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 MANGAN, C.V.      Niagara Mohawk Power Corp.  
 RECIP. NAME      RECIPIENT AFFILIATION  
 VASSALLO, D.B.      Operating Reactors Branch 2

SUBJECT: Forwards info re implementation of NUREG-0313, Rev 1, in response to 821108 request.

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|---|---|---|---|

December 30, 1982

Director of Nuclear Reactor Regulation  
Attn: Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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

Dear Mr. Vassallo:

Your letter dated November 8, 1982 requested information regarding implementation of NUREG-0313, Revision 1. Our letter dated December 20, 1982 indicated that a response would be provided by January 1, 1983. Attached is our response to your request.

Very truly yours,

*C. V. Mangan*

C. V. Mangan  
Vice President, Nuclear Engineering  
and Licensing.

CVM/MG:bd

Attach.

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Response to Request for Information  
Implementation of NUREG-0313, Revision 1

- Question 1. Unidentified Leakage Monitoring (IV.B.1 of NUREG-0313, Rev. 1):
- a. Identify the methods to detect and monitor unidentified leakage in the pressure boundary piping of your BWR. Some of these methods are enumerated in Regulatory Guide 1.45, Paragraph B.

Response: Unidentified pressure boundary piping leakage is detected and monitored by the drywell floor drain tank. Existing technical specifications limit the unidentified leakage to 5 gpm.

The primary means of determining the unidentified reactor coolant leakage rate is by monitoring the rate of rise in the level of the drywell floor drain tank. The signals produced by the rate of rise instrumentation are processed for level versus time and rate of change. Both processes are recorded in the control room. The rate of change process provides a direct readout of leakage in gpm on the chart recorder. Daily checks are made that no alarms have been actuated due to high leakage.

A second method is also used to determine the reactor coolant leakage rate. This method monitors the time required to fill the tank between two pre-determined levels. Redundant high and low-level sensors are provided on the floor drain tank. When an increasing level in the tank reaches the low-level sensor setting, a timer will start and operate for a preset time interval. If the timer times out before the high-level sensor setting is reached, indicating a leakage rate within allowable limits, no action will result, and the system resets for the next filling and time cycle. The system reset is accomplished by pumping the water out until the level is below the low level sensor setting.

If the high-level setting is reached before the timer resets, an alarm is actuated, indicating a leak rate above the predetermined limit. At this time, the operator can read the elapsed time on the timer, giving the time required to fill the tank between the two preset levels. Knowing the volume between these two levels and the time interval, the leakage rate can be determined.

Additional information is available to the operator which can be used for the daily leakage check if the various drywell sump level alarms are out of service. The integrated flow pumped from the sumps to the waste disposal system can be checked.



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Qualitative information is also available to the operator in the form of indication of drywell atmospheric conditions. Continuous leakage from the primary coolant system would cause an increase in drywell temperature. Any leakage in excess of 15 gpm of steam would cause a continuing increase in drywell pressure with resulting scram.

Question: 1b. Complete the attached table of information regarding the systems identified in the above paragraph.

Response: The information requested is provided on the attached table.

Question: 1c. Discuss the sensitivity of these systems for detecting unidentified leakage.

Response: The rate of rise instrumentation is the primary means of detecting unidentified leakage because of its sensitivity. The signals from this instrumentation are processed in two ways. The rate of change process has a sensitivity of approximately 0.25 gpm in 2 minutes. The sensitivity for the level versus time process is such that for inflows of one gpm, changes on the order of 0.2 gpm can be detected within 40 minutes. At inflows between one and five gpm, changes on the order of 0.5 gpm can be detected in eight minutes.

The sensitivity of the timer leak detection system is based on the following volume and respective time interval required for normal filling of the tank.

|                          | <u>Approximate Volume in<br/>Gallons Between<br/>Level Probes</u> | <u>Time in Minutes<br/>to Fill With<br/>Flow Rate</u> |
|--------------------------|---|---|
| Drywell Floor Drain Tank | 90  | 18 min @ 5 gpm  |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support informed decision-making.

3. The third part of the document focuses on the role of technology in modern data management. It discusses how advanced software solutions can streamline data collection, storage, and analysis, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data security and privacy. It stresses the importance of implementing robust security measures to protect sensitive information from unauthorized access and breaches.

