

# Niagara Mohawk

John T. Conway

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August 6, 1998

NMP1L 1349

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

RE: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Nine Mile Point Unit 2  
Docket No. 50-410  
NPF-69

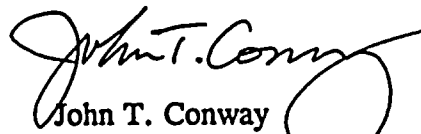
**Subject:** *Reply to Notice of Violation as Contained in NRC Inspection Report  
50-220/98-05 and 50-410/98-05*

Gentlemen:

Niagara Mohawk Power Corporation's (NMPC) reply to the subject Notice of Violation is enclosed in the Attachment to this letter. We do not dispute these violations.

As noted in Mr. Doerflein's transmittal letter dated July 7, 1998, NMPC is not required to respond to Violations 98-05-02 and 98-05-03, unless the description in Inspection Report 98-05 does not accurately reflect NMPC's corrective actions or position. The Inspection Report accurately reflects NMPC's corrective actions and position. Therefore, no response to these violations is being provided.

Very truly yours,

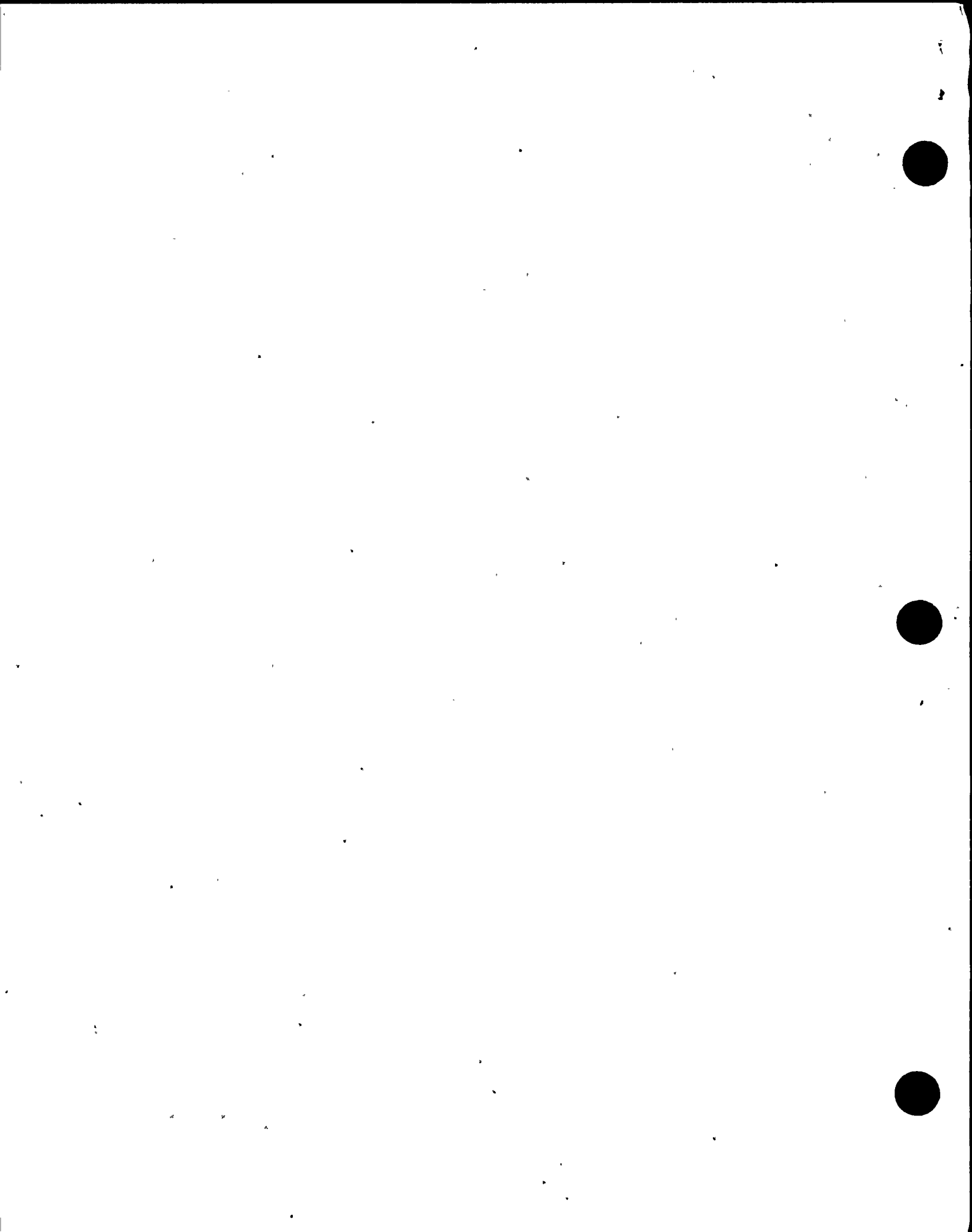


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JHM/GJG/sc  
Attachment

xc: Mr. H. J. Miller, Regional Administrator, Region I  
Mr. S. S. Bajwa, Director, Project Directorate I-1, NRR  
Mr. B. S. Norris, Senior Resident Inspector  
Mr. D. S. Hood, Senior Project Manager, NRR  
Records Management

~~4500120305~~ WP



**ATTACHMENT**

**NIAGARA MOHAWK POWER CORPORATION  
NINE MILE POINT UNIT 1/2  
DOCKET NO. 50-220/ 50-410  
DPR-63/NPF-69**

**"REPLY TO NOTICE OF VIOLATION," AS CONTAINED IN  
INSPECTION REPORT 50-220/98-05 AND 50-410/98-05**

**A. VIOLATION 50-220/98-05-01**

Nine Mile Point Unit 1 (Unit 1) Technical Specifications (TS), Section 6.8.1, requires procedures be implemented as written. With one loop of the core spray system inoperable, TS 3.1.4.d requires a plant shutdown initiated within one hour and the plant placed in the Cold Shutdown condition within the next ten hours.

