

DESIGNATED ORIGINAL

Certified By

Dot noack

RECEIVED
MAY 11 1982

ARIZONA

3003

STA.



PUBLIC SERVICE COMPANY

P.O. BOX 21666

PHOENIX, ARIZONA 85036

May 24, 1982

ANPP-21038-GHD/BSK

U. S. Nuclear Regulatory Commission
Region V
Creskide Oaks Office Park
1450 Maria Lane, Suite 210
Walnut Creek, California 94596-5368

Attention: Mr. T. W. Bishop, Chief
Reactor Construction Projects Branch

Subject: Final Report - DER 81-53
A 50.55(e) Reportable Condition Relating to Unit 1
Main Control Panel (JM-200) Violates Wiring Separation
Requirements
File: 82-019-026
D.4.33.2

Reference: (A) Telephone Conversation between J. Eckhardt and
G. Duckworth on December 30, 1981
(B) ANPP-20013, dated January 28, 1982 (Interim
Report)
(C) ANPP-20744, dated April 22, 1982 (Time Extension)

Dear Sir:

Attached, is our final written report of the reportable deficiency,
under 10CFR50.55(e), referenced above.

Very truly yours,

E. E. Van Brunt

E. E. Van Brunt, Jr.
APS Vice President
Nuclear Projects
ANPP Project Director

EEVBJr/GHD:skc

Attachment

cc: See Attached Page 2

8206250200 820524
PDR ADOCK 05000528
S PDR

1E27

U. S. Nuclear Regulatory Commission
Attention: Mr. T. W. Bishop, Chief
ANPP-21038-GHD/BSK
May 24, 1982
Page 2

cc: Richard DeYoung, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

J. A. Roedel
D. B. Fasnacht
G. C. Andognini
A. C. Rogers
B. S. Kaplan
W. E. Ide
J. Vorees
J. A. Brand
A. C. Gehr
W. J. Stubblefield
W. G. Bingham
R. L. Patterson
R. W. Welcher
R. M. Grant
D. R. Hawkinson
L. E. Vorderbrueggen
G. A. Fiorelli

Lynne Bernabei, Esq.
Harmon & Weiss
1725 "I" Street, NW
Suite 506
Washington, D. C. 20006

R. L. Greenfield
Assistant Attorney General
Bataan Memorial Building
Santa Fe, New Mexico 87503

FINAL REPORT - DER 81-53
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. Description of Deficiency

During a termination walkdown inspection, the Main Control Panel wiring was found to be in violation of IEEE-384-1974.

- NCR EC-1669 identifies Comsip, Incorporated installed internal wiring which has bundled Class 1E wires (red and green) with Non-Class 1E wires (black). This particular condition, however, is attributed to the Bechtel installation of Foxboro Miniature Records and shelf after Panel B06 had been delivered to the jobsite.
- NCR EC-1668 identifies several termination/routing conditions completed by Bechtel Construction in violation of separation requirements. This condition was discovered when the wiring was inspected to a later revision of the Installation Specification 13-EM-306. Revision 5 of this Specification clarified separation and routing requirements for these particular applications.

II. Analysis of Safety Implications

This condition is evaluated as Reportable under the requirements of 10CFR50.55(e). Electrical isolation and separation were inadequate to assure that failure in one circuit would not cause failure in an adjacent safety-related circuit.

III. Corrective Action

NCR EC-1669 will be dispositioned to provide the addition of a barrier as directed by letter Comsip, Incorporated #AR-1229, dated March 23, 1982, copy attached.

NCR EC-1668 will be dispositioned to provide electrical separation and barriers as directed by Bechtel IOM-E-9637, dated March 23, 1982, copy attached.

Installation Specification 13-EM-306, Revision 5, was issued on October 7, 1981. This revision provides additional instruction and direction for compliance to IEEE-384-1974. Compliance with this Specification will preclude recurrence for Units 2 and 3.



1418 E. Linden Avenue
P.O. Box 152
Linden, NJ 07036
(201) 486-1272
Telex 13-8496

10650 E. Rush Street
South El Monte, CA 91733
(213) 442-0882
Telex 67-4768

March 24, 1982
Letter #AR-1299

Bechtel Power Corp.
11445 S. Lakewood Blvd.
Downey, CA 90241

Attention: W. G. Bingham
Project Engineering Manager

Reference: Bechtel PO #10407-13-JM-200
Comsip SO #5875

Subject : Bechtel Deficiency Evaluation Report No. 81-53,
Rev. O (Bechtel NCR'S #1668 and 1669)

Correspondence Reference: Bechtel Letter #B/CC-E-38291,
MOC 183669, dated 1/29/82

Gentlemen:

Below is Comsip's response to your letter and reports referenced above:-

Non-conformance Report No. E-C 1668

A field trip was conducted on March 10, 1982, by our Mr. Y. Harpaz, to check for non compliance referred to in the report.

