

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

Report No. 50-220/80-17

Docket No. 50-220

License No. DPR-63 Priority -- Category B

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Station, Unit 1

Investigation At: Scriba, New York

Investigation Conducted: October 20 thru November 1 and 18, 1980

Investigators: R. K. Christopher 11-21-80
R. K. Christopher, Investigation Specialist date

H. B. Kister 11/21/80
H. B. Kister, Chief, Reactor Projects Section #4 date

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J. R. White, Radiation Specialist date

Approved by: E. J. Brunner 11/21/80
E. J. Brunner, Chief, Reactor Operations and Nuclear Support Branch date

Investigation Summary:

Investigation on October 20 thru November 1 and November 18, 1980 (Investigation Report No. 50-220/80-17)

The investigation determined on what basis the licensee concluded that the Interim Methods Requirements of Item 2.1.8.B (Increased Range of Radiation Monitors) and the Procedural Requirements of Item 2.1.8.A (Post Accident Sampling) were completed in compliance with the requirements and in accordance with the licensee commitments of NUREG 0578.

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SUMMARY

On September 13, 1979 a letter from the NRC Office of Nuclear Reactor Regulation defining a set of "short-term" requirements (NUREG 0578) as a result of the TMI Accident was issued to the licensee requiring a series of modifications at the licensee's Nine Mile Point, Unit 1 Nuclear Power Station. A subsequent clarification to that letter was issued to the licensee on October 30, 1979. In a commitment letter dated December 31, 1979, responding to these requirements, the licensee outlined the status of the outstanding items. In particular, Interim Methods for Requirement 2.1.8.B (Increased Range of Radiation Monitors) was stated by the licensee to have been completed as of January 1, 1980 and provided design details regarding that implementation. Completion of the item was again confirmed in a licensee letter on January 22, 1980 in response to a Commission Order to Show Cause dated January 2, 1980.

Subsequently, based on discussions with the licensee at an evaluation meeting on March 12, 1980, NRR staff personnel concluded that the licensee had satisfactorily met the category "A" requirements for all the items including 2.1.8.B.

During a Health Physics Appraisal Inspection conducted at the Nine Mile Point Station during October 3-10, 1980 it was determined that NUREG 0578, item 2.1.8.B had not been fully complied with (Inspection Report No. 50-220/80-11 pertains). The Health Physics Appraisal indicated, that contrary to the statements contained in the December 31, 1979 status letter and the response to the Order to Show Cause, that certain stated actions had not been completed. Specifically, a portable gamma survey instrument had not been installed, a lead shield cave was not constructed, an instrument calibration that would permit an accurate quantification of release rates and procedures were not developed that identified the method for quantifying noble gas releases.

Subsequent investigation, including interviews of involved management personnel determined that the basis by which licensee senior management affirmed completion of the requirement of item 2.1.8.B was based on the oral affirmation of the site chemistry and radiation supervisor who had direct responsibility for interpreting the requirements and insuring that 2.1.8.B was implemented in compliance with the requirements. No independent management overview or evaluation of the adequacy of the actions taken by the responsible supervisor was noted. One plant management individual stated he was aware that certain of the above 2.1.8.B items were not completed at the time he orally concurred with the December 31, 1979 status letter and the response to the Order to Show Cause. However, he stated it was his opinion that these items did not affect the status of compliance with item 2.1.8.B. No other management personnel appeared to be aware that these items were not completed and that the referenced documents were any less than accurate. The supervisor responsible was interviewed and in a sworn statement he stated his position as to his interpretation of the requirements and detailed what actions he had taken that led him to state why he felt he had completed the interim 2.1.8.B requirements as required. He also confirmed that he had advised the plant management that item 2.1.8.B was completed in compliance with the requirements.

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In response to an Immediate Action Letter, the licensee has instituted immediate corrective actions of those items in 2.1.8.B. As a result of the findings with regard to this item, the remaining NUREG 0578 category "A" items were made the subject of a special inspection (Inspection Report No. 50-220/80-18 pertains) to determine their completion status.

The inspection determined that the subject items had been essentially completed as stated. However, with respect to item 2.1.8.A (Post Accident Sampling) the inspector noted that no formal, approved procedures for obtaining a reactor water sample or containment atmosphere sample existed prior to March 1980. This appeared contrary to the licensee's January 22, 1980 response to the Order to Show Cause in which the licensee stated that procedures were implemented on December 31, 1979. The responsible supervisor for this item is the same individual responsible for item 2.1.8.B. When interviewed regarding item 2.1.8.A, he explained and presented previous existing plant procedures that were rewritten and implemented in March 1980. He maintained that the existing procedures at that time were adequate to take the samples and the March 1980 procedures were no more than a refinement of the existing procedures.

The inspection review also disclosed several additional items that require further clarification with regard to their acceptability. These matters are carried in Inspection Report No. 50-220/80-18.