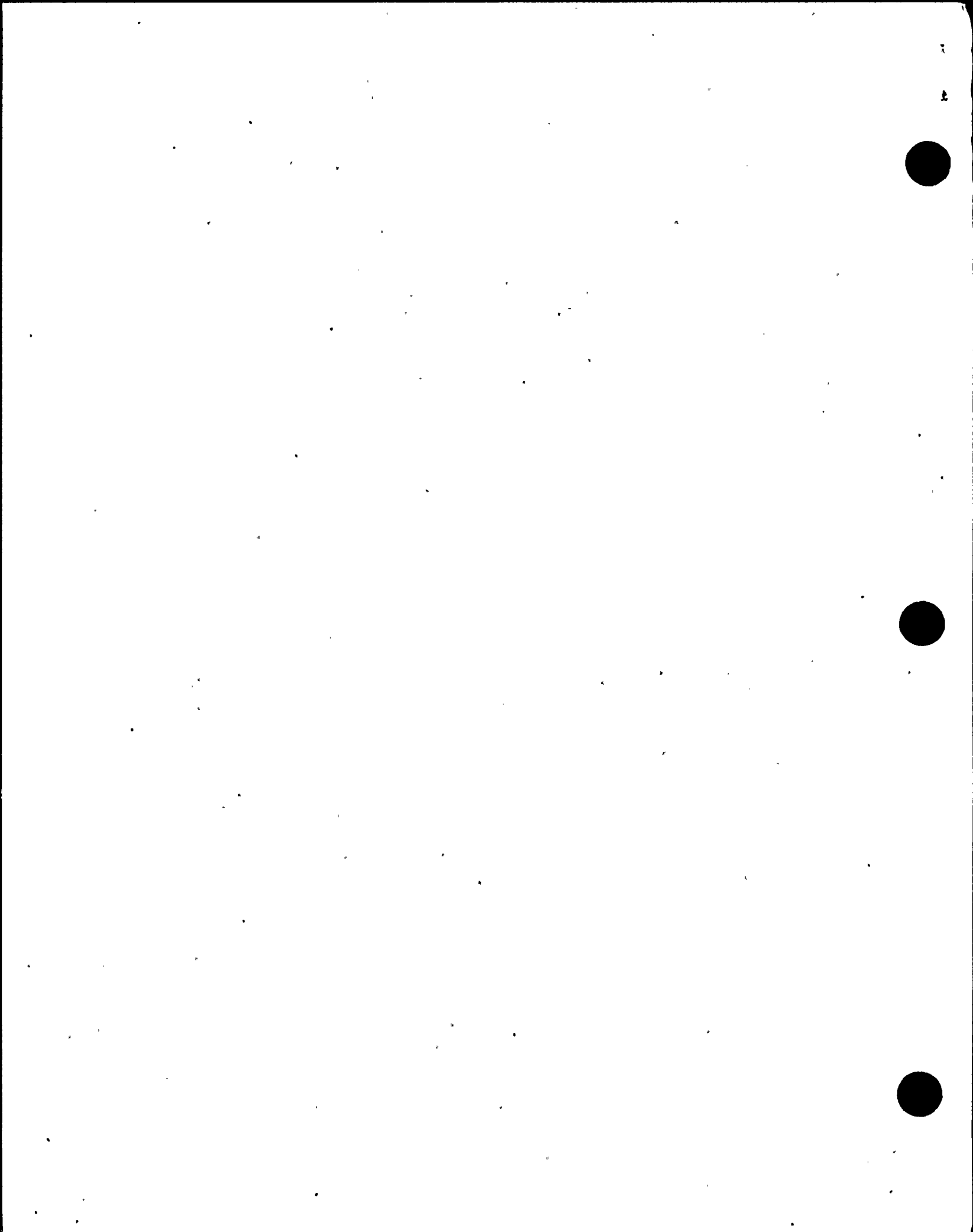
NMPC Surveillance Test Procedure N1-ST-Q28, "Containment Spray Raw Water Intertie Check Valve Quarterly Operability Test," Revision 5, Step 10.1.1 (Operations Review of the Acceptance Criteria) Note #1, states that if check valve 93-64 fails, then the core spray system loop #12 shall be considered inoperable and TS 3.1.4.d action statement entered.

Contrary to the above, on April 22, 1998, check valve 93-64 failed to open when the required torque was applied. However, core spray system loop #12 was not declared inoperable and TS 3.1.4.d was not entered.

**I. THE REASON FOR THE VIOLATION**

On April 22, 1998, operators at Nine Mile Point Unit 1 (NMP1) were performing N1-ST-Q28, Containment Spray Raw Water Intertie Check Valve Test. The purpose of the test is to assure forward flow and reverse flow prevention capability of the four raw water intertie check valves between the containment spray raw water system and the core spray system. The first three valves tested met their acceptance criteria. When the operators conducting the test attempted to forward flow exercise check valve 93-64, the valve would not move with the specified torque applied. The operator notified the Station Shift Supervisor (SSS) of the failure and the test was stopped. The SSS reviewed the acceptance criteria page of the test procedure and marked the acceptance criteria unsat. The SSS and Assistant Station Shift Supervisor (ASSS) discussed the test failure, initiated a Deviation/Event Report (DER), reviewed the Technical Specifications (TS), entered a fifteen day Limiting Condition for Operation (LCO) for an inoperable loop of Containment Spray, and notified the Plant Manager.

Approximately two hours after the test failure, the ASSS continued with closeout of the surveillance test. The last step in the procedure section for the forward flow exercise test on check valve 93-64 was to complete the acceptance criteria. The ASSS verified the acceptance



criteria had been marked unsat by the SSS and initialed for completion of the step. The ASSS then completed closure of the procedure.

Following shift turnover, the oncoming SSS questioned the TS LCO which had been entered. Upon review of the notes on the acceptance criteria page, the oncoming SSS determined that the appropriate TS LCO required commencement of a shutdown within one hour and that the plant be in cold shutdown within ten hours due to an inoperable Core Spray system.

