

# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9811180040 DOC.DATE: 98/11/09 NOTARIZED: NO DOCKET #  
 FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410  
 AUTH.NAME AUTHOR AFFILIATION  
 DEAN,R. Niagara Mohawk Power Corp.  
 PALEOLOGOS,N. Niagara Mohawk Power Corp.  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-026-00:on 981009,discovered that RB Triaxial Response Spectrum Recorder (TRSR) was not oriented as shown on design drawings.Caused by personnel not being aware that TRSR was not oriented.TRSR was properly oriented.With 981109 ltr.

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# Niagara Mohawk

November 9, 1998  
NMP2L 1832

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: Docket No. 50-410  
LER 98-26

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), we are submitting LER 98-26, "Seismic Monitor Inoperable for More than Thirty Days and Special Report Not Submitted." This report also fulfills the requirement of Technical Specification 3.3.7.2 Action a to submit a Special Report within ten days of a Seismic Monitoring Instrument inoperability for greater than thirty days.

Very truly yours,



Nick Paleologos  
Plant Manager - NMP2

NCP/GJG/kap  
Attachment

xc: Mr. H. J. Miller, Regional Administrator, Region I  
Mr. G. K. Hunegs, Senior Resident Inspector  
Records Management

9811180040 981109  
PDR ADOCK 05000410  
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## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (0150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1)

Nine Mile Point Unit 2

DOCKET NUMBER (2)

05000410

PAGE (3)

1 OF 4

TITLE (4)

Seismic Monitor Inoperable for More Than Thirty Days and Special Report Not Submitted

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)	
10	09	98	98	026	00	11	09	98	N/A		
									N/A		

OPERATING MODE (9)

1

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10) 100	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 73.71
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(e)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<i>(Specify in Abstracts below and in Text, NRC Form 366A)</i>
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(e)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

R. Dean, Manager Engineering - NMP2

TELEPHONE NUMBER

(315) 349-4240

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

 YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH

DAY

YEAR

ABSTRACT (Limits to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On October 9, 1998, while performing a plant walkdown, Engineering personnel discovered that a reactor building Triaxial Response Spectrum Recorder (TRSR) was not oriented as shown on design drawings. Engineering personnel determined that the TRSR had been inoperable since its last surveillance in May 1997 and potentially since initial installation. Since this inoperability exceeded 30 days, a Special Report should have been submitted as required by Nine Mile Point Unit 2 (NMP2) Technical Specification (TS) 3.3.7.2 Action a.

The cause of failing to submit the Special Report is that plant management was not aware that the TRSR was not oriented properly and thus rendered inoperable. Personnel who developed and revised the surveillance procedures were not aware of the criticality and the precise tolerances required for the directional orientation of the seismic instruments.

The TRSR was oriented properly on October 23, 1998. Accessible seismic instruments have been walked down to verify that they are installed in the proper orientation. In addition, recorder orientation aids will be installed, and the surveillance procedures will be revised to assure proper orientation prior to the next scheduled surveillance or December 31, 1998, whichever comes first.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	26	00	02 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

### I. DESCRIPTION OF EVENT

On October 9, 1998, while performing a plant walkdown, Engineering personnel discovered that two Triaxial Response Spectrum Recorders (TRSR) were not oriented as shown on design drawings. They are as follows:

1) The TRSR located on the Residual Heat Removal (RHR) Piping Penetration at elevation 294 feet 6 inches in the Reactor Building. After an investigation, Engineering personnel determined that the TRSR had been inoperable since its last surveillance in May 1997 and potentially since initial installation. Since this inoperability exceeded 30 days, a Special Report should have been submitted as required by Nine Mile Point Unit 2 (NMP2) Technical Specification (TS) 3.3.7.2 Action a.

2) The TRSR located in the Control Building elevation 214 feet 0 inches. Since this TRSR only measures vertical displacement, it remained operable.