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PURPOSE OF INVESTIGATION

The purpose of this investigation was to determine on what basis the licensee concluded that the Interim Method Requirements of item 2.1.8.B (Increased Range of Radiation Monitors) and the Procedural Requirements of Item 2.1.8.A (Post Accident Sampling) were completed in compliance with NUREG 0578 requirements and its subsequent clarification letters and to determine if there was any intent on the part of the licensee to provide false information regarding the implementation status of the interim requirements.

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BACKGROUND

On September 13, 1979, a letter was issued to each power reactor licensee from the Office of Nuclear Reactor Regulation which defined a set of "short-term" requirements resulting from the TMI Accident. On October 30, 1979, a second letter from the NRR was distributed providing additional clarification of the staff requirements to be completed by January 1, 1980 and noting that the intent of the requirements had not been changed throughout the process.

On December 31, 1979, the licensee issued a status letter outlining the details and status of outstanding commitments (including item 2.1.8.B) to the requirements of the NRR October 30, 1979 letter and NUREG 0578. The letter stated that the interim requirements for this item were to be completed as of January 1, 1980.

On January 2, 1980, the Commission issued an Order to Show Cause to the licensee requiring that all category "A" items except those with justified equipment delivery problems be completed no later than January 31, 1980. This Order to Show Cause did not reference the licensee's letter of December 31, 1979. On January 22, 1980, the licensee's response to the Order to Show Cause was forwarded to the NRC. This response reflected that interim requirements for 2.1.8.B (High Range Radiation Monitors, Effluents-Procedures) were implemented on December 31, 1979. This response did not reference the licensee's December 31, 1979 status letter.

On March 12, 1980, the NRR staff conducted an on site evaluation of the licensee's compliance with category "A" requirements of NUREG 0578. In a written evaluation on March 21, 1980, the NRR staff concluded, "that based on the licensee's submitted documentation and discussions held during the March 12, 1980 evaluation meeting, that the licensee had satisfactorily met all the category "A" requirements."

During a Health Physics Appraisal Inspection performed at the Nine Mile Point, Unit 1 Power Station, from October 3-10, 1980, it was determined that item 2.1.8.B of NUREG 0578 had not been fully complied with (Inspection Report No. 50-220/80-11 pertains).

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DETAILS

1. RECOMMENDATION OF NUREG 0578 ITEM 2.1.8.B, INCREASED RANGE OF RADIATION MONITORS

"Provide high range radiation monitors for noble gases in plant effluent lines and a high range monitor in the containment. Provide instrumentation for monitoring effluent release lines capable of measuring and identifying radioiodine in particulate radioactive effluents under accident conditions.

2. INTERIM REQUIREMENTS OF 10/30/79 LETTER FROM NRR TO ALL OPERATING NUCLEAR PLANTS

The January 1, 1980 requirements were specifically added by the Commission and were not included in NUREG 0578. The purpose of the interim January 1, 1980 requirement was to insure that licensees have methods of quantifying radioactivity releases should existing effluent instrumentation go off-scale.

3. NRR CLARIFICATION OF REQUIREMENTS FOR 2.1.8.B TO BE IMPLEMENTED BY JANUARY 1, 1980

The October 30, 1979 clarification from NRR states until final implementation on January 1, 1981, all operating reactors must provide by January 1, 1980, an interim method to quantify high level releases which meets the requirements of Table 2.1.8.B(1) (Exhibit (1) pertains). Methods are to be developed to quantify noble gas release rates up to 10,000 curies/second including developing special procedures for removal and analysis of radioactive particulate sampling medium.

The clarification letter states the following:

- A. To meet the intent of this requirement the use of a portable high range survey instrument set in a shielded collimator is an acceptable method.
- B. A method is to be developed with sufficient accuracy to quantify the iodine releases in the presence of high background radiation from noble gases collected on charcoal filters. (This item is not applicable).
- C. The licensee shall provide the following information on his methods to quantify gaseous releases:
 1. Instrumentation to be used, including range or sensitivity, energy dependence and calibration frequency and technique.
 2. Describe monitoring locations, including methods to insure representative measurements and background correction.
 3. Describe methods employed to facilitate access to radiation readings. Control room readout preferred but oral communication with control room is an acceptable method provided that a reading can be obtained every 15 minutes during an accident.

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4. Describe the source of power to be used.
5. Develop procedures for conducting all aspects of the measurement/analysis including:
 - (a) Minimize occupational exposures.
 - (b) Calculations for converting instrument readings to release rates based on air flow and nuclide spectrum as a function of time after shutdown.
 - (c) Dissemination of information.
 - (d) Procedures for calibration.

In addition, Table 2.1.8.B(1), requires that, licensees are to implement procedures for estimating noble gas and radioiodine release rates if the existing effluent instrumentation goes off-scale.

Examples of major elements of a highly radioactive effluent release special procedures (noble gas).

Pre-selected location to measure radiation from the exhaust air, e.g. exhaust duct or sample line.

