Log # TXX-3687
File # 10115

TEXAS UTILITIES GENERATING COMPANY

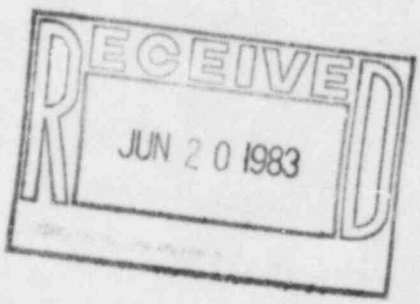
2001 BRYAN TOWER · DALLAS, TEXAS 75201

R. J. GARY
EXECUTIVE VICE PRESIDENT
AND GENERAL MANAGER

June 14, 1983

Mr. John T. Collins
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

RIV
Docket Nos. 50-445/IE Bulletin No. 82-04
50-446/IE Bulletin No. 82-04



SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
1981-83 2300 MW INSTALLATION
IE BULLETIN 82-04

Dear Mr. Collins:

TXX-3627 dated February 23, 1983 provided a preliminary response to IE Bulletin 82-04 and requested an extension until July 1, 1983 for the submittal of the final response.

CPSES has completed all required inspections, testing and evaluations and has provided the required documentation per item 5b.(2) of the bulletin in enclosure 1.

Approximately 1,550 man-hours were used to perform the required inspections, testing and to prepare the written responses.

Should you have additional questions, please contact this office.

Sincerely,

R. J. Gary

RJG:kp

c - U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D.C. 20555

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ENCLOSURE 1

IE BULLETIN 82-04

ITEM: 1A

SUBJECT: Inspection of conductor terminations at Bunker Ramo provided terminal boxes.

FINDINGS: Bunker Ramo provided terminal boxes for the following four (4) safety-related electrical penetrations:

1E80	2E80
1E81	2E81

Each termination box contained eight (8), #12 AWG conductors which had terminal lugs installed by Bunker Ramo.

CORRECTIVE ACTION REQUIRED: Due to the relatively small number of vendor terminations, the decision was made to replace the Bunker Ramo installed lugs. Using instructions prepared by Electrical Engineering, new site-procured termination lugs were installed on the conductors of the above listed penetrations. The tools used to crimp the lugs were calibrated per site procedures. All termination activities were witnessed per site procedures by Quality Control personnel.

ENCLOSURE 1

IE BULLETIN 82-04

ITEM: 1B

SUBJECT: Inspection of conductors as they enter and exit Bunker Ramo penetration modules.

FINDINGS: An inspection was conducted to verify the integrity of the insulation around the conductors as they enter and exit the electrical penetration modules. The inspection was intended to identify any conductor with suspected cracked or damaged insulation. All inspections were witnessed by site Quality Control personnel. At the conclusion of the inspection, there were no conductors identified as having visible damage to its insulation. A list of the sixty-four (64) safety-related penetrations inspected for potential insulation damage is included as Attachment 1.

CORRECTIVE ACTION REQUIRED: None

ENCLOSURE 1

IE BULLETIN 82-04

ITEM: 1C

SUBJECT: Inspection of Bunker Ramo provided in-line butt splices for penetration conductors.

FINDINGS: An inspection was conducted to examine the in-line butt splices installed by Bunker Ramo to connect the module conductors to the cable pigtails. A minimum random sample of 25% of each conductor size was inspected. This sample included the inspection of at least two (2) complete modules.

Due to accessibility, the sample conductors were selected from the penetrations designated for use in Unit 2. This decision was made after Bunker Ramo provided documentation that verified penetrations were manufactured and assembled according to conductor size and configuration, and independent of their designated use for Unit 1 or Unit 2.

Each inspection of the in-line butt splices was documented for acceptability per site termination procedures and witnessed by site Quality Control personnel. There were no visible indications to suspect that the in-line butt splices were either overcrimped or undercrimped by Bunker Ramo. A list of the penetrations inspected and their corresponding wire sizes is included as Attachment 2.

At the conclusion of the inspection, a random sample of 10% of the examined in-line butt splices were cut from their conductors and subjected to a one (1) minute direct pull test. The values for the pull out force were based on UL 486A (see Attachment 3). All pull tests were witnessed by site Quality Control personnel.

The in-line butt splices used for wire sizes #6, #8, #10, and #12 passed their respective pull tests. These tests confirmed that the in-line butt splices for these sizes of wires were properly crimped by Bunker Ramo and can be used as supplied.

For the pull tests involving the in-line butt splices for the #2 AWG conductors, only four (4) of the six (6) splices successfully passed the test. The two (2) splices which failed their pull test had one (1) conductor separate from the splice at 150 pounds of pull force.

ENCLOSURE 1

CORRECTIVE ACTION REQUIRED: Due to the failure of the splice connectors during their pull tests, all safety-related penetrations with #2 AWG conductors will have the Bunker Ramo crimped in-line butt splices removed and site-procured in-line butt splices installed. The following four (4) penetrations will be affected:

1E12	2E12
1E59	2E59

All tools used to crimp the site-installed splices will be calibrated per site procedures. All termination activities will be witnessed per site procedures by Quality Control personnel.

ATTACHMENT 1

ELECTRICAL PENETRATIONS INSPECTED

ITEM 1B

1E6	2E6
1E9	2E9
1E10	2E10
1E11	2E11
1E12	2E12
1E13	2E13
1E15	2E15
1E16	2E16
1E17	2E17
1E18	2E18
1E29	2E29
1E31	2E31
1E39	2E39
1E40	2E40
1E45	2E45
1E47	2E47
1E56	2E56
1E57	2E57
1E58	2E58
1E59	2E59
1E60	2E60
1E61	2E61
1E62	2E62
1E63	2E63
1E64	2E64
1E66	2E66
1E76	2E76
1E77	2E77
1E78	2E78
1E79	2E79
1E80	2E80
1E81	2E81

ATTACHMENT 2

ELECTRICAL PENETRATIONS INSPECTED

ITEM 1C

PENETRATION	CONDUCTOR SIZE (AWG)
2E12	#2
2E59	#2
2E10	#6
2E56	#6
2E76	#6
2E77	#6
2E10	#8
2E56	#8
2E10	#10
2E56	#10
2E78	#12
2E79	#12

ATTACHMENT 3

VALUES FOR CONNECTOR PULL TESTS

UL 486A

WIRE SIZE (AWG)	PULL-OUT FORCE (POUNDS)
#2	180
#6	100
#8	90
#10	80
#12	70