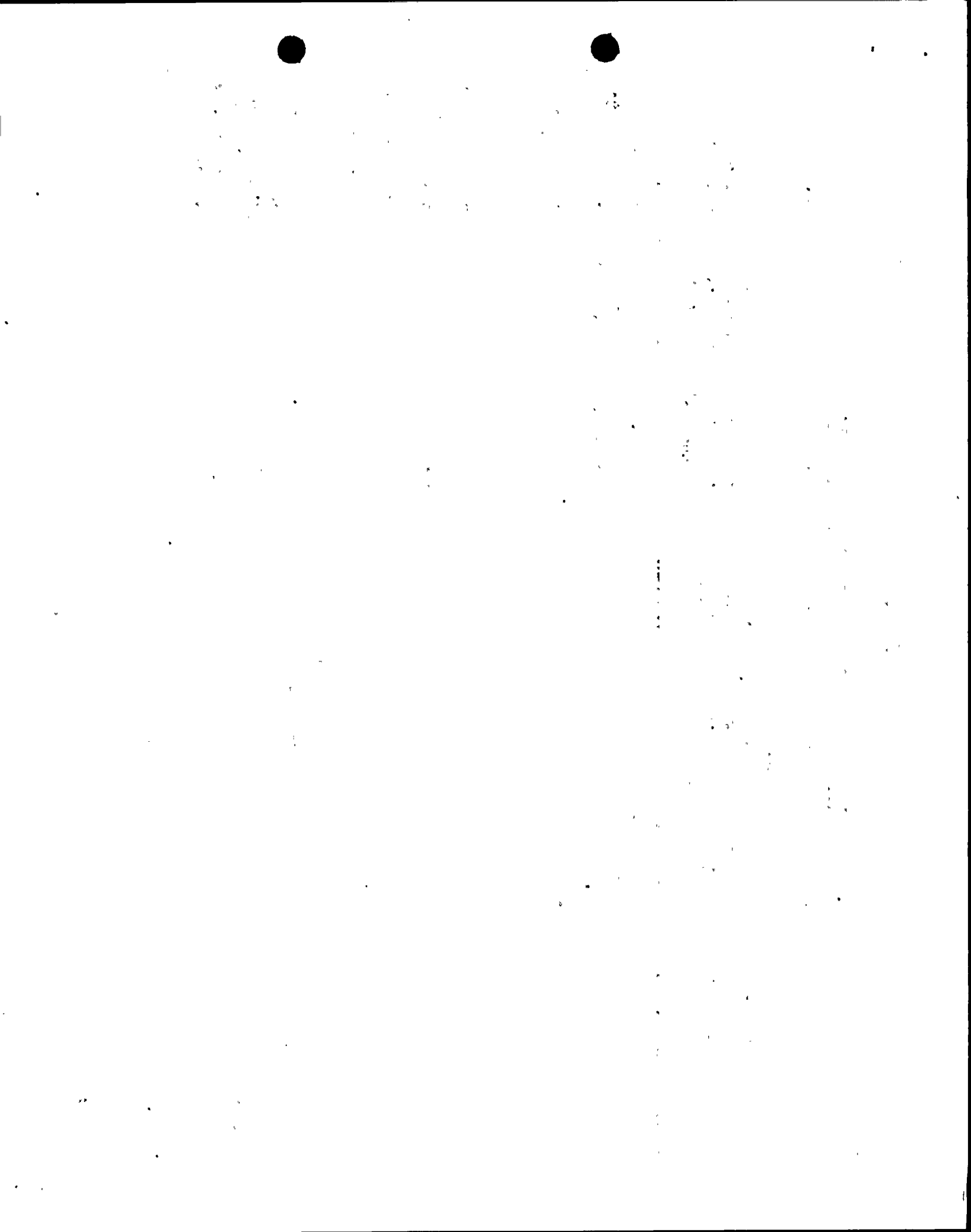
5. The fifth part of the document provides a summary of the key findings and recommendations. It concludes that a comprehensive data management strategy is crucial for the long-term success and growth of the organization.



