

January 26, 2016

Interim 10 CFR Part 21.21 Report

Name and address of the individual or individuals informing the Commission.

Michael R. Byram Manager Quality Assurance Canberra Industries, Inc. 800 Research Parkway Meriden, CT 06450 203-639-2209

Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Facility: FORT CALHOUN NUCLEAR STATION OMAHA PUBLIC POWER DISTRICT

Basic Components:

Modification Kit for Manual Flow Controller Relay, Time Delay Motor, Pump

Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Canberra Industries, Inc. 800 Research Parkway Meriden, CT 06450

Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

During review of executed Commercial Grade Dedications, specifically:

- On three separate purchase orders to OPPD, the commercial grade items were not properly dedicated as basic components per the PO requirements.
- Manual Flow Controller Modification Kit, material 7068423, which was provided for OPPD PO 00185091 Rev -, was not properly qualified for the intended use, the mild environment or the specified seismic criteria. Parts were provided to meet informally-communicated requirements and not all specifications of the Purchase Order. Not all critical characteristics to meet the functional use or to maintain environmental and seismic qualification may have been verified. TENT

Therefore, the sample flow controller or its adjustments, while unlikely, may fail prematurely or not operate during extreme environment or seismic event.

- Time Delay Relay, material 602958-001, which was provided for OPPD PO 00185167, did not have all of its identified critical characteristics verified. While some of those characteristics are not required for the intended use, there were no verifications of characteristics maintaining qualification at temperature extremes or during seismic events. Therefore, the time delay relay, while unlikely, may fail prematurely or not operate during extreme temperature or seismic events.
- Pump Motor, material 602627-001, which was provided for OPPD PO 00191479, did not have verifications of characteristics maintaining qualification at temperature extremes or during seismic events. Therefore, the pump motor, while unlikely, may not operate during extreme temperature or seismic events.
- The date on which the information of such defect or failure to comply was obtained.

## November 06, 2015

In the case of a basic component which contains a defect or fails to comply, the number and location
of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured,
or being manufactured for one or more facilities or activities subject to the regulations in this part.

FORT CALHOUN NUCLEAR STATION OMAHA PUBLIC POWER DISTRICT

- Mass Flow Controller Kit may have been used as an upgrade to Fort Calhoun RM-050/051.
- Time Delay Relay may have been used as a spare part at Fort Calhoun for unspecified radiation continuous air monitors.
- Pump Motor may be used as a spare part at Fort Calhoun, RM-050/RM-051-M, RM-052-M, RM-062-M.
- The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

CANBERRA has initiated internal CAR # 1511-MB940948 to capture ongoing review of and classification of possible defects to components.

CANBERRA requires OPPD to review current installation of the components and advise CANBERRA of required corrective action. CANBERRA will fully support that corrective action.

• Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

CANBERRA has assessed the previous usage, pedigree, and testing conducted of the items contained within the interim report and is under the presumption that the items will perform as required. But,

without additional testing as stated below CANBERRA cannot provide reasonable assurance for full functionality in extreme temperature or seismic conditions.

- Mass Flow Controller Kit cannot be dedicated by CANBERRA without specification by OPPD of critical characteristics required by the system modification/installation.
- Time Delay Relay and Pump Motor will likely need to be dedicated based on a new batch of parts, with samples destructively tested.
- In the case of an early site permit, the entities to which an early site permit was transferred.

Not applicable