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Subject: Requested Information
Creation Date: 5/27/04 2:15PM
From: "SCHEIDE, RICHARD H" <RSCHEID@entergy.com>

Created By: RSCHEID@entergy.com

Recipients
nrc.gov
owf4_po.OWFN_DO
DGH1 (Drew Holland)

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MESSAGE	106	05/27/04 02:15PM
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Battery Questions.doc	37376	
Mime.822	53795	

Options

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DOCKET NO. 50-368

Date: May 28, 2004

NOTE TO FILE ON DOCKET 50-368

LICENSEE RESPONSES TO QUESTIONS FROM NRR
TO ANO-2 MANAGEMENT REGARDING TIA-2004-01
REQUIREMENTS INTENDED TO CONTROL THE DEGRADATION
OF CLASS 1E BATTERIES

DURING MAY 2004, Management at ANO-2 responded to a number of questions that Project Manager, Drew Holland asked the licensee on behalf of Matthew McConnell and Saba Saba of EEIB in the Division of Engineering. A partial response to the questions by the licensee is provided by the attachment to this note to file.

The questions asked were as follows:

1) When did the initial equalizing charge take place for the cell that replaced cell 41 in 2D11?

2) When did the 24 hour float charge begin?

3) Provide a copy of the procedure used for discharge testing.

4) Does the procedure of 3) above cover pre-installation discharge testing?

5) Provide a copy of CR-ANO-2-2003-1882.

6) How were the four cells selected from 2D12 ? What was the acceptance criteria for the four cells?

7) Why were replacement cells not taken from the spare cell bank?

Docket No. 50-368

Battery Questions

When did initial equalizer charge of the replacement cell for 2D11 take place?

Initial charge for the replacement cell following its discharge test was performed in support of installation. Charge began on 10/6/03, ended on 10/8/03.

Provide copy of CR 2-2003-1882

To be provided in separate e-mail

Provide copy of discharge test procedure.

To be provided via separate e-mail

How were potential replacement cells selected from 2D12 and why didn't ANO use cells from the spare bank?

A great deal of careful consideration and evaluation of alternatives went into the decision to use spare cells from 2D12 for 2D11. We had a number of options available, including new cells, cells of various ages purchased from other plants, and cells removed from 2D12. We applied the lessons learned from the 2D12 cell 40 replacement problems, where we found that a new cell in an old bank will have depressed voltage due to depolarizer depletion. We also found applicable literature cautioning against installing new cells in older banks. The best match in age was in cells from 2D12. They were one to two years "younger" than 2D11 and had performed above average in surveillance tests. Also, we were able to select a small group of the best cells from 2D12's 58 cells, based on physical appearance and test results, to use as spares for 2D11.

What is the maximum allowable voltage of each cell and bank voltage?

Weekly Pilot Cell Surveillance and Quarterly Surveillance procedures (2307.016 & 2403.024) limit the maximum bank voltage to 2.25vpc/cell X 58 cells = 130.5V.