Provide shielding to minimize background interference.

Use of an installed monitor (preferable) or dedicated portable monitor (acceptable) to measure the radiation.

Pre-determined calculational method to convert the radiation level to radioactive effluent release rate.

4. INITIAL LICENSEE RESPONSE TO THE REQUIREMENTS OF NUREG 0578, ITEM 2.1.8.B

On December 31, 1979, the licensee forwarded to the Office of Nuclear Reactor Regulation a status letter outlining the design details and the status of outstanding commitments (including item 2.1.8.B) to the recommendations of NUREG 0578 for the Nine Mile Point, Unit 1 Nuclear Station. This letter, and its attachments were sent under the signature of Mr. Donald Dise, Vice President of Engineering. The letter states that with respect to item 2.1.8.B, the following provisional steps will be taken as of January 1, 1980:

- A. Quantification of higher level noble gas releases will be provided by means of a portable gamma survey instrument installed in such a manner that it will monitor a portion of the sample line to the existing stack monitors and that background radiation will be shielded by means of a lead cave built around the detector.

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- B. That the portable instrument has an upper limit range of at least 1,000 R/hr and that it will be calibrated with a Xenon-133 source such that the reading could be related from R/hr to microcuries/second stack release rate. With respect to this calibration the licensee stated that until the Xenon-133 calibration can be accomplished the existing stack monitor calibration dependence data will be used. No further schedule or clarification was provided in this letter regarding the xenon calibration.
- C. That readings on the interim monitors will be taken locally and results orally communicated to the control room by means of a head set every 15 minutes.
- D. That the interim monitors will be powered from a DC battery source capable of 8 consecutive days of operation.

The licensee's commitment letter and its attachments pertaining to item 2.1.8.B are appended as Exhibit (2) to this report.

5. ISSUANCE OF NRC ORDER TO SHOW CAUSE TO NINE MILE POINT NUCLEAR GENERATING STATION

On January 2, 1980, the Nuclear Regulatory Commission issued an Order to Show Cause to the licensee requiring implementation by January 31, 1980, of all category "A" requirements of NUREG 0578 regarding the short-term lessons learned as supplemented by the Commission letters of September 13, 1979 and October 30, 1979. The only exception to the Order were those instances in which the licensee adequately demonstrated that the delay was based on equipment availability. The Order to Show Cause is appended as Exhibit (3) to this report.

Investigator's Note:

It should be noted that the transmittal letter to the Commission Order to Show Cause refers to licensee status letters of October 18, November 22 and December 19 of 1979 but makes no reference or evaluation of the December 31, 1979 licensee status letter either in the transmittal letter or the Order to Show Cause.

6. LICENSEE RESPONSE TO COMMISSION ORDER TO SHOW CAUSE OF JANUARY 2, 1980

On January 22, 1980, the licensee responded to the Order to Show Cause regarding the requirements of NUREG 0578. In a sworn affidavit signed by Mr. James Bartlett, Executive Vice President, Niagara Mohawk Power Corporation, the licensee affirmed that all but one of the category "A" short-term requirements would be complied with by January 31, 1980. Specifically, this included affirmation of the implementation of Interim Methods for item 2.1.8.B (High Range Radiation Monitors, Effluents-Procedures) as of December 31, 1979. It should be noted that this response to the Order to Show Cause does not reference or make mention of the licensee's status and commitment letter of December 31, 1979. The licensee's response to the Order to Show Cause is appended as Exhibit (4) to this report.

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Investigator's Note:

The singular category "A" item (Direct Indicators of Safety and Relief Valve Position) that the licensee indicated would not be completed by January 31, 1980 is not relevant to this investigation report.

7. NRR STAFF EVALUATION OF LICENSEE'S COMPLIANCE WITH NUREG 0578 REQUIREMENT

By letters dated October 18, November 26, December 19, 20 and 31, 1979 and January 1980, the licensee submitted commitments and documentation of actions taken at the Nine Mile Point Power Station, Unit 1, to implement the requirements of NUREG 0578. Subsequent to the submittals, the NRR staff conducted a site visit in March 1980 to review the licensee's actions. The report of evaluation, dated March 21, 1980, stated, that based on the submitted documentation and discussions with the licensee on March 12, 1980, they concluded that the licensee had satisfactorily met all category "A" requirements.

With regard to item 2.1.8.B, the report states:

"The category "A" requirements are to have procedures quantifying effluent releases in case existing instrumentation would go off-scale (provisional fix). This included description of systems/methods employed, and description of procedures for conducting all aspects of the measurement/analysis for noble gases, radioiodine and particulate effluents."

"The existing in-line monitors are capable of detecting 50 curies/second and have readout and alarm capability in the main control room. Quantification of higher effluent releases is provided by a portable gamma survey instrument positioned at a predetermined location to monitor a portion of the effluent sample line."

