



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

October 3, 2007

TVA-SQN-TS-07-04

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket No. 50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - UNIT 2 - TECHNICAL SPECIFICATIONS (TS)
CHANGE 07-04 "REVISION OF CORE OPERATING LIMITS REPORT (COLR)
REFERENCES FOR REALISTIC LARGE BREAK LOSS OF COOLANT ACCIDENT
METHODOLOGY SUPPLEMENTAL INFORMATION"**

On July 26, 2007, TVA submitted TS Change 07-04 pursuant to 10 CFR 50.90, to add a new reference in TS Section 6.9.1.14.a. NRC's review of SQN TS Change 07-04 identified an inconsistency in the methodology with respect to the requirements of General Design Criteria 35 "Emergency Core Cooling" in that offsite power availability should not have been sampled.

To determine the effect of sampling offsite power availability, the cases reported in ANF-2655P, Revision 00 were ran with the opposite choice for offsite power availability. That is, base cases with offsite power available were ran with offsite power not available, and base cases with offsite power not available were ran with offsite power available. All other sampled parameters for each base case were unchanged. It is concluded that the set of cases submitted in Topical Report ANF-2655(P), Revision 00 is limiting relative to estimating the 95 percent peak clad temperature (PCT) and the estimated 95 percent PCT is unaffected by sampling offsite power availability.

DOBO
NRR

U.S. Nuclear Regulatory Commission
Page 2
October 3, 2007

Enclosure 1 provides supplementary information pertaining to the SQN realistic large break loss of coolant accident methodology. Portions of Enclosure 1 are proprietary to Areva Nuclear Power (NP). Enclosure 2 provides a non-proprietary version of the document contained in Enclosure 1.

Accordingly, Enclosure 3 includes a copy of the AREVA NP Application for Withholding Proprietary Information from public disclosure that was included with the original letter. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission, and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.790 of the Commission's regulations. TVA respectfully requests that the AREVA NP proprietary information be withheld from public disclosure in accordance with 10 CFR 2.390.

TVA determined this information does not affect the no significant hazards considerations associated with the proposed change and the TS change qualifies for categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

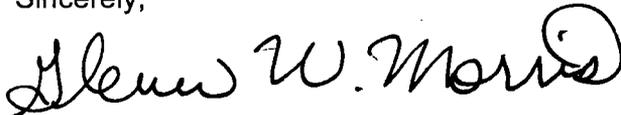
Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

There are no commitments contained in this submittal.

If you have any questions about this change, please contact me at 843-7170.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 3rd day of October, 2007.

Sincerely,



Glenn W. Morris
Manager, Site Licensing and
Industry Affairs

Enclosures:

1. Proprietary Version of SQN's Plant Specific Topical
2. Non-Proprietary Version of SQN's Plant Specific Topical
3. AREVA NP Affidavit for Withholding of Proprietary Information

U.S. Nuclear Regulatory Commission
Page 3
October 3, 2007

Enclosures

cc (Enclosures):

Mr. Brendan T. Moroney, Senior Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop 08G-9a
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2739

Mr. Lawrence E. Nanney, Director
Division of Radiological Health
Third Floor
L&C Annex
401 Church Street
Nashville, Tennessee 37243-1532

ENCLOSURE 2

**TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNIT 2**

NON-PROPRIETARY INFORMATION

**REALISTIC LARGE BREAK
LOSS OF COOLANT ACCIDENT ANALYSIS
ANP-2655(P)
REVISION 0
September 17, 2007**

Supplemental Information on the Sequoyah RLBLOCA Submittal

Provided herein is supplemental information concerning the sampling of 'offsite power availability' in the Sequoyah Unit 2 realistic large break LOCA (RLBLOCA) submittal, topical report ANF-2655P Revision 00.

To determine the effect of sampling offsite power availability, the cases reported in ANF-2655P Revision 00 were rerun with the opposite choice for offsite power availability. That is, base cases with offsite power available were rerun with offsite power not available and base cases with offsite power not available were rerun with offsite power available. All other sampled parameters for each base case were unchanged. Since only offsite power availability was changed between the base and reanalysis cases, one can construct a set of 59 cases with offsite power available and a second set of 59 cases with offsite power not available. The PCTs for these two sets, order from the highest to the lowest PCTs, are shown in Figures 1 and 2. Figure 3 is a bar chart showing the sensitivity of switching the offsite power availability sampling result from that of the base set of cases. The ordering in Figure 3 is by the case number (cases 1 to 59) associated with each of the 59 base cases. In Figure 4 the red triangles are the base set of 59 cases, while the blue squares represent the reanalysis with offsite power availability switched. The solid symbols are for offsite power available and the open symbols are for offsite power not available. The ordering in Figure 4 is by PCT from the base set of cases. The switched set of cases is presented in the order of the base set of cases. Like Figure 3, Figure 4 shows the individual case sensitivity.