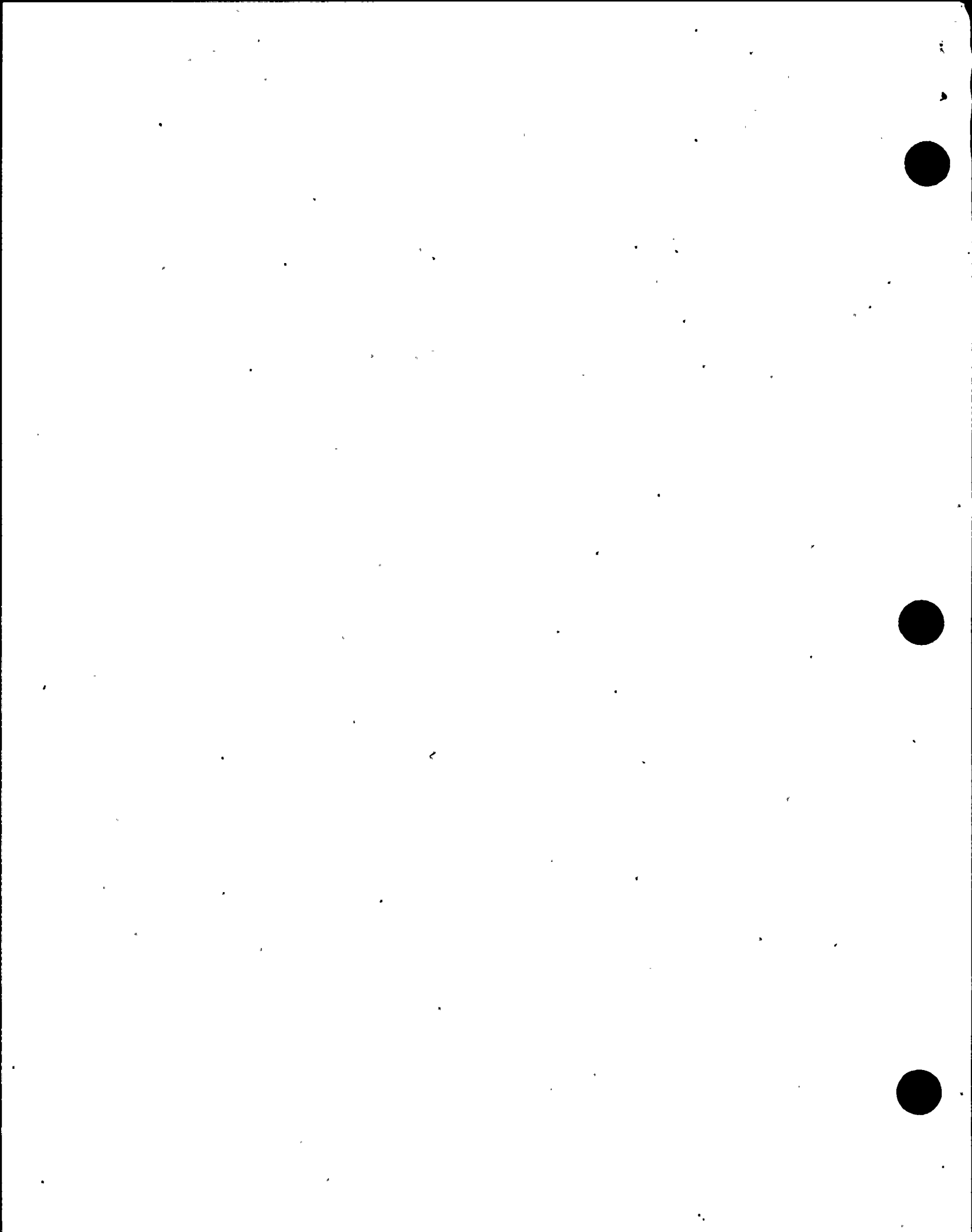
The procedure permitted exiting this LCO if compensatory actions were taken (closing the motor operated intertie valve and racking out the breaker, or closing one of the manual blocking valves). The oncoming SSS directed the compensatory measures to be taken which were completed prior to expiration of the ten hour cold shutdown requirement. Notifications were then made regarding the missed TS LCO.

The following day, the piping between check valve 93-64 and the motor operated intertie block valve was vented off. N1-ST-Q28 was performed satisfactorily on check valve 93-64. It was determined that the forward flow exercise test failed the previous day due to hydraulic lock on the check valve. If activation of the system had been required, the downstream valve would have opened and check valve 93-64 would have opened as required. As a result, it was determined that check valve 93-64 was never actually inoperable. In addition it has been determined that the procedure contained a note which inappropriately required entry into the TS 3.1.4.d action statement for forward flow testing failures. Entry into the TS 3.1.4.d action statement is appropriate for a reverse flow test failure, but is not required for a forward flow test failure.

The root cause for this deviation has been determined to be that the document use practices by the SSS and ASSS were inadequate in that N1-ST-Q28 was not followed correctly. The SSS focused on marking the appropriate box in the acceptance criteria, but did not read the notes on that page, and therefore, did not comply with the notes.

A contributor to this event is that N1-ST-Q28 was poorly written in that notes were placed on the acceptance criteria page but were not referenced in the acceptance criteria. Additionally, no mention was made in the plant impact statement, or precautions and limitations sections of the procedure regarding the significance of a failure of check valve 93-64 or 93-58. As discussed above, it has been determined that the guidance provided in the notes was inappropriate in that entry into the TS 3.1.4.d action statement is not required for a forward flow test failure.

In addition, other expected or required verifications were not performed since the SSS and ASSS did not evaluate the valve failure independently. The ASSS only verified that the appropriate acceptance criteria box was marked and similar to the SSS, did not recognize/read the notes on the acceptance criteria page.



## **II. CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED**

The following corrective actions have been taken:

1. The SSS and ASSS have received job performance counseling.
2. Performance Standdowns with all shift operations personnel were conducted by Operations Management to address this and other recent events associated with less than adequate performance. Key points of discussion and reinforcement included procedure adherence, error detection practices, and appropriate use of verification methodologies.
3. The ASSS involved developed a Lessons Learned Transmittal to communicate this deviation throughout the NMPC Nuclear Division.
4. N1-ST-Q28 was initially revised to include the TS LCO requirements into the plant impact and precaution and limitation sections of the procedure, and sign-offs were added for the notes on the acceptance criteria page shortly after the event. Subsequently, N1-ST-Q28 has been revised to not require entry into the TS 3.1.4.d action statement for forward flow test failures of the subject valves.