The evaluation report states "This provisional fix has been installed and calibrated. Conversion factors have been calculated for detecting up to 10,000 curies/second of noble gas effluents released at the stack. Interim methods and appropriate procedures have been written, approved and implemented. Personnel training has been conducted for sampling, quantifying and analyzing effluent releases."

Further discussion of the licensee's position regarding their understanding of NRR's acceptance of their compliance is included in following interviews. The NRR's evaluation of item 2.1.8.B is appended as Exhibit (5).

8. RESULTS OF HEALTH PHYSICS APPRAISAL

During a Health Physics Appraisal (Inspection Report No. 50-220/80-11 pertains) conducted at the licensee's Nine Mile Point, Unit 1 Power Station from October 3-10, 1980, it was determined that NUREG 0578, item 2.1.8.B



category "A" interim requirements had not been fully satisfied and that, certain actions committed to be completed by January 1, 1980 by the licensee were not yet implemented (licensee status letter of December 31, 1979 pertains). Specifically:

- A. The licensee committed to use a portable high range survey instrument having an upper limit of at least 1000 R/hr which would be installed such that it would monitor a portion of the sample line. However, during the inspection a portable instrument was found not to have been installed. Additionally, though the instrument has an upper range of up to 1,000 R/hr, the licensee's facilities are unable to provide an instrument calibration beyond approximately 25 R/hr (Co-60), the upper most extent that would be required using the licensee's derived conversion factor of 0.5 $\mu\text{Ci/cc/mR/hr}$.
- B. The licensee committed to install a lead cave to provide sufficient accuracy in quantifying noble gas releases. No lead cave was installed but a lead brick with a locator hole was in place on the sampling line.
- C. A calibration of the High Range Survey Instrument (a teletector) with Xenon-133 was not performed, and no schedule to complete the calibration was identified.
- D. Methods employed to facilitate access to radiation readings were not provided. The licensee committed to using oral communication with the control room via use of a head set; however, no system was in place or planned to provide this capability.
- E. No procedures relating to the implementation of the subject requirements were developed and no training regarding this area was identified as being accomplished.

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INTERVIEWS OF LICENSEE PERSONNEL

A. Introduction

The interviews and attached sworn statements reflect the results of interviews of those personnel who were involved in formulating the basis for the licensee to conclude that Interim Methods for item 2.1.8.B was implemented in compliance with NUREG 0578.

B. Interview of Niagara Mohawk Executive Vice President

During interviews conducted on October 28, 1980 and November 1, 1980, Mr. James Bartlett confirmed that he had signed under oath the Niagara Mohawk response to the Commission Order to Show Cause of January 2, 1980. Bartlett said he signed the affidavit in the absence of Mr. Donald P. Dise, Vice President of Engineering, who normally would have signed the document relating to this area of concern.

In a sworn statement (Exhibit (6) pertains) Bartlett stated that while he was familiar with the general process of preparing such documents he did not participate in the preparation of specific data nor was he personally aware of the lower management basis for formulating the implementation schedule of any of the items including 2.1.8.B. Mr. Bartlett did not recall how he actually received the response document for signature but conjectured that it would normally come from the Engineering Department. He did not recall specifically reviewing this document or having any meetings or oral conversations with either corporate or site management relevant to this document. Bartlett said any questions he would have had regarding this document would have been orally directed to Mr. Tom Lempges, who at the time was General Superintendent at the Nine Mile Point Nuclear Station. Bartlett did not recall having any conversation with Lempges regarding this matter.

Bartlett concluded that his signature was affixed to the response to the Order to Show Cause based on his reliance on his management chain and it was his belief that the response reflected accurate information. He denied having any indication from lower management that the document was in any way less than accurate.

C. Interview of Niagara Mohawk Vice President of Nuclear Generation

Mr. Thomas E. Lempges was interviewed on October 28, 1980 and again on October 31, 1980. In these interviews, Lempges confirmed that at the time of the implementation of the NUREG 0578 requirement he was the General Superintendent at the Nine Mile Point Generating Station.

In a sworn statement, (attachment (7) pertains) Lempges stated that the response to the Order to Show Cause was based primarily on the licensee's December 31, 1979 submittal which outlined the status of outstanding commitments to the recommendations of NUREG 0578. Lempges said the actual response to the Order to Show Cause was drafted by Mr. Peter Francisco of the Corporate

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Engineering Branch but he was unaware of exactly how Francisco compiled the draft. He said the draft response would have gone to the site for review, comment and concurrence but this would have been done on an oral basis with no formal letter of concurrences or review.

Lempges recalled that Mr. Mel Silliman, the Site Technical Superintendent, was assigned the responsibility of tracking the status of the item. He stated that this assignment would not have included any physical review of the actual implementations by Mr. Silliman.

