Consumers Power Company

Stephen H. Howell
Senior Vice President

General Offices: 1945 West Parnall Road, Jackson, Michigan 49201 • (517) 788-0453

August 23, 1979
Howe-225-79

Mr J G Keppler, Regional Director
Office of Inspection and Enforcement
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND NUCLEAR PLANT
UNIT NO 1, DOCKET NO 50-329
UNIT NO 2, DOCKET NO 50-330
STATION BATTERY QUALIFICATION TEST FAILURE

Reference: S H Howell letter to J G Keppler; Midland Nuclear Plant; Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330; Component Qualification Test Documentation Re-Review; Serial Howe-252-78, dated November 28, 1979

An oral 50.55(e) report was made to your office on August 1, 1979 concerning a qualification test failure of Midland's Station Batteries. Exide Industrial Battery Division, the supplier of the batteries, has made a 10 CFR Part 21 report on the subject batteries.

This letter, and its enclosure, is our final report. It is our evaluation that the failure mode experienced during the accelerated aging test is one that would be detectable during the plant operational phase prior to any significant degradation of the batteries or loss of ability to meet functional requirements. The supplier is implementing part corrective action to eliminate the design discrepancy. The status of qualification of the Station Batteries is included in the above-referenced 50.55(e) report on Component Qualification Test Documentation Re-Review. The status of the Station Batteries will be updated via subsequent 50.55(e) reports on Component Qualification.

Stephen H Howell

WRB/lb

Enclosure: Bechtel Power Corporation letter to CPCo, Status Report on Exide 10 CFR 21 Report, HQA-79-111, dated August 15, 1979

CC: Director of Office of Inspection and Enforcement
Att: Mr Victor Stello, USNRC (15)

Director of Office of Management
Information and Program Control, USNRC (1)

Enclosure to
Howe-225-79

Bechtel Power Corporation
777 East Eisenhower Parkway
Ann Arbor, Michigan
Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

August 15, 1979

Consumers Power Company
Mr. W. R. Bird
1945 West Parnall Road
Jackson, Michigan 49201

Midland Plant - Job 7220
Consumers Power Company
Status Report on Exide
10 CFR 21 Report - 7220-E-12AC
File: 9507

Dear Mr. Bird:

Attached is a status report on the Exide 10 CFR 21 Report issued July 31, 1979.

Project Engineering will follow up on the action as outlined in the report. Unless there are major deviations from the actions outlined no further reports will be made and control will be maintained by standard project procedures.

If there are any questions, please contact me.

W. G. Moring

WGM/kb
HQA-79-111

Response: No

cc: Mr. Bauman
Mr. Miller
Mr. Marguglio

Attachment

SUBJECT: Exide Industrial Battery Division 10 CFR 21 Report - 7220-E-12 AC
DATE: August 14, 1979

PROJECT: Consumers Power Company
Midland Plant Units 1 & 2
Bechtel Job 7220

Introduction:

This is a status report covering activities and schedules developed in response to the 10 CFR 21 Report issued July 31, 1979, by Exide Industrial Battery Division.

Description of Discrepancy:

On July 31, 1979, Exide advised that there was a potential problem with batteries shipped to the Midland 1 & 2 jobsite, which could be reportable under 10 CFR 21. Qualification testing to IEEE 323-1974 had shown a low voltage condition after 32 days of high temperature (160 F) artificial aging. Exide aborted the test so they cannot provide 5 years qualification by the end of August, 1979, or 20 years qualification by January, 1980. The deficiency was reported to the NRC.

Probable Cause:

During the qualification to IEEE 323-1974 of the "GN" series of batteries, a low voltage condition was indicated on some of the test cells after 32 days of high temperature (160 F) artificial aging.

An internal examination by Exide of the involved cells indicated that the failure was most likely caused by a material resistance path across the top of the plate separators, between the hanging lug of one plate to the conducting lug of the opposite polarity plate.

Corrective Action:

The Exide design staff has determined the corrective action necessary and has instituted a minor design change. Production of the new design is scheduled to begin by September 1, 1979. The changes are internal to the cells so there will be no changes in the Exide outline drawing, or rack layouts affecting the battery installations in any way.

New test cells are planned to be available by the end of September, 1979, which should enable Exide to provide us with 5 years qualification by March, 1980, and 20 years qualification by September, 1980.

Exide reassures us that under the quarterly individual cell voltage readings taken in accordance with IEEE 450-1975 any field problems would be detected at an early stage.

The batteries as installed have an expected life of 3.2 years based on the portion of the test completed. In order to meet specification requirements the batteries will be replaced with the redesigned batteries. Based on the schedule provided by Exide, qualified batteries will be available for replacement prior to fuel load. The use of the present batteries is satisfactory for the pre-operational test program.

Safety Implication:

There is no safety implication involved as the problem was discovered during a qualification test specifically intended to determine the life of the equipment.