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 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
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 SMITH, W. G. Indiana & Michigan Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DAVIS, A. B. Document Control Branch (Document Control Desk)

SUBJECT: Special rept: on 870610, seismic instrumentation indicated event alarm & began recording data. Probably caused by slightly hyper-sensitive trigger in reactor pit. Monitor remains inoperable until plant shutdown.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
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INDIANA & MICHIGAN ELECTRIC COMPANY

Donald C. Cook Nuclear Plant
P.O. Box 458, Bridgman, Michigan 49106

June 16, 1987

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
Licensee Nos. DPR-58 and DPR-74

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: Mr. A. B. Davis

In accordance with Technical Specification (T/S) 4.3.3.3.2, this special report is being submitted to inform you of the results of the seismic event of June 10, 1987.

At 1950 hours, seismic instrumentation indicated an event alarm and began recording data. Per the Emergency Plan Procedure, an Unusual Event was declared and appropriate notifications were made.

At 2005 hours the Unusual Event was terminated. Control Room Panel walkdown, general plant inspection, radiation monitor check, and RCS leak rate determinations were performed with no problems found.

At 2045, work began to retrieve the recorded seismic data and return the instruments to operable. (The seismic instrumentation at Cook Plant is set to record accelerations above 0.01g.) On site evaluation of the Strong Motion Triaxial Accelerograph record was performed. No measurable data, indicating normal seismic activity, was found. The SMA data was then sent to Kinemetrics, Inc. for playback and analysis.

The T/S related Peak Recording Accelerographs (PRA's) were then checked for recorded events. The transverse axis of Upper Containment PRA generated an indication of over 2g. The remaining axes of Upper Containment and all other PRA's showed no trace. The most likely cause of this isolated reading could be explained as induced response that occurred during handling of the instrumentation rather than accelerations actually measured during the earthquake.

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On June 12, 1987, SMA analysis by Kinemetrics, Inc. was completed. Results indicated the system was operating properly and that no acceleration above 0.01g was recorded. Kinemetrics Systems Engineers feel this is a reasonable response for the physical effects noted by our local witnesses. The triggering of the system may be attributable to a slightly hyper-sensitive trigger in the reactor pit that has been inaccessible for adjustment since August 1985. A second possibility is that an acceleration of nominally 0.01g may have indeed triggered the system. However, the recorder does not activate for 100 milliseconds, at which point the acceleration is shown to have dropped below the 0.01g level.

As a result of the above, we conclude that the recent seismic activity epicentered at Lawrenceville, Illinois did not result in ground motion levels at the Cook Plant site high enough to threaten features important to safety or general plant systems. It is to be noted that seismic instrumentation in the reactor pit cannot be channel calibrated without unnecessarily shutting down the plant. All other monitors have been reset but not calibrated. In accordance with T/S surveillance requirements (T/S 4.3.3.3.2) the monitors remain technically inoperable. However, we note that our consultant has advised us that "... we feel that no special activities are warranted and we recommend that you return to your original test/calibration schedule." (See attached letter from Kinemetrics, Inc., dated June 12, 1987.) If the monitors remain inoperable for more than 30 days, we will be filing a special report describing the situation under the requirements of T/S 3.3.3.3(b). We believe that the continued operation of the plant with the monitors restored, but not operable, will not result in undue risk to public health and safety.

Sincerely,



W. G. Smith, Jr.
Plant Manager

LGW/mmp

cc: J. E. Dolan - AEPSC
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PNSRC
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June 12, 1987

D.C. Cook Nuclear Power Plant
Operating Storeroom
P.O. Box 458
Bridgman, MI 49106



Attention: Mr. Tom Bestrom

CC: Mr. Jim McDowell ✓

Subject: Post-Earthquake Handling of Seismic Instrumentation

Dear Mr. Bestrom:

It is my understanding that your plant's technical specifications require a complete channel calibration of the seismic instrumentation within 24 hours following an earthquake. I am writing to inform you of industry recommendations regarding this practice.

First, we are opposed to the immediate removal of the systems from service after an earthquake. The likelihood of having an earthquake is highest in the first few days after another earthquake and the subsequent event could well be larger than the first.

For the SMA-3 time-history accelerograph, our recommended practice is to run a functional test, label and remove the tape cassettes for playback and analysis, and to then restore the system to proper operation by installing new (blank) tape cassettes and running an additional functional test.

Regarding calibration (which incidently takes a few days and could never be completed in 24 hours), if the plant has not had a system calibration in the last 18 months and/or if preliminary analysis and observation indicates the possibility that OBE levels had been exceeded, then a full calibration is recommended to begin within 30 days following the event.

After observing the absence of measurable data on the tapes sent to us in response to the 10/JUN/87 event at 23:48:52.0 hours UTC at location 38.793N / 87.870W, and noting that the system has already been restored to proper operation, we feel that no special activities are warranted and we recommend that you return to your original test/calibration schedule.

Yours truly,


George W. Siegel
Supervisor, Product Services

GWS:nec