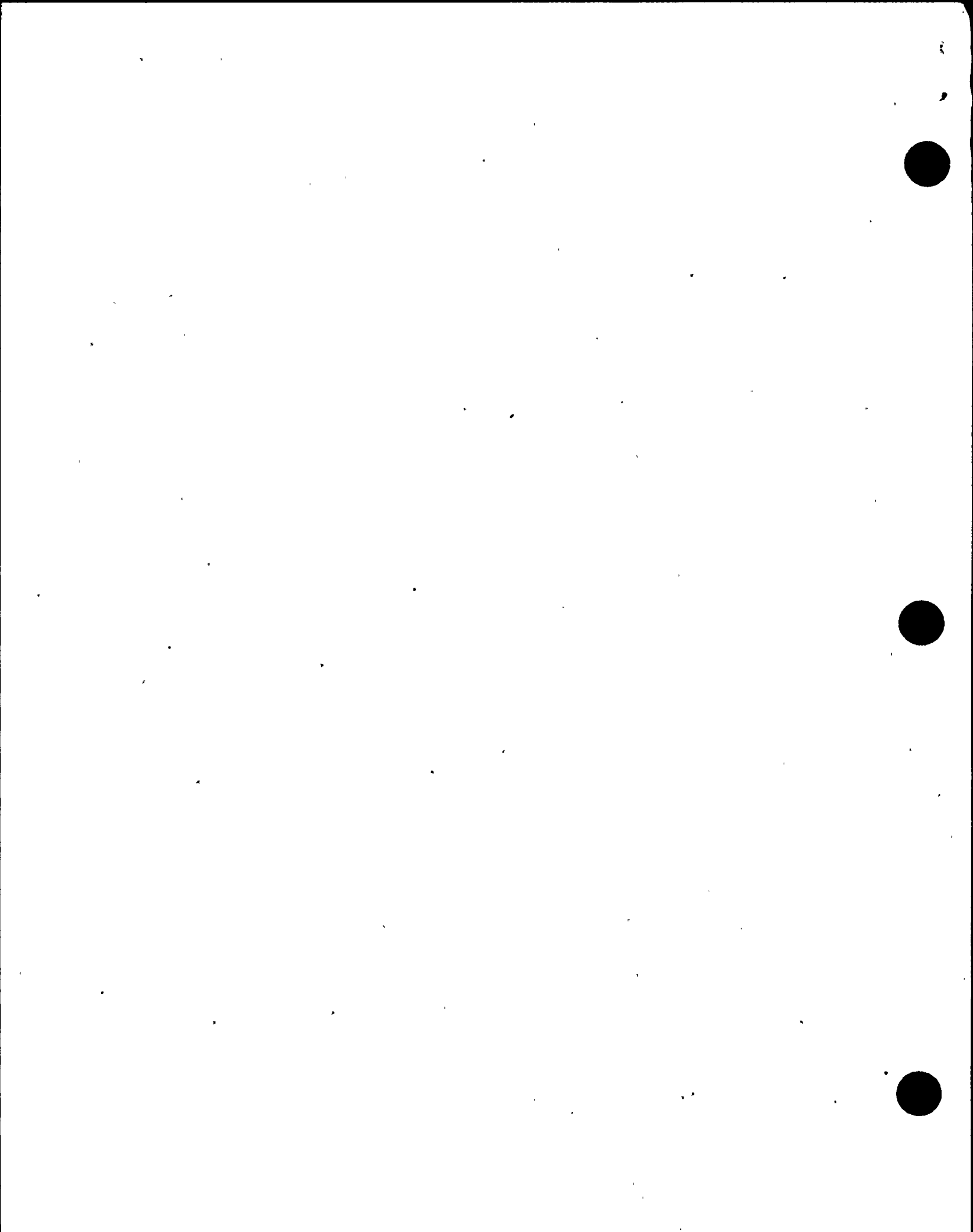
## **III. ACTIONS THAT WILL BE TAKEN TO PREVENT RECURRENCE**

The following preventive actions have or will be taken:

1. Operations Training has incorporated the unique requirements of the Containment Spray Raw Water Intertie Check Valves into the Containment Spray System lesson plan.
2. A review of all surveillance test procedures for similar notes was conducted and identified three other tests with similar notes. Shift management has been notified of this condition. Those procedures will be revised by August 29, 1998.
3. Operations Management has instituted a Shift Mentoring Program with a primary focus on improvement of operator performance through improved work practices, including clarification of roles and responsibility and effective teamwork between crew members.

## **IV. DATE OF FULL COMPLIANCE**

Full compliance was achieved on April 22, 1998, when the oncoming evening shift took the required procedural actions.





**B. VIOLATION 50-410/98-05-06**

Unit 2 TS, Section 3/4.3.7.3, requires that the meteorological monitoring instrumentation channels be demonstrated operable by the performance of a channel check and channel calibration. Section 1.4 defines a channel calibration as the adjustment of the channel output so that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The channel calibration is to encompass the entire channel, including the sensor and alarm and/or trip functions.

Contrary to the above, prior to May 22, 1998, NMPC did not perform the channel calibration of the wind speed channel according to the channel calibration definition; in that, the wind speed sensor was not included in the channel calibration.

**I. THE REASON FOR THE VIOLATION**

Nine Mile Point Unit 2 (NMP2) Technical Specification Surveillance Requirement (TS SR) 4.3.7.3 requires a Channel Calibration of the wind speed sensor on six-month intervals. A Channel Calibration requires calibration from the sensor to the alarm and/or trip functions. The meteorological tower provides indication to the Nine Mile Point Unit 1 (NMP1), NMP2 and James A. Fitzpatrick (JAF) control rooms, and to the meteorological computer. Between July 1982 and February 1983, the wind speed monitoring system, including the wind speed sensor, was modified. When the wind speed sensor was modified, the surveillance procedure was inappropriately revised by not including calibration of the entire channel.

The wind speed sensors were replaced in 1982 with a calibrated cup design. Prior to 1983, calibration of the sensor was performed using a synchronous motor to simulate a constant wind velocity to allow calibration of the recorders and computer point. The use of the synchronous motor met the Channel Calibration requirement. The sensor was adjustable, therefore, any inaccuracy could be corrected by adjustment. The use of the motor also provided for overlap testing of the signal cables.

After replacing the sensors in 1982, a test procedure revision was issued in January 1983. At that time, use of the synchronous motor was removed from the procedure. The revised surveillance procedure required inspection of the wind sensors for starting torque (threshold), level mounting, cup deterioration/deformation, bent arms, and any visual damage to the sensor assembly. Portions of the sensor that were unacceptable were replaced. However, at no time were the sensors calibrated for a given wind speed. The wind speed sensors are supplied with a calibration report at the time of purchase. Calibration of the meteorological recorders and computer points was accomplished in the procedure using a signal generated by a test card installed in the test panel. This test panel is located at the base of the meteorological tower, therefore, the signal cables from the sensors to the base of the tower were not tested as described above.



No documentation or explanation was found to justify changing the calibration methodology. It is believed that the use of the synchronous motor was removed because the new sensors were not adjustable, and that inspection of the physical condition and starting torque were sufficient to meet vendor recommended maintenance requirements. In addition, conversation with a vendor representative indicated that a synchronous motor was not available in the 1980's for testing the sensors. Therefore, starting torque and physical condition of the cup assembly was considered to be a sufficient test for the wind speed sensors. Thus, daily systems checks and the semi-annual check of the starting torque were considered adequate to meet the TS SR.

In 1986 when the NMP2 low power license was received, the NMP2 TS became effective. Accordingly, in May 1986, the meteorological procedures were revised to address NMP2 license requirements. Based on accounts from personnel involved in the calibrations in 1986, the question was raised regarding calibration of the sensors. A decision was made that the sensors were a "go/no go" type device and that the accuracy was sufficient, provided the sensors were inspected for physical integrity and bearing condition (starting torque).

Based upon the preceding, the cause of this event is a misinterpretation of the requirements to calibrate the entire channel. When the sensors were changed, it is postulated that personnel at the time did not consider Channel Calibration to include the sensors, since the new sensors were not adjustable.

## **II. CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED**

Procedures have been revised to include exchanging the wind speed sensors with calibrated sensors and the use of a synchronous motor to provide the proper channel functional testing and overlap. During the week of June 30, 1998, the wind speed monitoring system was successfully tested per the revised procedure.