Table 1b

INFORMATION REQUESTED ON LEAK DETECTION SYSTEM

|                               | (1)                         | (2)  | (3)  | (4)                                     | (5)   | (6)  | (7)   |
|-------------------------------|-----------------------------|--|--|---|---|--|---|
| Type of System                | Is System Operable (yes/no) | Leak Rate Sensitivity (gpm)  | Time Required To Achieve Sensitivity (hours) | Is System Functional After SSE (yes/no) | Control Room Indications (alarms) (recorders) | Calibration or Testing During Operation (yes/no) | Documentation Reference for (1) Thru (6)  |
| Rate of Rise (Level vs. Time) | Yes                         | For inflows of 1 gpm:<br>0.2 gpm<br><br>For inflows of 1-5 gpm:<br>0.5 gpm | .66 hours<br><br>.13 hours                   | No                                      | A Alarm-High Level<br>B Recorder              | Yes (Daily checks)                               | First and Fifth Supplement to Final Safety Analysis Report and the Technical Specifications |
| Rate of Rise (rate of change) | Yes                         | 0.25 gpm   | 0.03 hours                                   | No                                      | A Alarm-High Rate<br>B Recorder               | Yes  | Niagara Mohawk Procedure - Drywell Floor Drain Rate of Rise Instrument Channel Calibration  |
| Timer (with level sensor)     | Yes                         | 5.0 gpm  | 0.30 hours                                   | No                                      | A Alarm-High Level                            | Yes  | First and Fifth Supplement to Final Safety Analysis Report and the Technical Specifications |



Question 2. Augmented ISI of Nonconforming Service Sensitive Pipe:

- a. Identify the methods for augmented ISI of the nonconforming service sensitive pipe (IV.B.3 of NUREG-0313 Rev. 1).

Response: The methods used to examine augmented piping are those specified in paragraph (g), "Inservice Inspection Requirements", of 10 CFR 50.55a, "Codes and Standards".

Question 2b. Provide a copy of the specifications for the augmented ISI method or methods (IV.B.3 of NUREG-0313 Rev. 1)

Response: A copy of each of the procedures used for augmented ISI examinations is provided in Attachment 1.

Question 2c. Identify each of the augmented ISI methods used and the training and certification levels the individuals using those methods received. Indicate if cracked specimens are used in your training (IV.B.3 of NUREG-0313 Rev. 1).

Response: Personnel performing nondestructive examinations are trained, examined and certified in accordance with the recommended practice and requirements of the American Society for Nondestructive Testing, Document SNT-TC-1A, 1975 Edition.

- 1) Ultrasonic Examinations: Ultrasonic (UT) examinations are performed by a certified team consisting of two examiners. The minimum requirement for a team is one UT Level II and one UT Level I. Reported indications are dispositioned by a UT Level III. In the case of Ultrasonic Examinations of Stainless Steel Piping for Intergranular Stress Corrosion Cracking, examiners receive forty hours of training prior to performing examinations. A portion of this training is conducted on cracked specimens.
- 2) Liquid Penetrant Examinations: Liquid penetrant (PT) examinations are performed by a PT Level II. Reported indications are dispositioned by a PT Level III. Training and certification is conducted on cracked specimens.

Question 2d. Identify the proportion of the nonconforming service sensitive pipe that is being inspected (IV.B.2.b of NUREG-0313 Rev. 1).

Response: The Augmented Inservice Inspection Program Plan is being revised to include modifications made to the plant during the current outage and to incorporate the requirements of Revision 1 to NUREG 0313. This revision will specifically identify the nonconforming service sensitive piping to be inspected. When the revision is completed we will submit the requested information to your staff.

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Question 2e. Identify the inspection interval of each system of the nonconforming service sensitive pipe (IV.B.2.b of NUREG-0313 Rev. 1).

Response: The inspection interval is in accordance with NUREG 0313, Revision 1 (i.e. every refueling outage).

Question 2f. Identify the Stress Rule Index Numbers if available for the welded joints in the nonconforming service sensitive pipe (I.V.B.L.b(6) of NUREG-0313 Rev. 1).

Response: The Stress Rule Index Numbers are not available at this time. When the Stress Rule Index Numbers become available they will be submitted to your staff.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for the proper management of the organization's finances and for ensuring compliance with applicable laws and regulations.

2. The second part of the document outlines the specific procedures that should be followed when recording transactions. This includes the use of standardized forms and the requirement that all entries be supported by appropriate documentation.

3. The third part of the document discusses the role of the accounting department in the overall financial management process. It highlights the department's responsibility for providing timely and accurate financial information to management and other stakeholders.

4. The fourth part of the document addresses the issue of internal controls. It explains how a strong system of internal controls can help to prevent errors and fraud, and how it can be used to monitor the organization's financial performance.