Lempges continued that based on oral input from the site staff and particularly Mel Silliman, Edward Leach, the Radiation Management Supervisor, and Thomas Perkins the Station Superintendent, he accepted item 2.1.8.B as being complete. He said other items were confirmed in the same oral manner although he had personal knowledge of the implementation status of some of the other items.

Lempges said that there was no formal transmittal or concurrence with the draft response but that he did agree with the stated status of the response letter based on oral input from the site personnel. He said that based on this information, Mr. Peter Francisco finalized the response letter with no significant change. Mr. Lempges denied having any knowledge that the response letter was in any form other than accurate with regard to the completed items.

With regard to the December 31, 1979 status letter, Lempges recalled reviewing it at the time and accepted the status of this commitment letter based on assurance by the site staff that they were in compliance with all of the items including 2.1.8.B.

D. Interview of Niagara Mohawk Corporate Engineer

Peter E. Francisco, Nuclear Engineer at the licensee's corporate headquarters, was interviewed on October 23, 1980 and again on October 31, 1980. In these interviews Francisco stated that after the Order to Show Cause was received, he was directed to prepare the response to the Order to Show Cause. He explained that after the TMI Accident he was assigned responsibility for review and documentation of all TMI related modifications. Francisco said his original preparation of the implementation schedule attached to the response (including item 2.1.8.B) was based primarily on his review of the licensee's December 31, 1979 status letter of the NUREG 0578 requirements which outlined the licensee's status of outstanding commitments, and on various undocumented phone conversations with Mel Silliman and Edward Leach at the site.

Francisco said his final implementation date in the response letter was based on general confirmation that the items, including 2.1.8.B, were complete and in compliance and that he did not get involved in the details of how the compliance was achieved.

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With regard to the licensee's December 31, 1979 submittal, he advised he also prepared this document based on input from various engineers and site personnel. He said item 2.1.8.B was a site responsibility. Francisco said he could not recall originally drafting the 2.1.8.B portion of the letter but stated its content would have to have been based on the input and concurrence of Edward Leach, who had responsibility for completing the requirement of 2.1.8.B. Francisco said he had no personal knowledge as to how or to what extent item 2.1.8.B was completed. He concluded that with respect to the December 31, 1979 letter, he received oral concurrence from the Site Superintendent, Thomas Perkins, as to acceptability.

In the interview of October 23, 1980, Francisco confirmed that he attended the NRR evaluation meeting of March 12, 1980. In this interview and in a subsequent sworn statement (Exhibit (8) pertains) Francisco said he did not recall any particular discussion regarding the status of item 2.1.8.B other than to note it was carried as an open item pending the installation of permanent monitors. He recalled the meeting being one of general discussion rather than specific questioning and stated that to his recollection the NRR staff did not actually go into the plant to examine any of the implemented items. Francisco also provided a copy of the licensee's record of the March 1980 meeting (Exhibit (9) pertains) and noted that this record was based on his personal notes taken at that time.

E. Interview of General Superintendent, Nine Mile Point Nuclear Station

Mr. Thomas Perkins was interviewed on October 22, 1980 and October 31, 1980. He advised that at the time of the implementation of the NUREG 0578 requirements he was the Unit 1 Site Superintendent and that he had since been promoted to General Superintendent. In these interviews, Perkins confirmed that the response to the Order to Show Cause was originally drafted by the Corporate Licensing Branch. He said preparation of this response was based on oral input by those individuals who were assigned to complete the various items. Perkins said, that through him, item 2.1.8.B was assigned to the Chemistry and Radiation Management Supervisor (Edward Leach) for completion. Perkins said confirmation of item 2.1.8.B and other items being completed in compliance with the requirements was reliant on the oral status reports of the responsible supervisors. He said there was no formal procedure for transmitting the implementing status of the items through the management chain. Perkins said the Technical Superintendent, Mel Silliman, was given the overall responsibility of keeping a record of completion of the items, but he advised that this task did not require Mr. Silliman to perform any actual verification of the various implementations.

Perkins said concurrence of the draft response at the site was based only on the oral input of the personnel assigned responsibility for each item. He said this did not require any explanation as to how compliance was achieved but only that they were in fact in compliance with the particular item.

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He said the majority of the response letter was based on the licensee's submittal of December 31, 1979 and that document was prepared at the Corporate Licensing Branch based on the same method of oral input from site personnel.

With respect to item 2.1.8.B, Perkins stated he was aware at the time of the December 31, 1979 submittal and the response to the Order to Show Cause, that the lead cave was not in place, however he said he placed no significance to this because he was aware that a lead brick with an instrument locator hole was installed on the sample line. Perkins said he was told by Edward Leach that the cave was not completed because some piping needed to be relocated before installation.

Perkins also said that while the Xenon-133 calibration was not completed, it was their intent to calibrate the instrument as stated when the source was acquired and a procedure was developed. He said that to the best of his knowledge no action was initiated at the time to purchase this source or to initiate compilation of the procedures.

