

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

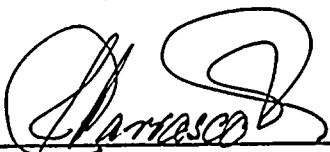
DOCKET/REPORT NO: 50-410/94-09

LICENSEE: Niagara Mohawk Power Corporation

FACILITY: Nine Mile Point Nuclear Station, Unit 2  
Scriba, New York


DATES: April 18-22, 1994

INSPECTOR:

  
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Joseph E. Carrasco, Reactor Engineer  
Materials Section  
Division of Reactor Safety

5-20-94  
Date

APPROVED BY:

  
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Michael C. Modes, Chief  
Materials Section  
Division of Reactor Safety

5-20-94  
Date

Areas Inspected: A safety inspection was conducted to review the licensee's corrective action addressing the self-identified deficiencies cited in Deviation Event Report (DER) 2-93-2746, and to independently assess the status of the licensee's current technical specification (TS) snubber program.

Results: The licensee's corrective actions to address the TS snubber surveillance program deficiencies identified in Deviation Event Report (DER) 2-93-2746 were adequate.



## DETAILS

### 1.0 BACKGROUND

In January 1994, the licensee's quality assurance (QA) review of the technical specification (TS) snubber inspection program found a number of deficiencies regarding the implementation and documentation of the results of TS snubber examinations. To address these deficiencies, the licensee's mechanical maintenance conducted a review of the snubber program and concluded that there were quality record deficiencies, lack of administratively task-qualified inspectors, and procedure compliance violations were evident. A thorough review of all TS visual inspections and functional tests of snubbers in 1993 was performed by the licensee to verify compliance with TS.

### 2.0 PURPOSE AND SCOPE

The purpose of this inspection was to verify and review the licensee's corrective action addressing the self-identified deficiencies cited in Deviation Event Report (DER) 2-93-2746, and to independently assess the licensee's current TS snubber program.

### 3.0 ASSESSMENT

#### 3.1 Deficiencies and Corrective Actions

The licensee's QA review of the TS snubber inspection program determined that four snubbers had been visually examined by a nontask-qualified inspector during the third refueling outage (RF-3). Upon discovering these deficiencies, these snubbers were reinspected by the licensee. The NRC inspector verified the results of the reinspection as follows: A review was performed by the licensee to determine if the individual in question personally inspected any other snubbers for acceptance. It was determined that only those four snubbers, which required functional testing during the RF-3 outage, had been visually inspected by the individual in question. These inspections were performed prior to snubber removal for testing and after reinstallation following testing. The NRC inspector verified the field reinspection performed by the licensee to ensure the credibility of those inspections. Minor discrepancies found by the licensee's audit on the paperwork included:

- "As-left or post-installed" snubber settings varied from actual "As-left" settings as follows:

2GTS-PSSP112B2	-	1/8"	difference	(3-1/8" vs. 3-1/4")
2GTS-PSSP117B2 (A)	-	1/4"	difference	(3" vs. 3-1/4")
2GTS-PSSP117B2 (B)	-	1/4"	difference	(3" vs. 3-1/4")
2GTS-PSSP118B2	-	1/4"	difference	(4" vs. 3-3/4")



- Snubber serial number was mixed up between the "A" and "B" snubber.

2GTS-PSSP117B2 (A) Had serial number 15349, which was from the "B" snubber.

The licensee explained that these discrepancies could have been attributed to inattention to detail or poor work practices. The inspector verified that the licensee conducted visual inspections of the work performed by others (task qualified individuals). These inspections were documented and found to be acceptable. The inspector concluded that this was an isolated case.

### 3.2 TS Accessible Snubbers Visually Examined

The licensee's QA audit findings and their corrective actions were reviewed by the NRC inspector with the following details:

- The inspector found that, of the 379 accessible snubber examinations that should have been performed in January of 1993, 89 reports could not be located.

The inspector verified that, of those 89 missing reports, 45 snubbers have been reinspected, and the remaining 44 have been removed due to the snubber reduction program implementation during RF-03 and satisfactorily tested (see Section 3.6 of this report). The current in-plant accessible snubber total is 335. From verification of the licensee snubber database, the inspector concluded it to be accurate.

- The visual examination checklist of inspections performed in January of 1993 lacked the maintenance engineer's signature and lacked required procedural information.