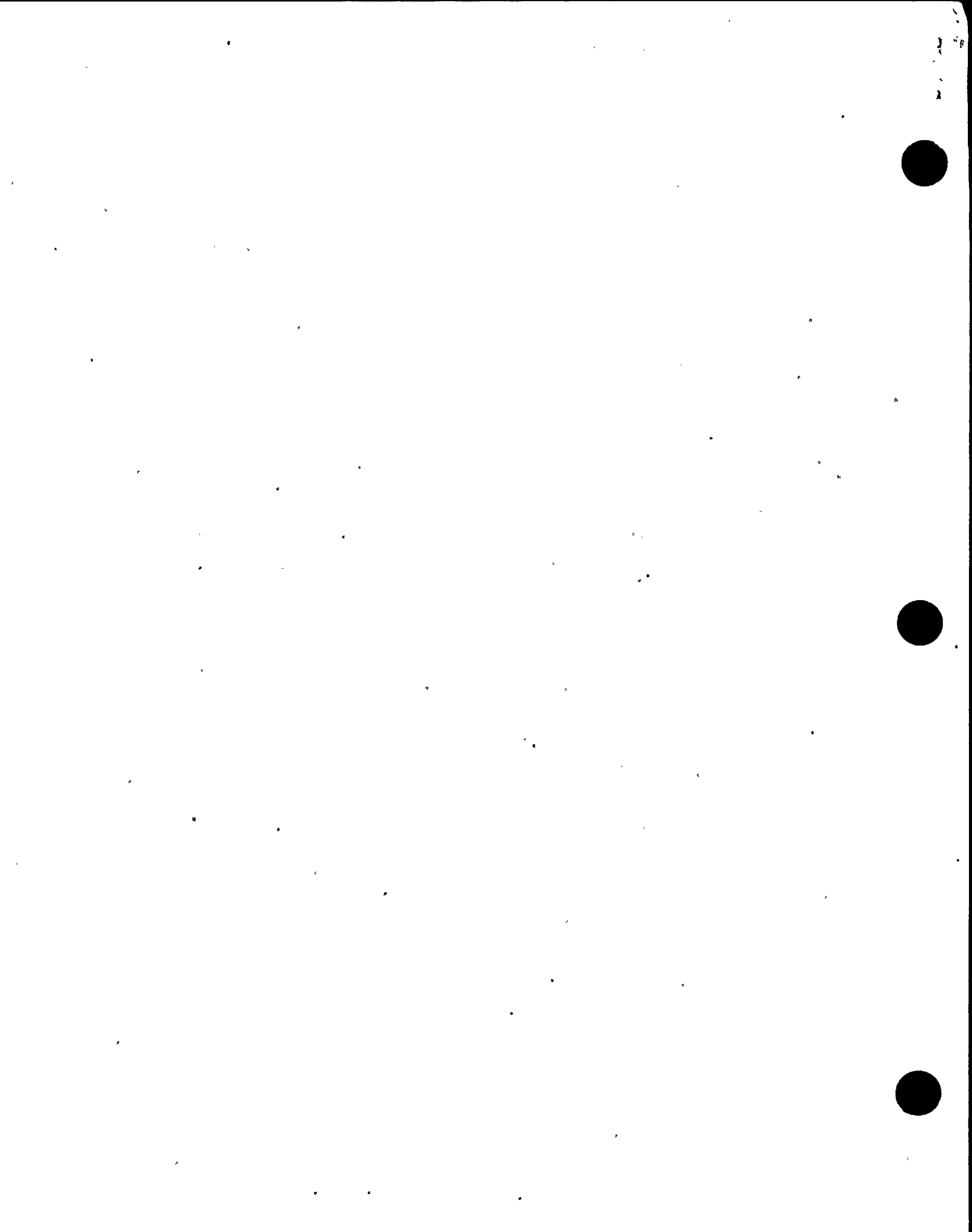
## **III. ACTIONS THAT WILL BE TAKEN TO PREVENT RECURRENCE**

The following actions have or will be taken:

1. Other meteorological procedures required by TS have been reviewed. No similar deficiencies were identified.
2. This event has been communicated to groups responsible for TS surveillances at both NMP1 and NMP2.

## **IV. DATE OF FULL COMPLIANCE**

Full compliance was achieved during the week of June 30, 1998 when the wind speed monitoring system was successfully tested per the revised procedure.



# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410  
AUTH.NAME AUTHOR AFFILIATION  
CONWAY, J.T. Niagara Mohawk Power Corp.  
RECIP.NAME RECIPIENT AFFILIATION  
Records Management Branch (Document Control Desk)

SUBJECT: Responds to violations noted in insp repts 50-220/98-05 & 50-410/98-05. Corrective actions: personnel involved received job performance counseling & performance standdowns w/all shift operations personnel were conducted by operations mgt.