NMP2 has a seismic instrumentation program to monitor and record input motion and behavior of the plant in the event of an earthquake. The following instruments are installed:

- Triaxial Time - History Accelerographs (TTHAs) are actuated by the seismic trigger to record on tape seismic responses in both the horizontal and the vertical axis.
- Triaxial Peak Accelerographs (TPAs) are installed to verify seismic response determined analytically by utilizing the traces from the accelerographs.
- A Triaxial Seismic Switch (TSS) is installed in the reactor building to provide an immediate signal to the control room if the Operational Base Earthquake (OBE) acceleration is exceeded.
- TRSRs are installed to provide redundancy to the TTHAs and the TPAs.

All other accessible seismic instrumentation was walked down and was found to be properly orientated. The TPAs installed within primary containment are not accessible during power operation. The Instrument and Control (I&C) Technicians who performed the surveillance of the primary containment TPAs believe these TPAs may be mis-oriented. Engineering has performed an evaluation for these TPAs and determined that they are operable, even with potential misorientation, since the data can now be corrected by measuring the degree of skew prior to performing the analysis.





LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH (P-330), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT  
(3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)
		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	-	26	-	00	03 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

**II. CAUSE OF EVENT**

The cause of not submitting a Special Report as required by TS 3.3.7.2 Action a is that plant management was not aware that the TRSR was not oriented correctly. Personnel who developed and revised the surveillance procedures were not aware of the criticality and the precise tolerances required for the directional orientation of the seismic instruments. This resulted in an inadequate procedure being developed which did not provide information regarding orientation or acceptable tolerances. Additionally, orientation aids were not on the mounting plates or the general area.

**III. ANALYSIS OF EVENT**

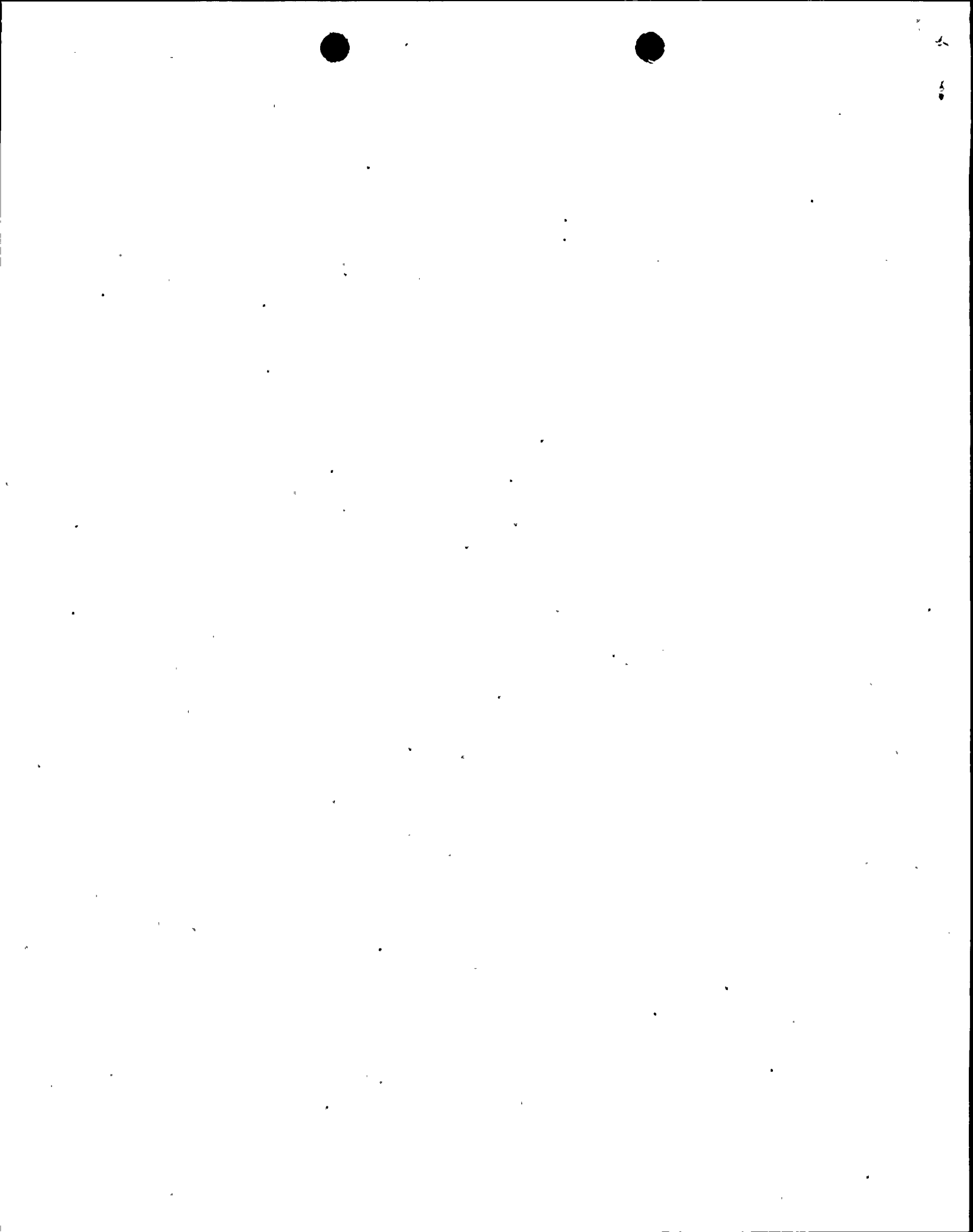
This event is reportable in accordance with 10CFR50.73(a)(2)(i)(B), "any operation or condition prohibited by the plant's Technical Specification" and NMP2 TS 3.3.7.2, "Seismic Monitor Instrumentation" action a which requires a Special Report be submitted ten days after a seismic instrument is inoperable for greater than thirty days.