The inspector verified that all of the licensee's inspection reports have been reviewed by maintenance, and audited by quality assurance to ensure that they satisfy the Technical Specification 4.7.5.c surveillance requirements. These licensee inspections were performed to verify: (1) snubbers have no visible indications of damage or impaired operability; (2) attachments to the foundation or supporting structure are functional; and (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional. To further verify the licensee's compliance with the Technical Specification 4.7.5.c snubber surveillance requirements, the NRC inspector walked down several accessible snubbers and reviewed the pertinent packages (see Section 3.6 of this report).

### 3.3 TS Inaccessible Snubbers Visually Examined

The inspector verified that the visual examination checklists of all inaccessible visual inspections performed during RF-03 have been reviewed by maintenance, and audited by quality assurance to ensure that they satisfied the Technical Specification 4.7.5.c surveillance requirements.



### 3.4 TS and ISI Snubbers Functionally Tested

The sample plans for the snubber functional test at Nine Mile Point Unit 2 are based upon three types of snubbers. The three types of snubbers are grouped as small Pacific Scientific (PS 1/4 and 1/2), medium (PS 1, 3, and 10), and large (PS 35 and 100). Technical Specifications direct sample plans for "small" (use the 10% plan) and for the "medium" and "large" (use an initial representative sample of 37 snubbers).

During RF-03, 171 functionally-tested snubbers have been reviewed and found to be acceptable, in accordance with Procedure N2-MSP-GEN-V351, Revision 02. Engineering reviewed the 171 snubber functional tests selected for the RF-03, and concluded that the representative sample was appropriately selected per Technical Specification 3/4.7.5.e.

The inspector verified the database that listed the functionally tested snubbers during RF-03 and those scheduled for RF-04. Initial sample size for RF-03 was 86. This is based upon the TS sample plans plus five retests from RF-02. Additional sample groups were added, based upon functional failures during RF-03. They have been added to the initial sample plan for RF-04, scheduled in May 1995. The total number of snubbers, including the ISI snubbers, functionally tested during RF-03, was 171.

### 3.5 Snubber Reduction Program

Nine Mile Point Unit 2, prior to the first phase of snubber reduction, had 1,494 snubbers requiring inspection per plant TS. Because of the large number of snubbers at Unit 2, a snubber reduction program was initiated there. Since the first refueling outage, the licensee has eliminated 622 snubbers from the TS. This has reduced the number to 872 snubbers. The licensee's engineering department plans to remove another 75 snubbers in the fourth refueling outage, leaving approximately 800 snubbers at Unit 2.

The licensee's engineering is looking at the possibility of using gap restraints to eliminate the majority of the snubbers remaining following the current snubber reduction.

### 3.6 Snubber Field Walkdown

On April 4, 1994, the inspector and the licensee's engineers performed a field walkdown of snubbers located in the North Auxiliary Bay at elevation 175, the Reactor Building at elevation 196, and the Standby Gas Treatment Building at Unit 2. Specifically, snubber supports located on the low pressure core spray (CSL), residual heat removal (RHR), and standby gas treatment (GTS) systems are shown below:





Mark Number	Building	Elevation	Size	Figure	Rated Load
2CSL-PSSP037A2	NAB	183	10	307	15000
2CSL-PSSP060A2	NAB	178	3	306	6000
2RHS-PSSP884A2	NAB	183	35	307	50000
2CSL-PSSP081A2	RB	196	35	307	50000
2RHS-PSSP209A2	RB	201	3	306	6000
2RHS-PSSP126A2	RB	202	35	307	50000
2GTS-PSSP118B2	SG	266	3	306	6000

For these snubbers, the inspector visually verified and found to be acceptable, the following information: component ID no., snubber serial no., extension piece position, loose/missing parts, corrosion, wear, thread engagement, alignment, spherical bearing, required clearances, structural integrity, and manufacturer's data plate. No deficiencies were detected, and, based on the results of the NRC inspector's walkdown of the above-listed snubbers, it appears that the TS snubbers have been inspected in accordance with written Mechanical Surveillance Procedure No. N2-MSP-GEN-V350, Revision 4.

### 3.7 Conclusion

Based on the inspector's assessment of the licensee's corrective actions to address the deficiencies identified on Deviation Event Report (DER) 2-93-2746, verification of the accessible and nonaccessible TS snubbers examined during the RF-03, and the verification of the TS snubber functional test performed on RF-03, the inspector concluded that the licensee's corrective actions were adequate.

### 4.0 PREVENTIVE ACTIONS

The inspector verified and discussed the key actions that will preclude the recurrence of these self-identified deficiencies, as follows.