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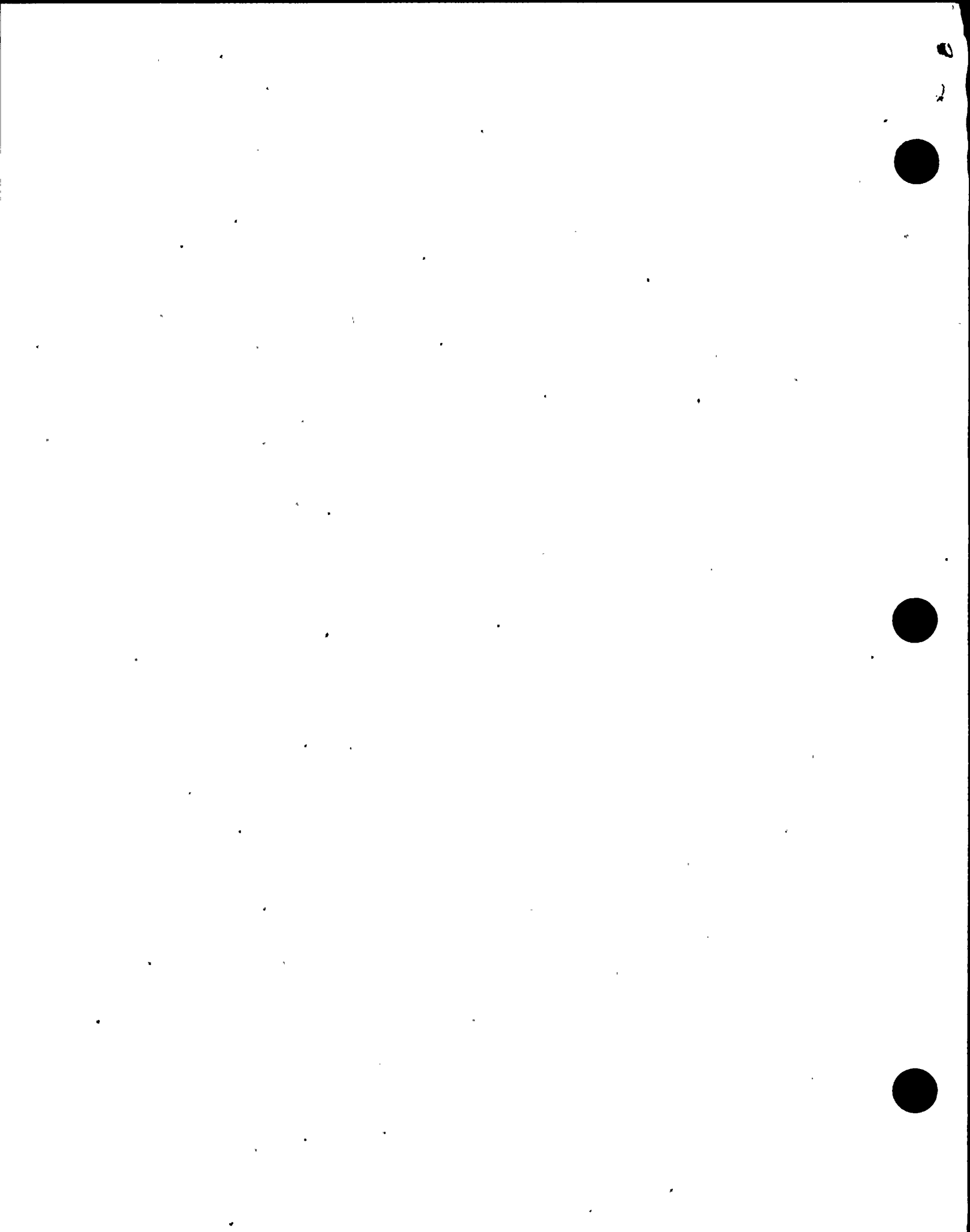
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# Niagara Mohawk



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President  
Nuclear Generation

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NMP1L 1349

U. S. Nuclear Regulatory Commission  
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RE: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Nine Mile Point Unit 2  
Docket No. 50-410  
NPF-69

**Subject:** *Reply to Notice of Violation as Contained in NRC Inspection Report 50-220/98-05 and 50-410/98-05*

Gentlemen:

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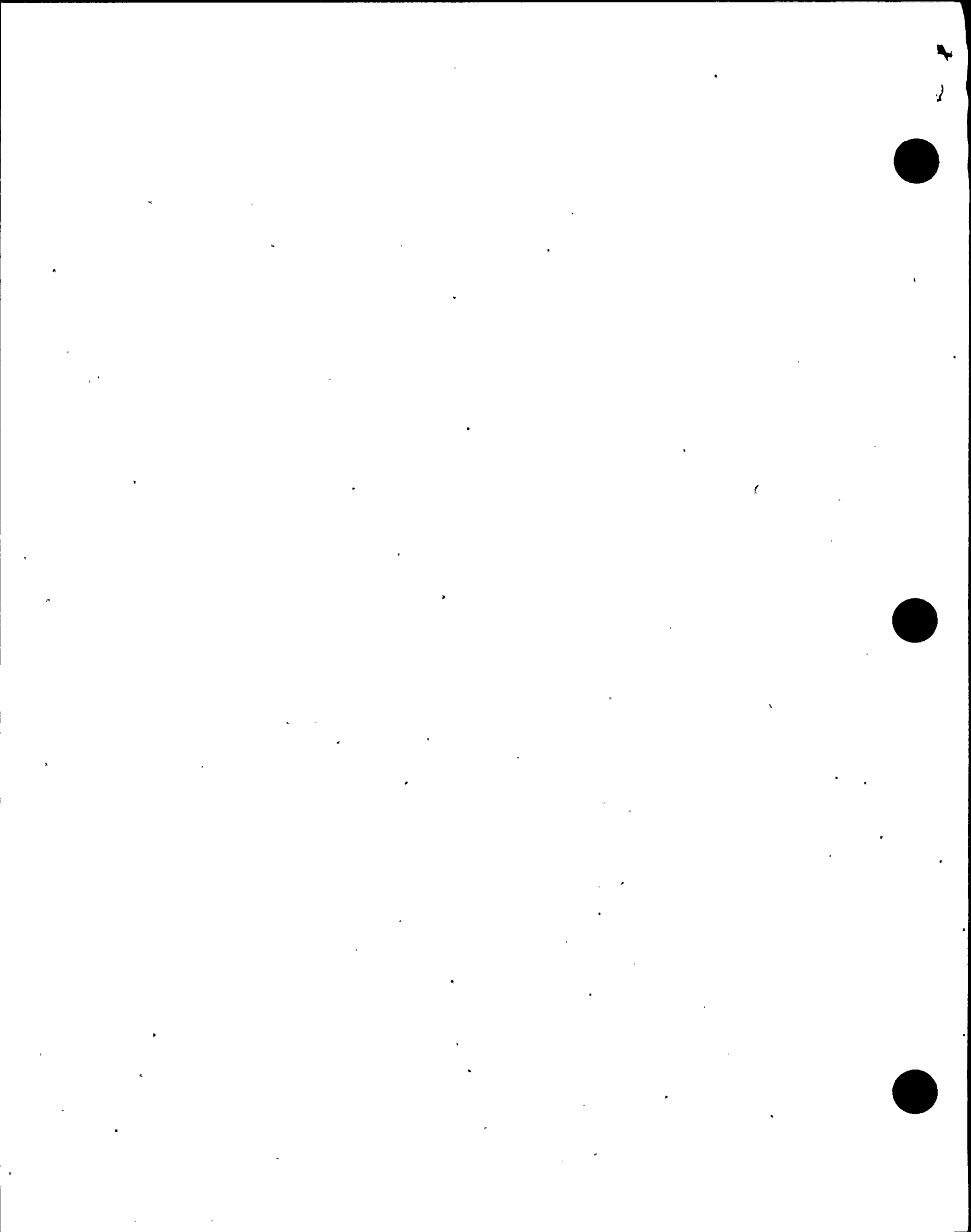
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PDR ADOCK 05000220  
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JHM/GJG/sc  
Attachment

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Mr. D. S. Hood, Senior Project Manager, NRR  
Records Management

IED 11/

0065





## ATTACHMENT

NIAGARA MOHAWK POWER CORPORATION  
NINE MILE POINT UNIT 1/2  
DOCKET NO. 50-220/ 50-410  
DPR-63/NPF-69

**"REPLY TO NOTICE OF VIOLATION," AS CONTAINED IN  
INSPECTION REPORT 50-220/98-05 AND 50-410/98-05**

**A. VIOLATION 50-220/98-05-01**

Nine Mile Point Unit 1 (Unit 1) Technical Specifications (TS), Section 6.8.1, requires procedures be implemented as written. With one loop of the core spray system inoperable, TS 3.1.4.d requires a plant shutdown initiated within one hour and the plant placed in the Cold Shutdown condition within the next ten hours.