Sampling of offsite power availability within the AREVA RLBLOCA evaluation model (EM) is primarily a study in []

[]. Of secondary importance is the link of the [] to offsite power availability. This is so because [] generally [] to the end of []. The single failure assumption—the complete loss of one train (high, medium and low head injection for Sequoyah) of ECCS injection—is [] offsite power availability sampling. Also containment pressure suppression—all cooling systems (sprays and fan coolers) are fully functional with []—is [] both the [] and offsite power availability []. The parameter of interest is perhaps better termed [] since it actual []

].

Comparing the two sets of 59 cases, the following is observed:

1. The base limiting case, Number 44 in ANP-2655P Revision 00, remains limiting. This case was for RCPs un-powered (offsite power not available). Changing to powered RCPs decreased the PCT slightly (see Figure 4). The maximum PCT remains at 1,967 °F.
2. []

]. This can be seen in Figure 4.

AREVA NP Inc.

Sequoyah Nuclear Plant Unit 2
Realistic Large Break LOCA Analysis
Page 2

ANP-2655(NP)(Q)
Revision 00
9/17/2007

It is concluded that the set of cases submitted in topical report ANF-2655(P) Revision 00 is limiting relative to estimating the 95 percent PCT and that the estimated 95 percent PCT is unaffected by sampling offsite power availability.