#### 4.1 Task Qualification of Individuals

The inspector reviewed the training records and information network, and held discussions with the maintenance supervisors to obtain specific details to assess their qualification program. The inspector noted that personnel are selected to perform tasks within the plant appropriate to their qualification status on the training matrix. On-the-job training (OJT) and on-the-job evaluation (OJE) are the methods used by the trained and qualified licensee personnel for name entry into the training matrix. A number of individuals were questioned



by the licensee's assessors on the training they received, and it was found that they had other related training and qualifications. For example, a number of individuals can have training in areas such as: Mechanical-Piping-U2-I, Inspection of Spring Load Hangers, Inspection of Stationary Hangers, and Installation of Pipe Hangers, and be administratively task-qualified.

The inspector verified the training matrix of the individual engaged in the snubber surveillance program and found no discrepancies. Additionally, the licensee stated that, during inspection periods, the licensee relied heavily on contract personnel who, in addition to being task-qualified, are certified VT-2, 3, 4 inspectors to perform technical specification-required visual inspections of snubbers.

#### 4.2 Procedure Improvement

The inspector verified and discussed changes made to Mechanical Surveillance Procedure No. N2-MSP-GEN-V350. This procedure provides guidance for performing TS visual inspections of snubbers, for satisfying the periodic inspection requirements of TS 3.7.5 and 4.7.5, and for satisfying the transient event inspection requirements of TS 3.7.5 and 4.7.5. The inspector noted that the licensee revised Revision 3 of the procedure, and issued an improved version of the procedure under Revision 4.

Comparing Revision 3 of the procedure with Revision 4, the inspector found that Revision 4 enhanced the acceptance criteria by elaborating on concepts such as "acceptable," "degraded," and "failed" conditions. Revision 4 also added "Direct Visual" and "Remote Visual" criteria. Furthermore, the revision incorporated a list of all TS snubbers with their associated walk path (inaccessible and accessible). In terms of implementation, Revision 4 added an inspection step to provide data on snubber orientation (i.e., extension piece/telescoping cylinder toward pipe) to mitigate potential snubber problems due to dried grease. Based on the inspector's assessment, it was concluded that Revision 4 constitutes an effective procedural improvement.

#### 4.3 Supervisory Enhancements

The plant manager of Unit 2 had assembled a snubber incident assessment team to assess the effectiveness of corrective and preventive actions related to the snubber program deficiencies identified in Deviation Event Report (DER) 2-93-2746. One of the team's recommendations was to continue and build on recent efforts to improve the management of personnel performance, and develop supervisory skills. Units 1 and 2 plant managers reviewed current programs to improve the effectiveness of the leadership and supervisory skills. The licensee stated that this program implementation was already part of the Nuclear Business Plan.



The licensee stated that the timetable for completing supervisory assessments has been accelerated to more quickly identify areas where supervisory and technical knowledge weaknesses exist with existing plant supervision. The objective of this assessment process was to assess nonsupervisory personnel to determine their suitability for future supervisory positions. Since the licensee's supervisory program enhancements just started, the inspector could not, at this time, assess the overall impact of their implementation.

#### **4.4 Conclusion**

Based on the review of the licensee's preventive actions, the inspector concluded that the licensee has taken an adequate series of actions to prevent the recurrence of the deficiencies identified in DER 2-93-2746.

#### **5.0 MANAGEMENT MEETINGS**

Licensee management was informed of the scope and purpose of the inspection at the beginning of the inspection. The findings of the inspection were discussed with licensee management at the April 22, 1994, exit meeting. See Attachment 1 for attendance.



## ATTACHMENT 1

### Persons Contacted

#### Niagara Mohawk Power Corporation

- |                   |                                   |
|-------------------|-----------------------------------|
| * C. G. Beekham   | Manager of QA                     |
| * G. Gresock      | General Manager Mech. Maintenance |
| * R. T. Hankings  | Structural Engineering            |
| * A. P. Lepore    | Sprv. Mechanical Maintenance      |
| * M. J. McCormick | Vice President, Nuclear Safety    |
| * J. H. Mueller   | Plant Manager, Unit 2             |
| * D. Suri         | Inservice EG                      |
| * D. J. Wolniak   | Sup. Licensing Support            |
| * A. F. Zallnick  | Site Licensing                    |

#### U.S. Nuclear Regulatory Commission

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| * B. S. Norris | Senior Resident Inspector |
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- \* Denotes those present at the exit meeting.

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