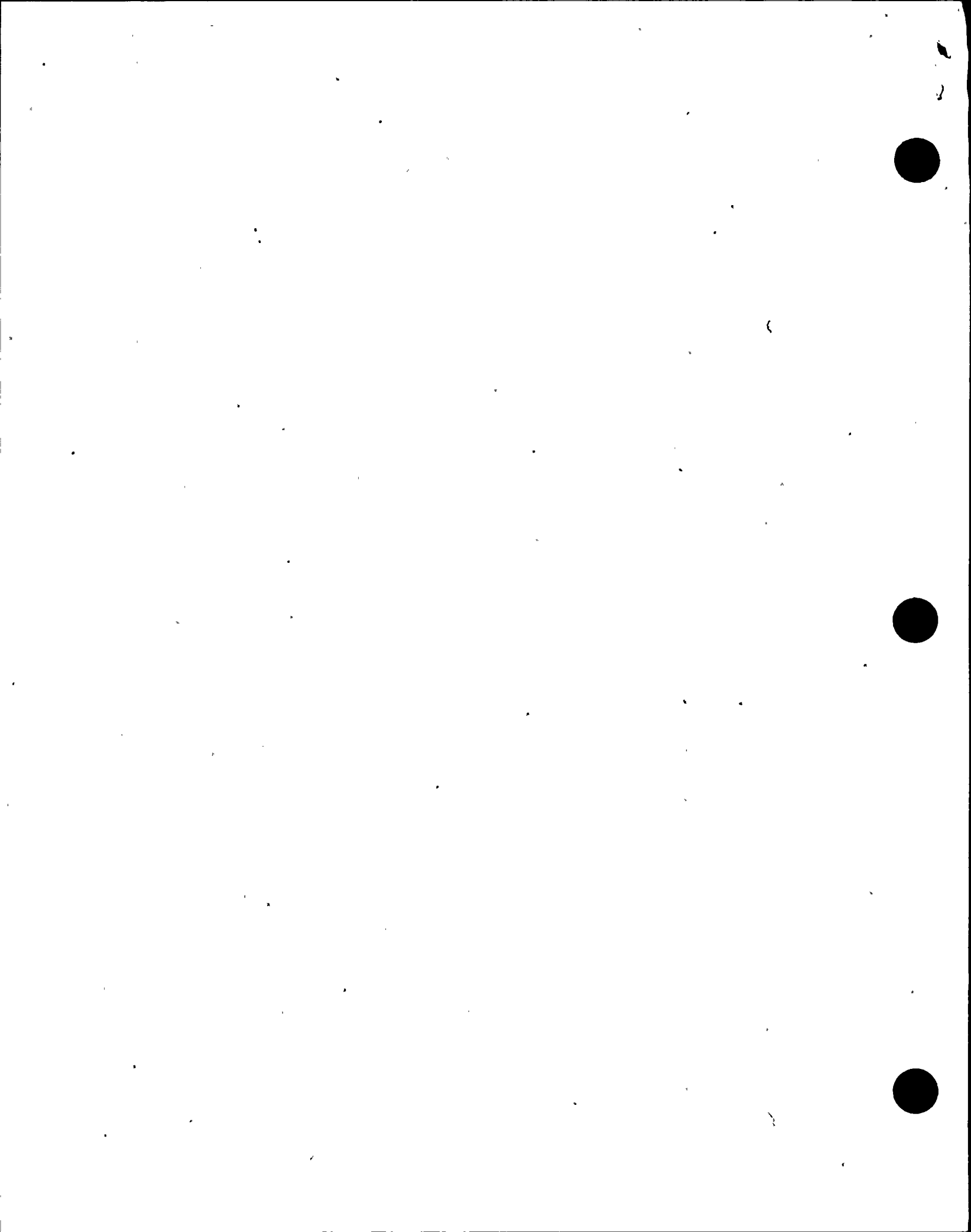
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Contrary to the above, on April 22, 1998, check valve 93-64 failed to open when the required torque was applied. However, core spray system loop #12 was not declared inoperable and TS 3.1.4.d was not entered.

**I. THE REASON FOR THE VIOLATION**

On April 22, 1998, operators at Nine Mile Point Unit 1 (NMP1) were performing N1-ST-Q28, Containment Spray Raw Water Intertie Check Valve Test. The purpose of the test is to assure forward flow and reverse flow prevention capability of the four raw water intertie check valves between the containment spray raw water system and the core spray system. The first three valves tested met their acceptance criteria. When the operators conducting the test attempted to forward flow exercise check valve 93-64, the valve would not move with the specified torque applied. The operator notified the Station Shift Supervisor (SSS) of the failure and the test was stopped. The SSS reviewed the acceptance criteria page of the test procedure and marked the acceptance criteria unsat. The SSS and Assistant Station Shift Supervisor (ASSS) discussed the test failure, initiated a Deviation/Event Report (DER), reviewed the Technical Specifications (TS), entered a fifteen day Limiting Condition for Operation (LCO) for an inoperable loop of Containment Spray, and notified the Plant Manager.

Approximately two hours after the test failure, the ASSS continued with closeout of the surveillance test. The last step in the procedure section for the forward flow exercise test on check valve 93-64 was to complete the acceptance criteria. The ASSS verified the acceptance



criteria had been marked unsat by the SSS and initialed for completion of the step. The ASSS then completed closure of the procedure.

Following shift turnover, the oncoming SSS questioned the TS LCO which had been entered. Upon review of the notes on the acceptance criteria page, the oncoming SSS determined that the appropriate TS LCO required commencement of a shutdown within one hour and that the plant be in cold shutdown within ten hours due to an inoperable Core Spray system.

The procedure permitted exiting this LCO if compensatory actions were taken (closing the motor operated intertie valve and racking out the breaker, or closing one of the manual blocking valves). The oncoming SSS directed the compensatory measures to be taken which were completed prior to expiration of the ten hour cold shutdown requirement. Notifications were then made regarding the missed TS LCO.

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A contributor to this event is that N1-ST-Q28 was poorly written in that notes were placed on the acceptance criteria page but were not referenced in the acceptance criteria. Additionally, no mention was made in the plant impact statement, or precautions and limitations sections of the procedure regarding the significance of a failure of check valve 93-64 or 93-58. As discussed above, it has been determined that the guidance provided in the notes was inappropriate in that entry into the TS 3.1.4.d action statement is not required for a forward flow test failure.