During the interview of October 22, 1980 and confirmed in a subsequent sworn statement (Exhibit (10) pertains) Perkins confirmed that he attended the NRR evaluation meeting of March 12, 1980. He said he recalled general discussions of the various items with the NRR personnel with respect to item 2.1.8.B. He said he recalled a general discussion of the licensee's methodology with the NRR staff but he was unable to respond to specific questions regarding the discussion of the area. He said the majority of discussion with regard to 2.1.8.B would have been held with Ed Leach who had responsibility for the implementation of 2.1.8.B. He did state that his only recollection of discussions regarding the use of new or existing procedures was limited to general reference by Ed Leach during discussion of in-plant procedures.

F. Interview of Nine Mile Point, Unit 1, Technical Superintendent

Melvin A. Silliman, was interviewed on October 29, 1980 and on October 31, 1980. He confirmed that after the licensee received NUREG 0578 requirements he was asked to coordinate completion of the category "A" modifications. He said this did not require him to conduct any overview or physical examination of the various items including item 2.1.8.B. With respect to 2.1.8.B Silliman said he had no personal knowledge as to what specific actions were taken to implement this item. He said he relied only on the oral statements of Ed Leach that the plant was in compliance with this item.

Silliman said he did not have any final input into the preparation of the final response to the Order to Show Cause, nor did he recall receiving any telephone calls or questions regarding the status of any of the items including 2.1.8.B. He said the majority of the response was based on the

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December 31, 1979 licensee submittal on the status of the outstanding requirements. He said he had input into the preparation of this letter but it was again limited to conversations between himself, Peter Francisco and the responsible site supervisors who were completing the various items. He said if any detailed information was requested regarding item 2.1.8.B he would have referred them to Edward Leach since he had no knowledge personally of the details of the implementation. Silliman was not aware of any formal letters of transmittal or concurrence with regard to the status of these items.

During the interviews and reiterated in a sworn statement (Exhibit (11) pertains), Silliman confirmed that he attended the NRR evaluation meeting on March 12, 1980, but he was unable to respond to any specific questions regarding specific details of the meeting relating to item 2.1.8.B.

G. Interview of Nine Mile Point, Unit 1, Chemistry and Radiation Supervisor

Edward Leach was interviewed on October 29, 1980 at the Nine Mile Point Power Station. Leach confirmed that he was assigned responsibility for implementation of item 2.1.8.B and that he did not delegate that responsibility. Leach stated his opinion that he had met the interim requirements of item 2.1.8.B with the installation of lead bricks with locator holes on the stack and on the sampling line station through which a portable instrument could be inserted to take the required reading of the higher level gas releases. He also stated his position that existing in-plant emergency procedure (EPP 6) (Exhibit 13) and existing calibration methodology satisfied the interim requirement.

Leach acknowledged that the commitment to construct a lead cave around the detector had not been completed. He stated this was an oversight on his part due largely to the fact that a decision was made to modify the cave configuration. Leach said a design drawing of the cave was made but during the course of events it was somehow overlooked for completion. Leach was unable to provide the cave drawing or to locate its whereabouts.

Leach emphasized the lead brick was installed on the sample line and the stack prior to December 30, 1979 and cited the fact that the dose rate conversion was done on December 30, 1979 which required installation of the lead brick. Leach noted the information regarding the dose rate conversion was provided to the NRC during a recent Health Physics Inspection.

In response to the questions of dedication of the portable monitor, Leach stated his position that while there was no intention to dedicate a portable monitor only for use of taking readings at the stack sampling line, the instrument to be used was that instrument set aside for in-plant emergency surveys and that this met the requirement for a dedicated instrument.

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Leach also stated his position that no new procedures were written regarding the interim requirements as he felt the existing in-plant emergency procedures satisfied this requirement. He also stated that no training had been conducted for the interim provision in that he felt that the annual technician training performed, including the emergency in-plant procedure requirements, sufficed to fulfill the requirement.

Leach also confirmed that he orally communicated to Melvin Silliman and Peter Francisco confirmation as to the implementation of the requirements for item 2.1.8.B. He said the 2.1.8.B portion of the December 31, 1979 submittal was prepared by Peter Francisco of the Corporate Licensing Branch but that he provided the input into the preparation and reviewed it for acceptability. He confirmed that neither Francisco or Silliman had personal knowledge as to the specific actions taken to comply with 2.1.8.B.

Leach also confirmed that he was present at the NRR evaluation meeting of March 12, 1980. He recalled discussing the plant's ability to measure 10,000 curies/second of noble gases but not necessarily identified as Xenon-133. He also stated there was general discussion of the methods of detection, the scale range of the portable instrument and the calibration factor. He said to the best of his recollection, there was no discussion regarding the lead cave configuration. He concluded that the NRR staff did not physically examine the implemented actions but based their acceptance on the text of his answers at the meeting. A sworn statement reiterating the above information was obtained on October 31, 1980 and is appended as Exhibit (12) to this report. Additionally, the Nine Mile Point In-Plant Emergency Procedure (EPP 6) is appended as Exhibit (13).