5. The fifth part of the document discusses the importance of regular audits. It explains that audits are a key component of the financial management process, as they provide an independent assessment of the organization's financial records and internal controls.

6. The sixth part of the document discusses the role of the board of directors in the financial management process. It explains that the board is responsible for overseeing the organization's financial performance and for ensuring that the organization is using its resources in a responsible and effective manner.

7. The seventh part of the document discusses the importance of transparency in financial reporting. It explains that transparency is essential for building trust with investors and other stakeholders, and for ensuring that the organization is held accountable for its financial performance.

8. The eighth part of the document discusses the importance of communication in financial management. It explains that clear and effective communication is essential for ensuring that all stakeholders are kept up-to-date on the organization's financial performance and for addressing any concerns that may arise.

9. The ninth part of the document discusses the importance of continuous improvement in financial management. It explains that the financial management process should be regularly reviewed and updated to ensure that it remains effective and efficient.

10. The tenth part of the document discusses the importance of ethical behavior in financial management. It explains that ethical behavior is essential for ensuring that the organization is acting in a responsible and transparent manner, and for building trust with its stakeholders.

Question 3. Augmented ISI of Nonconforming Nonservice Sensitive Piping:

a. Identify the methods for augmented ISI of the nonconforming nonservice sensitive piping (IV.B.3 of NUREG-0313 Rev. 1).

Response: The response to this question is provided in the response to Question 2(a).

Question 3b. Provide a copy of the specifications for the augmented ISI method or methods (IV.B.3 of NUREG-0313 Rev. 1).

Response: The response to this question is provided in the response to Question 2 (b).

Question 3c. Identify each of the augmented ISI methods used and the training and certification levels the individuals using those methods received. Indicate if cracked specimens are used in your training (IV.B.3 of NUREG-0313 Rev. 1).

Response: The response to this question is provided in the response to Question 2 (c).

Question 3d. Identify the proportion of the nonconforming nonservice sensitive piping that is being inspected (IV.B.2.b of NUREG-0313 Rev. 1).

Response: The Augmented Inservice Inspection Program Plan is being revised to include modifications made to the plant during the current outage and to incorporate the requirements of Revision 1 to NUREG-0313. This revision will specifically identify the nonconforming nonservice sensitive piping to be inspected. When the revision is completed we will submit the requested information to your staff.

Question 3e. Identify the Stress Rule Index Numbers (if available) for the welded joints in the nonconforming nonservice sensitive piping (IV.B.1.b(6) of NUREG-0313 Rev. 1).

Response: The response to this question is provided in the response to Question 2 (f).

Question 3f. Identify the proposed inspection interval for each system of nonconforming nonservice sensitive piping (IV.B.1.b of NUREG-0313 Rev. 1).

Response: The current inspection interval is a 60 month period. This is more conservative than the interval specified in NUREG-0313, Revision 1 (i.e. over an 80 month period).



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Question 4. Coolant Leakage (IV.B.1.b.(2) of NUREG-0313 Rev. 1):

NUREG-0313 Rev. 1 requires that:

Plant shutdown should be initiated for inspection and corrective action when any leakage detection system indicates, within a period of 24 hours or less, an increase in rate of unidentified leakage in excess of 2 gallons per minute or its equivalent, or when the total unidentified leakage attains a rate of 5 gallons per minute or its equivalent, whichever occurs first. For sump level monitoring systems with fixed-measurement interval method, the level should be monitored at 4-hour intervals or less.

You are requested to forward Technical Specifications which incorporate the above in the Technical Specifications for your facility or provide justification for continued plant operation without such Technical Specifications. Should justification be provided, plant leakage data and/or operating experience should be included.

Response:

An analysis is currently being performed to provide justification for continued plant operation without the above described Technical Specifications. Our current schedule is to have this analysis completed by February 15, 1983. Upon completion of this analysis, the results will be submitted to your staff.



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## Attachment 1

1. Liquid Penetrant Examination Procedure
2. Ultrasonic Examination General Requirements
3. Ultrasonic Examination of Stainless Steel Piping for Intergranular Stress Corrosion Cracking (IGSCC)
4. Ultrasonic Examination Procedure for Nozzle to Safe End Welds
5. Program Plan Book for Augmented Inservice Inspection of Austenitic Stainless Steel Piping Within the Reactor Coolant Pressure Boundary per NUREG 0313.



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