If an Operating Basis Earthquake (OBE) had occurred during the time that the TRSR was misoriented, the data obtained from this TRSR would have been skewed (i.e., distorted from the true values). In addition, the TPA data from the primary containment instruments could have been skewed. It is possible that a comparison of data from all seismic instrumentation would have identified these anomalies and the orientation would have been measured to correct this data. In the worst case, the incorrect data would have been used to verify the reactor building seismic model. However, the disparity between the various instruments would likely have lead Engineering personnel to perform additional analysis and walkdowns prior to allowing NMP2 to restart.

Seismic monitoring instrumentation is installed to monitor and record data in the event of an earthquake. The purpose of monitoring earth movement, acceleration and frequency is to verify the analytical models described in Section 3.7.A of the NMP2 Updated Safety Analysis Report (USAR). The instrumentation does not perform any accident mitigation function. Therefore, the inoperability of the TRSR did not pose a threat to public health and safety.

**IV. CORRECTIVE ACTIONS**

1. The TSSR was oriented properly on October 23, 1998.
2. Accessible seismic instruments were verified to be oriented properly.
3. The surveillance procedures will be revised to assure that seismic instruments are verified to be in the proper orientation prior to the next scheduled surveillance or December 31, 1998, whichever comes first.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT  
(3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  Nine Mile Point Unit 2	DOCKET NUMBER (2)  05000410	LER NUMBER (6)			PAGE (3)  04 OF 04
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		98	26	00	

TEXT (If more space is required, use additional NRC Form 366A's) (17)

**IV. CORRECTIVE ACTIONS (Cont'd)**

4. Engineering will provide additional training on the use of the revised surveillance procedures to I&C personnel involved with maintaining and calibrating seismic instrument by February 28, 1999. This training will include details of the directional orientation requirements including the precise tolerances.
5. The seismic instrumentation located outside primary containment will have orientation aids installed by November 30, 1998.
6. The two TPAs located in the primary containment will be properly oriented, if needed, and will have orientation aids installed by the next refueling outage (Spring 2000).
7. System Engineers have considered other similar instruments which have critical orientation tolerances and have the potential of not being installed properly. Several instruments were identified which have the potential for misorientations. Engineering determined that there were no deficiencies for those instruments. In addition, personnel who, by the nature of their job, work with instruments that have critical orientation tolerances will determine if they know of any other potential deficiencies. This will be completed by December 15, 1998.

**V. ADDITIONAL INFORMATION**

- A. Failed components: None
- B. Previous similar events: None
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Triaxial Response Spectrum Recorders	VR	IN
Triaxial Time-History Accelerograph	VR	IN
Triaxial Peak Accelerograph	VR	IN
Triaxial Seismic Switch	VIS	IN



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