Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

February 4, 1986

DJS LTR: 86-80

James G. Keppler
Regional Administrator
Director of Inspection and Enforcement
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Reference: DJS Ltr. 85-1187 to J. G. Keppler from D. G. Scott, dated December 30, 1986.

Dear Sir:

This letter is in reference to the Conformatory Action Letter 85-04 regarding the Main Steam Line Snubber Monitoring System for Dresden Unit 2. Item 2 of this Confirmatory Action Letter requires a verbal notification to Region III within 2 working days followed by a written report and safety evaluation within 30 calendar days.

Five occurrences have been identified during this reporting period:

Occurrence #26	Notification made to J. Harrison by E. Armstrong on January 8, 1986.
Occurrence #27	Notification made to D. Danielson by E. Armstrong on January 12, 1986.
Occurrence #28	Notification made to I. Yen by J. Achterberg on January 23, 1986.
Occurrence #29	Notification made to D. Danielson by J. Achterberg on January 24, 1986.
Occurrence #30	Notification made to D. Danielson by E. Armstrong on January 31, 1986.

The written reports and safety evaluations when required for these occurrences are attached.

sincerely,

D. J. Scott

D. J. Scott
Station Manager
Dresden Nuclear Power Station

DJS:JW:hjb
Enclosure
cc: J. Almer
J. Welch
J. Achterberg
J. Williams
File/Misc.
File/Numerical

FEB 7 1986

Occurrence #26

On January 6, 1986 at 2107 hours the Linear Variable Displacement Transformer (LVDT) for snubber #50 exhibited a step function of 1.2 inches in magnitude, with a rise time of 5 milliseconds. At that time no corresponding force signature on the strain gage (SG) for snubber #50 was noted nor did any other SG or LVDT show a response. The signal returned to its normal level within 8 hours. The cause of the step function is likely due to a malfunction within the vishay amplifier or the AC/DC excitation module for the LVDT channel. The problem is intermittent, and the cause of the failure has not been determined. To verify that no mechanical failures of the LVDT had occurred, snubber #50 was visually examined following the scram of January 21, 1986 (Occurrence #18). No abnormalities were noted at that time.

On January 7, 1986 at 1600 hours to 1655 hours 4 spikes above the trip level were received on the LVDT for snubber #50. Unit 2 was at 98.5% power (2514 MWt) with a load of 821 MWe. A review of the operators log book and computer printouts for reactor pressure and steam flow showed no operational transients occurring at that time.

The SG associated with snubber #50 showed no corresponding force signature nor did any other SG or LVDT show any corresponding movement. With the large linear movements in the signals and their short duration (5-10 milliseconds) this actuation is attributed to spurious electrical noise and not an actual pipe movement. The source of the noise remains undetermined.

Occurrence #27

On January 12, 1986 at 1000 hours, Unit 2 was operating at a steady power of 88% (2224 MWt) and a load of 727 MWe. An orderly increase of power to 93.1% (2352 MWt) and a load of 770 MWe was commenced at 1038 hours and completed at 1100 hours. During this time 4 spikes occurred on the strain gage (SG) on snubber #53 at 1006, 1050, 1050, and 1054 hours. The magnitude of these spikes were 16, 17, 17, and 19 kips respectively, with a duration of less than 4 milliseconds. Subsequently, a spike occurred on the Linear Variable Displacement Transformer (LVDT) on snubber #53 at 1105 hours which had a magnitude of 1.4 inches and a duration of less than 4 milliseconds. All of these spikes were of an isolated nature and no other movement or forces were denoted on the other SG or LVDT.

The SG spikes were of large magnitude and short duration and the fact that there was no corresponding LVDT movement indicates that the spikes were caused by electrical noise. Similarly, with the large linear movements indicated by the chart record of the LVDT signals (outside design limits of the snubber) this actuation is also attributed to spurious electrical noise and not an actual pipe movement. The source of the noise remains undetermined.

Occurrence #28

On January 21, 1986 at 12:45 hours Unit 2 scrammed from 45.9% power (1160 MWt) and a load of 360 MWe. The scram occurred during a reactor level instrument calibration surveillance. Following the scram, several spikes were observed on the strain gages (SG) and Linear Variable Displacement Transformers (LVDT's) associated with all of the snubbers. After reviewing the sequence of events during the scram, it was determined that the snubber instrumentation triggers occurred during the insertion of the source range monitors (SRM's) and the intermediate range monitors (IRM's). These traces were compared and similarities noted to those obtained during testing on June 3, 1985, which is described in Occurrence #5. That occurrence was attributed to electrical interference generated from the movement of the SRM's and IRM's. Since no abnormalities or unusual steam line transients were identified and the source of the traces have been attributed to a specific plant evolution (SRM/IRM movement), the safety significance of this event is minimal.

Occurrence #29

On January 23, 1986 Unit 2 began an orderly startup following the scram of January 21, 1986 (Occurrence #29). The unit was synchronized to the grid at 1810 hours and a power increase was commenced. Soon after synchronizing to the grid, condenser vacuum anomalies were noted. As a preventive measure the unit was manually taken off line and put in hot standby to determine the root cause of the vacuum problem.

During the unit startup and shutdown, several snubber instrumentation monitor actuations were noted. After reviewing the sequence of events during startup and shutdown, it was determined that the snubber instrumentation triggers occurred during the withdrawal and insertion of the source range monitors (SRM's). These traces were compared and similarities noted to those obtained during testing on June 3, 1985, which is described in Occurrence #5. That occurrence was attributed to electrical interference generated from the movement of SRM's and IRM's. Since the unit startup and shutdown progressed normally, no steam line transients were identified and the source of these traces have been attributed to a specific plant evolution (SRM/IRM movement), the safety significance of this event is minimal.

Occurrence #30

On January 29, 1986 after the source of the condenser vacuum problem which forced the shutdown of the unit was found and repaired, an orderly startup was commenced. The unit was placed in the run mode at 0633 hours and synchronized to the system grid at 0933 hours.

During the unit startup several snubber instrumentation monitor actuations were noted. After reviewing the sequence of events during the startup, it was determined that the snubber instrumentation triggers occurred during the withdrawal of the source range monitors (SRM's) and the intermediate range monitors (IRM's). These traces were compared and similarities noted to those obtained during testing on June 3, 1985, which is described in Occurrence #5. That occurrence was attributed to electrical interference

generated from the movement of the SRM's and IRM's. Since the unit start-up progressed normally, no steam line transients were identified and the source of the traces have been attributed to a specific plant evolution (SRM/IRM movements), the safety significance of this event is minimal.