Figure 1: Offsite Power Available

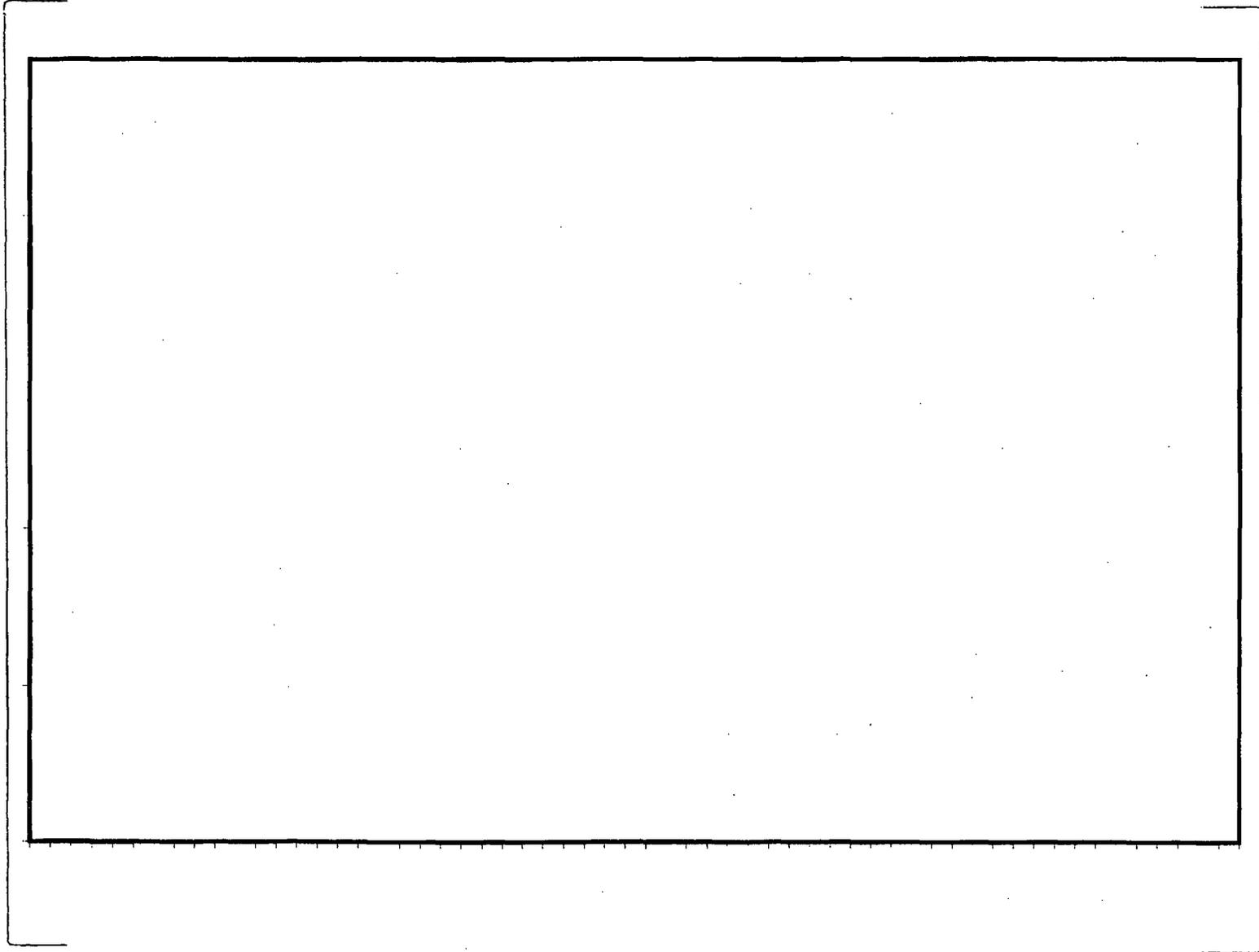


Figure 2: Offsite Power Not Available

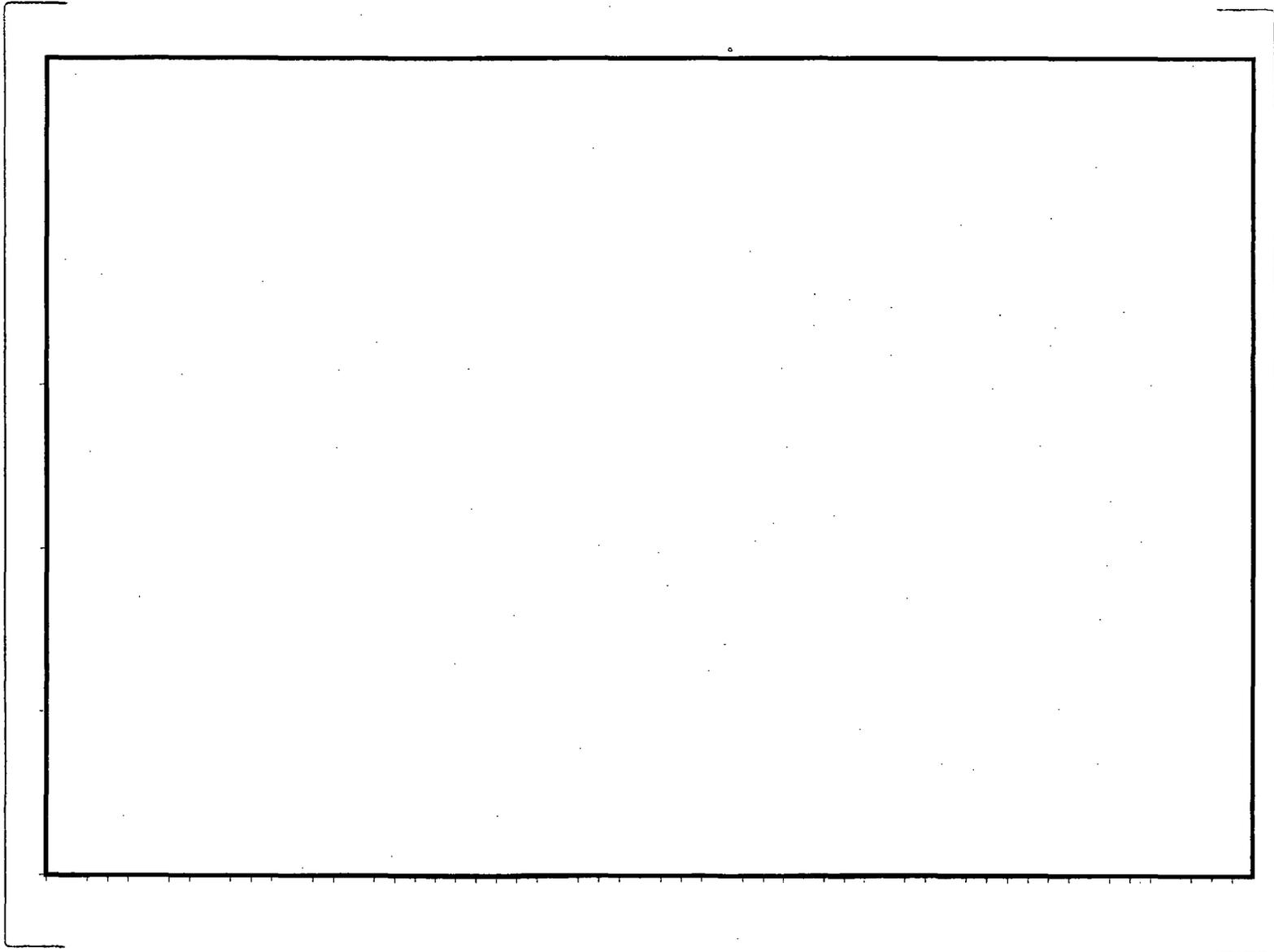


Figure 3: Effect of Switching Offsite Power Availability

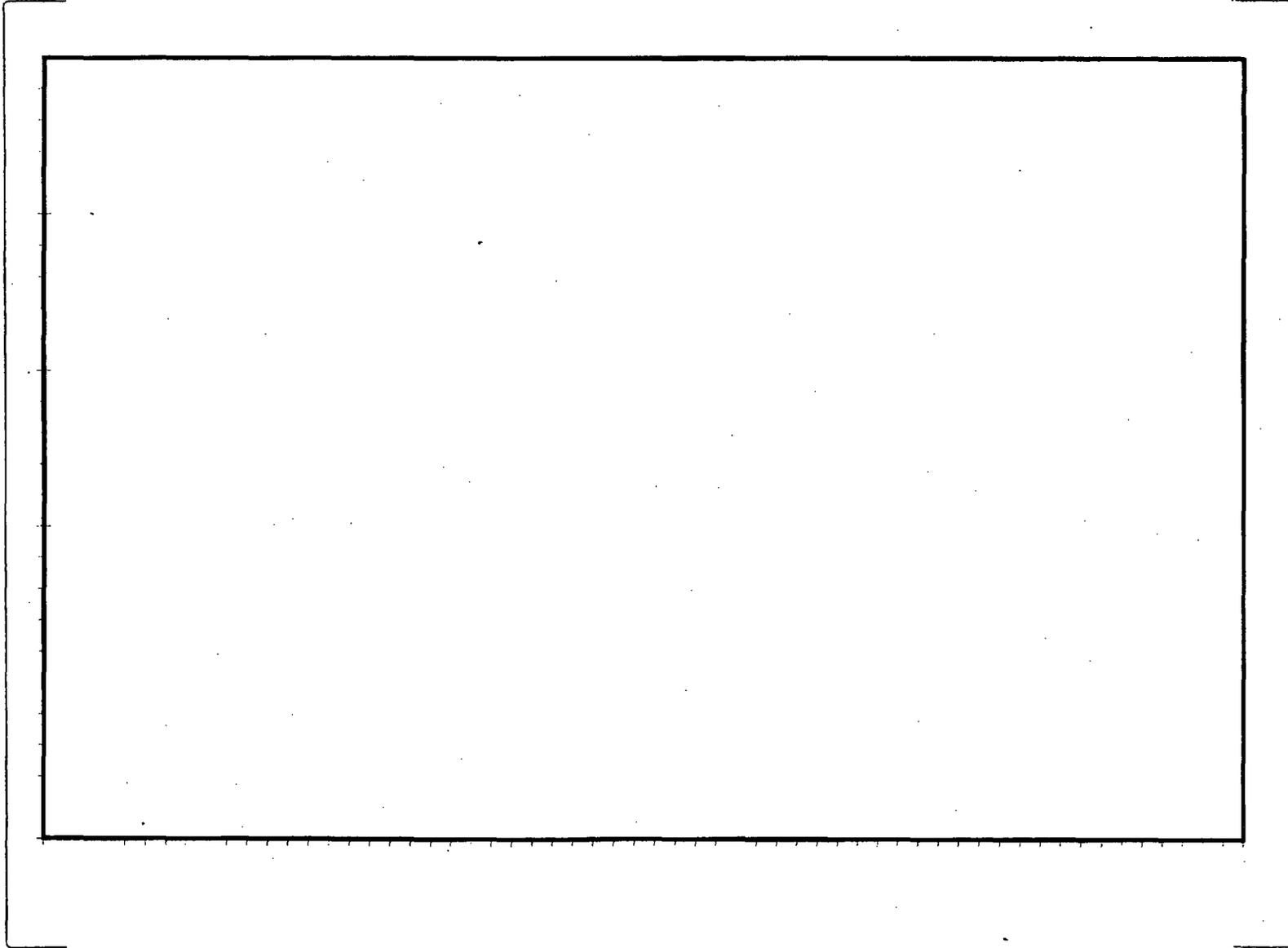
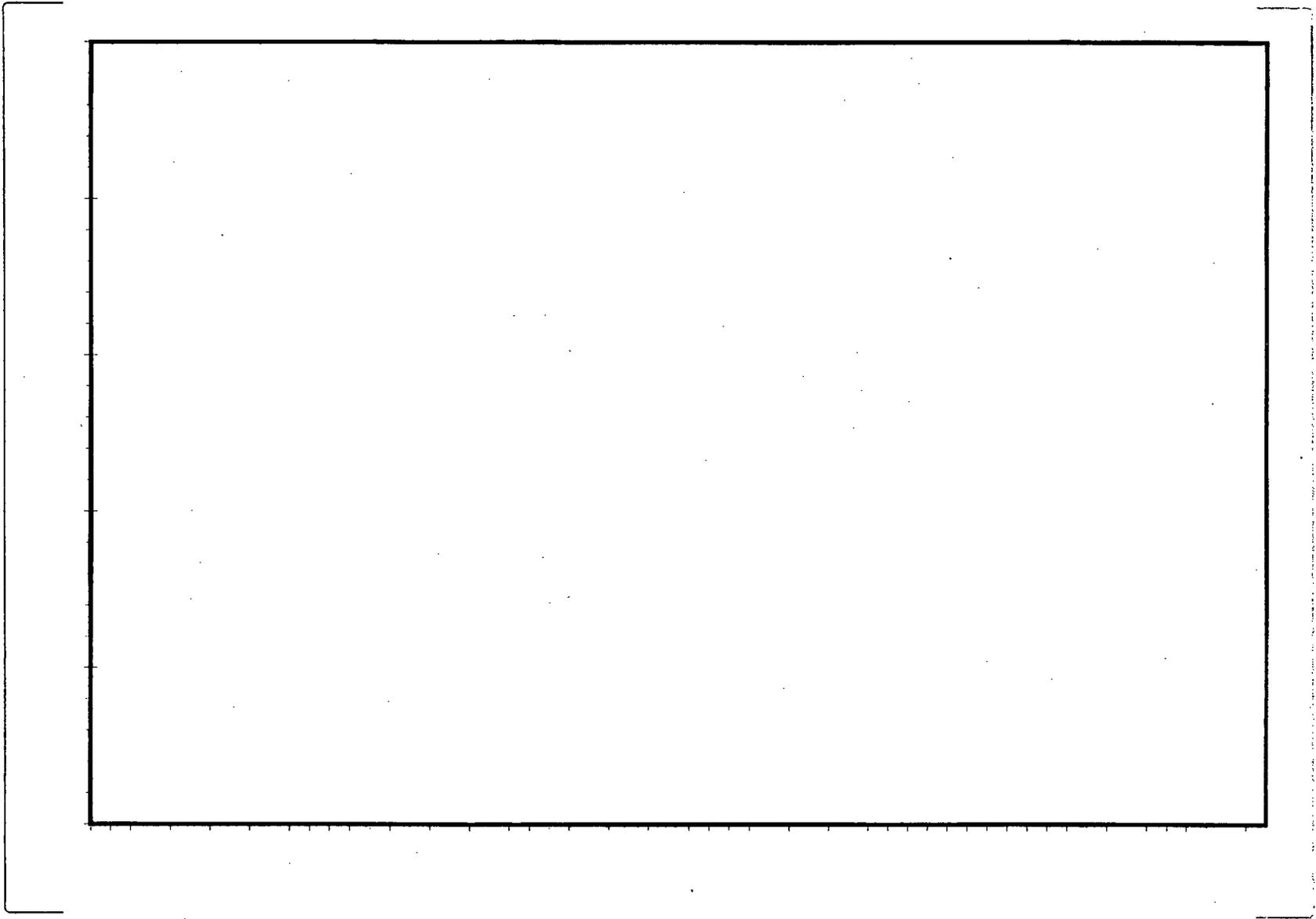


Figure 4: Effect of Switching Offsite Power Availability



ENCLOSURE 3

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNIT 2**

PROPRIETARY INFORMATION WITHHOLDING AFFIDAVIT

requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

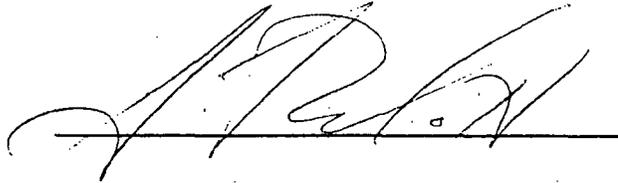
- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b) and 6(c) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

A handwritten signature in black ink, appearing to be 'A. P. A.', written over a horizontal line.

SUBSCRIBED before me this 28th
day of June, 2007.

A handwritten signature in black ink, appearing to be 'S. McFaden', written over a horizontal line.

Sherry L. McFaden
NOTARY PUBLIC, COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES: 10/31/10