H. Interview of Niagara Mohawk Vice President of Engineering

Mr. Donald T. Dise was interviewed on November 18, 1980, at the Nine Mile Point Nuclear Power Station. In a sworn statement (Exhibit 15 pertains), Dise stated the actions taken to prepare the licensee's December 31, 1979 status and commitment letter were initiated by him in response to the NUREG 0578 requirements and the October 30, 1979 clarification letter from the Director, Office of Nuclear Reactor Regulation.

He said this letter was both written and coordinated by Mr. Peter Francisco of the Corporate Engineering staff. Dise said he was not personally aware of the specific details as to how the items were completed or in what manner the Site Corporate Management Chain reviewed the items for completion and acceptability. Dise said he relied on oral confirmation from his management subordinates that the status of the items were completed at the time he signed the December 31, 1979 commitment letter. Dise also stated that the lower management review of these items were primarily based on oral communications rather than on a formal review of the items.

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With respect to the interim requirements of item 2.1.8.B, Dise said at the time he signed the December 31, 1979 status letter he was not aware of the specific details of implementation of that item and had no knowledge that it reflected inaccurate information.

I. Interview of Additional Licensee Attendee to NRR Evaluation Meeting of March 12, 1980

Bruce E. Taylor, an Instrumentation Control Supervisor, was interviewed on October 31, 1980 relative to his involvement in the NRR evaluation meeting and his knowledge of item 2.1.8.B. In a sworn statement (Exhibit 14 pertains) Taylor stated he had no knowledge of or responsibilities for implementation of the interim requirements for item 2.1.8.B. He also stated that since he had no responsibility for this item, he recalled no details or discussions regarding 2.1.8.B at the NRR evaluation meeting.

J. Interim Requirements for Item 2.1.8.A (Post Accident Sampling)

The October 30, 1979 NRR clarification letter to the requirement states "Plant procedures for the handling and analysis of samples, minor plant modifications for taking samples, and a design review of procedure modifications (if necessary), shall be completed by January 1, 1980."

K. Licensee Implementation Schedule

In a letter dated November 18, 1979, the licensee responded to the NRR letter of September 13, 1979 regarding the short-term requirements of NUREG 0578. This letter, from Gerald K. Rhode, Vice President, System Project Management, Niagara Mohawk Power Corporation, to Darrell G. Eisenhut, Acting Director, Division of Operating Reactors, Nuclear Reactor Regulation, relayed the licensee's plans to implement the recommendations.

In Table 1 of that letter, the licensee referred to the preparation of revised procedures and stated "Existing procedures for obtaining samples of the reactor coolant system and containment atmosphere will be reviewed and revised accordingly by January 1, 1980. As modifications are completed, procedures will be revised accordingly."

Investigator's Note:

In a subsequent licensee status and commitment letter of December 31, 1979, the licensee made no commitment to issue interim procedures.

In the licensee's January 22, 1980 response to the Order to Show Cause, the procedure requirements of item 2.1.8.A was stated to have been implemented on December 31, 1979.

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L. Special Inspection Findings

As a result of the findings related to item 2.1.8.B the remaining items were made the subject of a special inspection (Inspection Report No. 50-220/80-18) to determine their completion status. With respect to item 2.1.8.A the inspector noted that no formal, approved procedures for obtaining a reactor water sample or containment atmosphere sample appeared to exist prior to March 11, 1980.

M. Reinterview of Nine Mile Point General Superintendent

Mr. Thomas J. Perkins was reinterviewed on November 18, 1980, at which time he executed an additional sworn statement (Exhibit 16 pertains) providing further clarification and details of his understanding of the completion status of the interim fix for item 2.1.8.B of the NUREG 0578 requirements. Perkins also related his understanding of the procedural requirements for item 2.1.8.A.

In a previous statement given on October 31, 1980, Mr. Perkins stated that when they referred to the installation of a portable monitor in the their December 31, 1979 commitment letter, there was no intent to permanently install the instrument. Perkins further clarified at this interview, that it was his assumption that a portable monitor would not be dedicated to perform only this function of taking a reading at the stack sample line. He said his acceptance of this item was based on what the Radiation and Chemistry Supervisor felt was needed to meet the requirement.

With regard to the use of communications equipment to relay readings for item 2.1.8.B, Perkins said he had no discussions with the responsible supervisor (Radiation and Chemistry Supervisor) regarding this particular area. He said his acceptance of this was based on his interpretation of the 2.1.8.B response in a December 31, 1979 status and commitment letter. He said he interpreted the reference to the use of a head set to mean a maintenance communications jack was available in the area to plug in a head set. Perkins said he did not interpret the communications to be completed using the existing in-plant hand phone system.

Investigator's Note:

In a sworn statement given by the Radiation and Chemistry Supervisor on October 31, 1980, he stated it was his intention to use the existing in-plant hand phone system which was near the area to communicate the information.