A careful inspection of all panel sections conducted with Bechtel field personnel and engineers found that except as detailed below, non compliance was not due to Comsip installation.

There may be a possible deviation from the separation requirements by wires installed on panel sect. B06, near the Foxboro Miniature Recorders 1J-RJN-UJR-168 and 1J-CDN PR49/47 due to proximity to cable connectors.

Bechtel Power Corp.
Attn: W. G. Bingham
March 24, 1982

Page -2-

The field signal cable to the above 2 recorders may require an addition of a barrier in order to comply with the separation requirements.

We will accept to our account a field charge for the required labor to install the 2 barriers, should it become necessary.

Non-conformance Report No. E-C 1669

A field trip was conducted on March 10, 1982 by our Mr. Y. Harpaz, to check for non compliance referred to in the report.

A careful inspection of all panel sections conducted with Bechtel field personnel and engineers, found no area of non compliance. The wires and cables of different channels were adequately separated in conformance with the specification requirements.

Since all these units are intended to be identical (with few exceptions) it is assumed that any non compliance found to exist in the Unit 1 panels will also be found in the panels fabricated in Unit 2 and 3.

Therefore, while the Unit 3 Main Control Room Panels are still under construction, any wiring non compliance noted in referenced DER will be corrected before shipment of the Unit 3 panels to the jobsite.

Conditions of non compliance existing in the Unit 1 & 2 Main Control Room Panels must, of course, be corrected at Comsip's expense, as noted per our response to NCR'S #1668 and 1669 above.

Bechtel Power Corp.
Attn: W. G. Bingham
March 24, 1982

Page -3-

I trust that you will find our investigation and response to this matter satisfactory.

Very truly yours,

COMSIP INC.,
CUSTOMLINE DIVISION

K. Kopans

K. Kopans,
Project Manager

KK/ss

CC: R. Sylvester - CIGD
Y. Harpaz "
D. Rankin "
C. Ferdinand "
E. Walinski "
J. Ingram "
M. Batson "

E.E. Van Brunt, Jr. - Bechtel (Downey) " "
B. Rhodes " "
S. Bagga " "
D. Souteropoulos " "
D. Guidetti " (Palo Verde)
W. Kerrigan " (In-House) SQR

Bechtel Power Corporation

Interoffice Memorandum

To W. J. Stubblefield

Subject ANPP Job 10407
Electrical Separation in
Main Control Board

File No. E.11.03
IOM-E-9637 MOC 191507
Date March 23, 1982

From W. G. Bingham
Of Engineering

Copies to W. H. Wilson
F. Herman
R. R. Stiens
K. Soteropoulos
T. E. Hartman
V. Arora
All w/encl.

At LAPD Ext. 539

This will inform you that Engineering has performed a field walkdown to inspect Electrical Separation Problems in Unit 1 Main Control Boards as a result of Field Memo RE-056, dated October 14, 1981.

Project criteria for wire/cable safety separation is based on meeting Regulatory Guide 1.75 and is noted specifically in Specification 13-EM-306, Section 11.0. A minimum of six (6) inches between redundant Class IE field cables or internal redundant Class IE wiring is required when relying on air separation. The safety separation may be reduced to one (1) inch (wire to barrier) if acceptable barriers are utilized. Please be advised that as a result of the field inspection, non-compliances to this criteria were discovered.

To date, only an advance copy of NCR EC-1668, which addresses separation in Main Control Boards but doesn't include all the non-compliances cited during the field walk, has been received by Engineering. Specifics determined at the time of walkdown are enclosed for your information with Electrical's input provided to aid in determining formal dispositions. For cases where separation non-conformances have not been included in NCRs written to date it is suggested that the field perform the necessary modifications with consent of vendor in order to fix the separation deficiencies or issue appropriate NCRs for specific dispositioning.

We would also like to advise that special precautions be taken to avoid similar separation problems in Units 2 and 3 implementations.


W. G. Bingham

WGB:ST:lcc

Enclosure: Separation Non-Conformances in MCB (15 pages, 1 copy)