In addition, other expected or required verifications were not performed since the SSS and ASSS did not evaluate the valve failure independently. The ASSS only verified that the appropriate acceptance criteria box was marked and similar to the SSS, did not recognize/read the notes on the acceptance criteria page.



## **II. CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED**

The following corrective actions have been taken:

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2. Performance Standdowns with all shift operations personnel were conducted by Operations Management to address this and other recent events associated with less than adequate performance. Key points of discussion and reinforcement included procedure adherence, error detection practices, and appropriate use of verification methodologies.
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4. N1-ST-Q28 was initially revised to include the TS LCO requirements into the plant impact and precaution and limitation sections of the procedure, and sign-offs were added for the notes on the acceptance criteria page shortly after the event. Subsequently, N1-ST-Q28 has been revised to not require entry into the TS 3.1.4.d action statement for forward flow test failures of the subject valves.

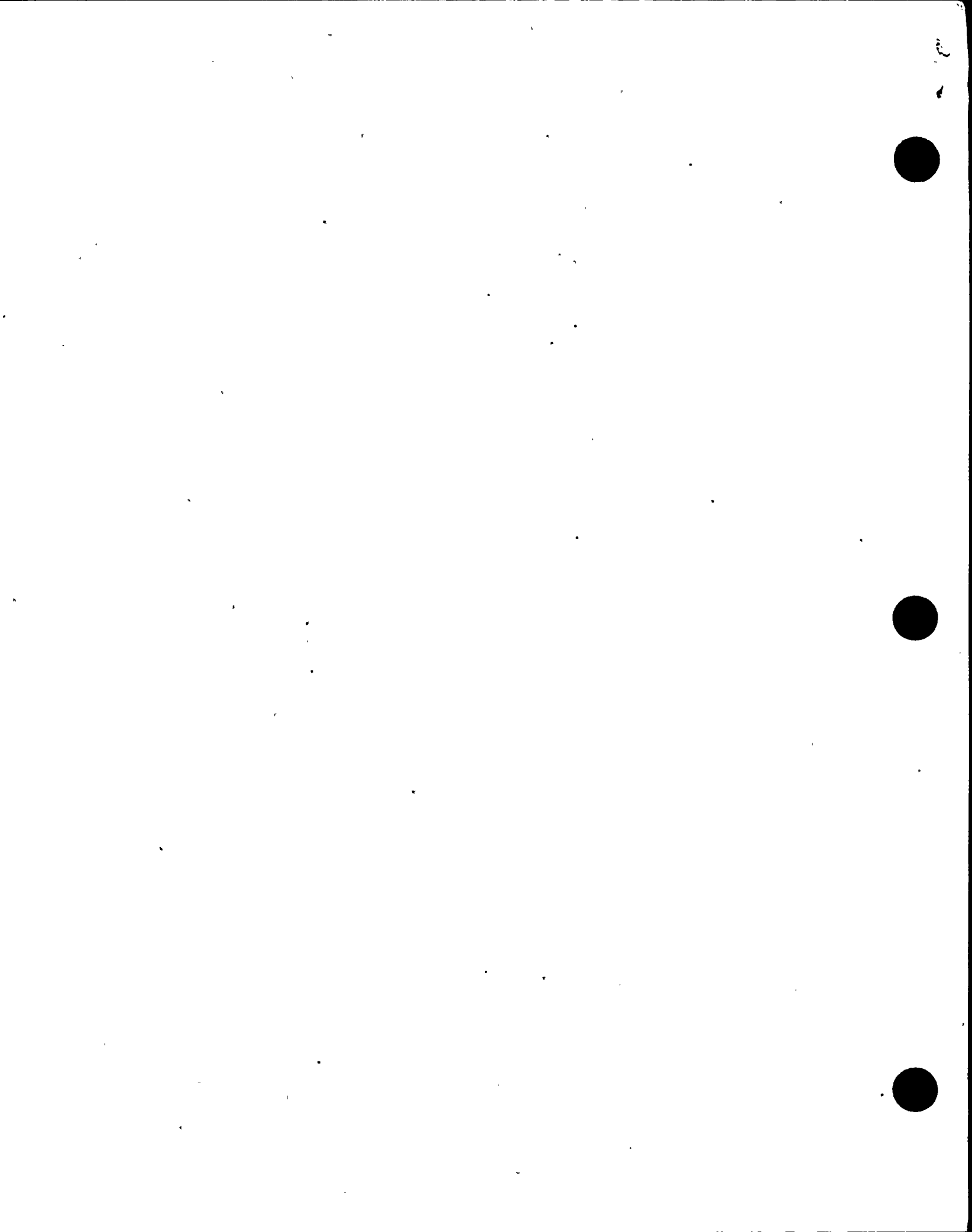
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## **IV. DATE OF FULL COMPLIANCE**

Full compliance was achieved on April 22, 1998, when the oncoming evening shift took the required procedural actions.



**B. VIOLATION 50-410/98-05-06**

Unit 2 TS, Section 3/4.3.7.3, requires that the meteorological monitoring instrumentation channels be demonstrated operable by the performance of a channel check and channel calibration. Section 1.4 defines a channel calibration as the adjustment of the channel output so that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The channel calibration is to encompass the entire channel, including the sensor and alarm and/or trip functions.

Contrary to the above, prior to May 22, 1998, NMPC did not perform the channel calibration of the wind speed channel according to the channel calibration definition; in that, the wind speed sensor was not included in the channel calibration.

**I. THE REASON FOR THE VIOLATION**

Nine Mile Point Unit 2 (NMP2) Technical Specification Surveillance Requirement (TS SR) 4.3.7.3 requires a Channel Calibration of the wind speed sensor on six-month intervals. A Channel Calibration requires calibration from the sensor to the alarm and/or trip functions. The meteorological tower provides indication to the Nine Mile Point Unit 1 (NMP1), NMP2 and James A. Fitzpatrick (JAF) control rooms, and to the meteorological computer. Between July 1982 and February 1983, the wind speed monitoring system, including the wind speed sensor, was modified. When the wind speed sensor was modified, the surveillance procedure was inappropriately revised by not including calibration of the entire channel.

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## **III. ACTIONS THAT WILL BE TAKEN TO PREVENT RECURRENCE**

The following actions have or will be taken:

1. Other meteorological procedures required by TS have been reviewed. No similar deficiencies were identified.
2. This event has been communicated to groups responsible for TS surveillances at both NMP1 and NMP2.

## **IV. DATE OF FULL COMPLIANCE**

Full compliance was achieved during the week of June 30, 1998 when the wind speed monitoring system was successfully tested per the revised procedure.

