July 12, 1984

Mr. James G. Keppler Regional Administrator U.S. Nuclear Regulatory Commission Region III 799 Roosevelt Road Glen Ellyn, Il 50137

> Subject: Braidwood Station Units 1 and 2 10 CFR 50.55(e) 30 day Report -Revised Final Report Concrete Expansion Anchor Installation NRC Docket Nos. 50-456 and 50-457

Reference (a): E.D. Swartz letter to J.G. Keppler dated June 11, 1984.

Dear Mr. Keppler:

On May 11, 1984, the Commonwealth Edison Company notified Mr. W. L. Forney of your office of a deficiency reportable pursuant to 10 CFR 50.55(e), regarding Concrete Expansion Anchors (CEAs) installed through finished floors. For your tracking purposes, this deficiency was assigned Number 84-07. On June 11, 1984, Reference (a) provided our thirty day report regarding this matter.

This letter is a revision to the above referenced letter. Information regarding CEA installations in surface repaired concrete was inadvertently omitted from our June 11, 1984, letter. We apologize for this oversight. This letter is considered to be a revised final report.

DESCRIPTION OF DEFICIENCY

Contrary to Sargent and Lundy Specification BY-BR-CEA, Section 3.1.5. the embedment length of Concrete Expansion Anchors (CEAs) installed in finished slabs was measured from the elevation of the finished floor rather than from that of the rough concrete. Additionally, contrary to Section 3.1.9, the embedment length of CEAs installed through surface repaired concrete extending beyond the reinforcing steel cover was not increased by the "X" dimension shown in figure 38-5 (X=thickness of concrete cover plus nominal diameters of outside reinforcing steel). These apparent oversights could result in CEA installations with anchor embedment lengths which are less than the required minimum.

ANALYSIS OF SAFETY IMPLICATIONS

If left undetected, equipment could potentially shift during the unlikely occurrence of a seismic event, resulting in the subsequent loss of the equipments' intended function.

8407250471 840712 PDR ADOCK 05000456 S PDR JUL 16 1984 11

J. G. Keppler July 12, 1984 CORRECTIVE ACTION TAKEN For previous installations in finished floor areas, Sargent & Lundy completed a walk down of the finished floor areas in order to map the size and location, and to determine the acceptability of previous CEA installations. Any deficiencies (i.e. longer length CEAs required) which are subsequently identified during the review of the data obtained during the walkdown will be reworked in accordance with Sargent and Lundy requirements. For previous installations in surface repaired concrete areas, Sargent & Lundy will complete a walk down by October 26, 1984, in order to map the size and location and to determine the acceptability of previous CEA installations. Again, any deficiencies which are identified will be reworked in accordance with Sargent and Lundy requirements. For new installations in finished floors, all contractors installing CEAs have been instructed to notify Sargent & Lundy and obtain the correct embedment length prior to installation. This contractor notification will be required until design documents are revised to reflect the appropriate length of CEAs to be used. Commonwealth Edison Company NCR 617 was issued to document and track this deficiency until the required corrective actions are complete. For new installations in surface repaired concrete areas, all contractors installing CEAs will be sent a set of drawings showing major patches (repairs to areas which had exposed rebar) by July 25, 1984. As any new major patches are made, revised drawings will be transmitted to all CEA installation contractors. Additionally, major patched areas will be physically demarcated in the building. Section 3.1.9 requirements can be fully met with the above information. Commonwealth Edison Company NCR 634 was issued to document and track this deficiency until the required corrective actions are complete. Very truly yours, Douglas Swartz Nuclear Licensing Administrator 1m cc: RIII Inspector - Braidwood Director of Inspection and Enforcement U.S. Nuclear Regulatory Commission Washington, D.C. 20555 8976N