Perkins also reiterated that based on discussions he had with the Radiation and Chemistry Supervisor (Edward Leach), they determined that the in-plant existing procedures satisfied the requirements for item 2.1.8.B and that the training associated with those procedures was sufficient to fulfill the training requirements. He said no new training was effected regarding this item.

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Perkins said since he placed no significance to the absence of the lead cave shield for item 2.1.8.B, he did not communicate the fact that it was not in place to any one else in the management structure.

With respect to item 2.1.8.A (Post Accident Sampling Procedures) Perkins said that again based on his discussions with the Radiation and Chemistry Supervisor it was their opinion that the existing plant procedures were adequate for taking these samples. Perkins concluded that he had no knowledge as to why or when the new sampling procedures for item 2.1.8.A that were implemented on March 11, 1980 were written. He conjectured that it was part of a routine bi-annual review of procedures.

N. Reinterview of Radiation and Chemistry Supervisor

Mr. Edward Leach was reinterviewed on November 18, 1980. He provided a sworn statement (Exhibit 17 pertains) in which he confirmed that he was also given the responsibility of completing the requirements for item 2.1.8.A (Post Accident Sampling). With regard to the procedure requirements for 2.1.8.A Leach said it was determined by himself and concurred with by Thomas Perkins that the existing plant procedures, NI-SP-11, revised December 3, 1979, and NI-SP-12, revised August 17, 1979, satisfied the requirements for reactor water sampling assuming capability for access to the reactor building. He also stated his opinion that existing procedures and NI-SP-8, Revision 0, dated April 4, 1978, fulfilled the requirements for the drywell atmosphere sampling.

Leach continued that during a procedure review of the off-gas sampling procedure conducted on a bi-annual basis, it was decided to include more detail in a separate sampling procedure using the off-gas sampling rig. Leach identified this procedure as NI-PSP-11, dated March 11, 1980 and noted it included the applicable portions of NI-SP-8. Leach said at the same time a new procedure (N-PSP-12) was produced incorporating portions of existing procedures NI-SP-11, NI-SP-12 and N-PSP-1. Leach denied that these new procedures were written for the purpose of the NRR evaluation meeting on March 12, 1980 and maintained that they were nothing more than a routine refinement of existing procedures.

Separately, Leach reaffirmed that there was no work order initiated for the construction of a lead cave for item 2.1.8.B to complete the commitment of December 31, 1979. Leach said this cave was not a maintenance function and therefore no work order would have been initiated to do the work had it been done at that time.

O. Licensee Corrective Action

During the investigation, a commitment was obtained from the licensee on October 17, 1980 to take prompt corrective action on item 2.1.8.B to: (1) install and calibrate the necessary "provisional fix" high range monitoring equipment, (2) prepare the required procedures, and (3) conduct the necessary training of personnel by November 20, 1980. A commitment was also obtained to further refine the calibration of the instrumentation by November 3, 1980, and to complete an audit of all category "A" items by October 24, 1980 to insure that they had been completed as required.

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STATUS OF INVESTIGATION

This investigation is submitted in a closed status.

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EXHIBITS

- Exhibit 1 NRR Letter to Licensee of October 30, 1979 and Item 2.1.8.B Attachment
- Exhibit 2 Niagara Mohawk Letter to NRR dated December 31, 1979 and Item 2.1.8.B Attachment
- Exhibit 3 NRR Letter to Licensee dated January 2, 1980 and enclosed Order to Show Cause
- Exhibit 4 Licensee Response to Order to Show Cause dated January 22, 1980 with Attachment
- Exhibit 5 NRR Letter to Licensee dated March 21, 1980 and enclosed "Evaluation of Item 2.1.8.B
- Exhibit 6 Sworn Statement of Mr. James Bartlett dated November 1, 1980
- Exhibit 7 Sworn Statement of Mr. Thomas Lempges dated October 31, 1980
- Exhibit 8 Sworn Statement of Mr. Peter Francisco dated October 31, 1980
- Exhibit 9 Licensee Record of NRR Meeting dated March 20, 1980
- Exhibit 10 Sworn Statement of Mr. Thomas Perkins dated October 31, 1980
- Exhibit 11 Sworn Statement of Mr. Melvin Silliman dated October 31, 1980
- Exhibit 12 Sworn Statement of Mr. Edward Leach dated October 31, 1980
- Exhibit 13 Licensee In-Plant Emergency Procedure (EPP 6) undated
- Exhibit 14 Sworn Statement of Mr. Bruce Taylor dated October 31, 1980
- Exhibit 15 Sworn Statement of Mr. Donald Dise dated November 18, 1980
- Exhibit 16 Sworn Statement of Mr. Thomas Perkins dated November 18, 1980
- Exhibit 17 Sworn Statement of Mr. Edward Leach dated November 18, 1980

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