e.g. torque multiplier, crowsfoot, universal joint, etc.) then the wrench and any such device(s) must be calibrated together as a unit in the configuration to be used in the field."

Additionally, a reference to ASP-23 and QCP 12.1, M&TE, has been added to each SSP revised.

The Startup Engineer overseeing the work activity has been reinstructed in the correct utilization of torque wrench adapters or attachments.

V. Date of Full Compliance

STP is in full compliance at this time.

ATTACHMENT 1

<u>SSP No.</u>	<u>SUBJECT</u>
SSP-9	Pipe Support Installation
SSP-10	Installation and Field Fabrication of Piping
SSP-11	Fabrication, Erection and Bolt-up of Structural Steel
SSP-14	Stud Anchor Installation and Inspection
SSP-24	Disassembly/Reassembly of Safety and Non-Safety Related Valves
SSP-26	Termination of Electrical Cable
SSP-28	Installation and Inspection of Electrical Raceway and Supports
SSP-38	Installation and Inspection of HVAC Duct/Supports and Accessories
SSP-40	Maxi-Bolt Installation and Inspection
SSP-41	Rock Bolt Installation and Inspection
SSP-47	Inspection and Rework of Class 1E M.O.V.s
SSP-52	Installation, Assembly and Disassembly of Permanent Mechanical Plant Equipment
SSP-53	Instrumentation Installation
SSP-57	Installation and Inspection of Electrical Equipment.