

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

*Nuclear Facilities
Branch*

JAN 12 1976

Niagara Mohawk Power Corporation
Attention: Mr. R. R. Schneider
Vice President
Electric Operations
300 Erie Boulevard West
Syracuse, New York 13202

License No. DPR-63
Inspection No. 75-33
Docket No. 50-220

Gentlemen:

This refers to the inspection conducted by Mr. W. Sanders of this office on December 17-18, 1975 at Scriba, New York (Nine Mile Point 1) of activities authorized by NRC License No. DPR-17 and to the discussions of our findings held by Mr. Sanders with Mr. T. Perkins of your staff at the conclusion of the inspection.

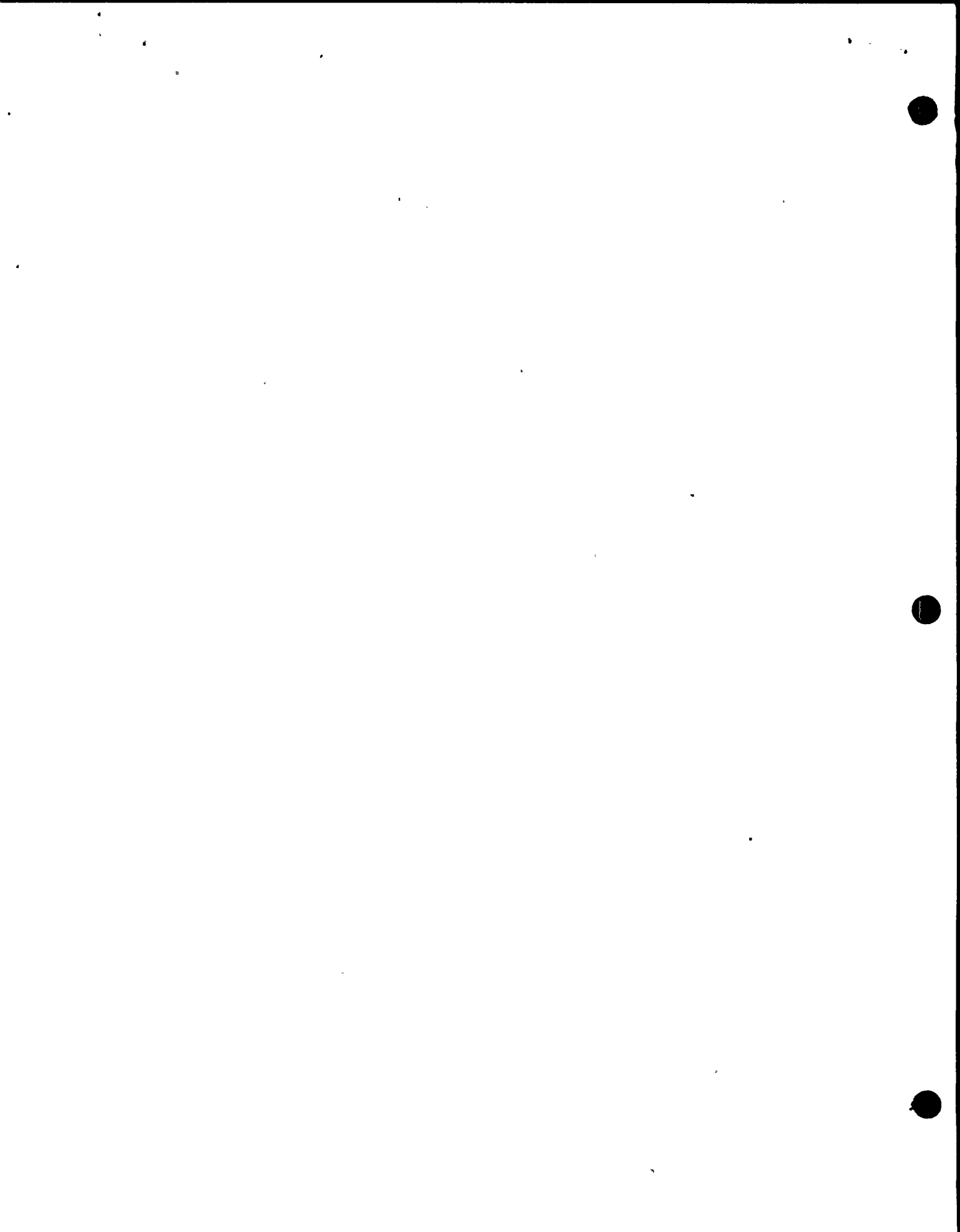
Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

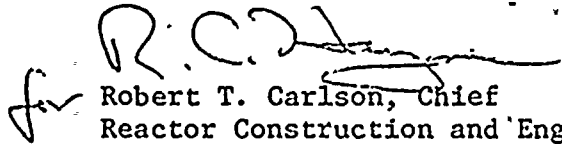
JMS





No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,


for Robert T. Carlson, Chief
Reactor Construction and Engineering
Support Branch

Enclosure:

IE:I Inspection Report 50-220/75-33

cc: T. E. Lempges, General Superintendent, Nuclear Generation
T. J. Perkins, Station Superintendent
C. L. Stuart, Operations Supervisor
E. B. Thomas, Jr., Esquire
A. Z. Roisman, Counsel for Citizens Committee for
Protection of the Environment (Without Report)

bcc:

IE Mail & Files (For Appropriate Distribution)

PDR

Local PDR

NSIC

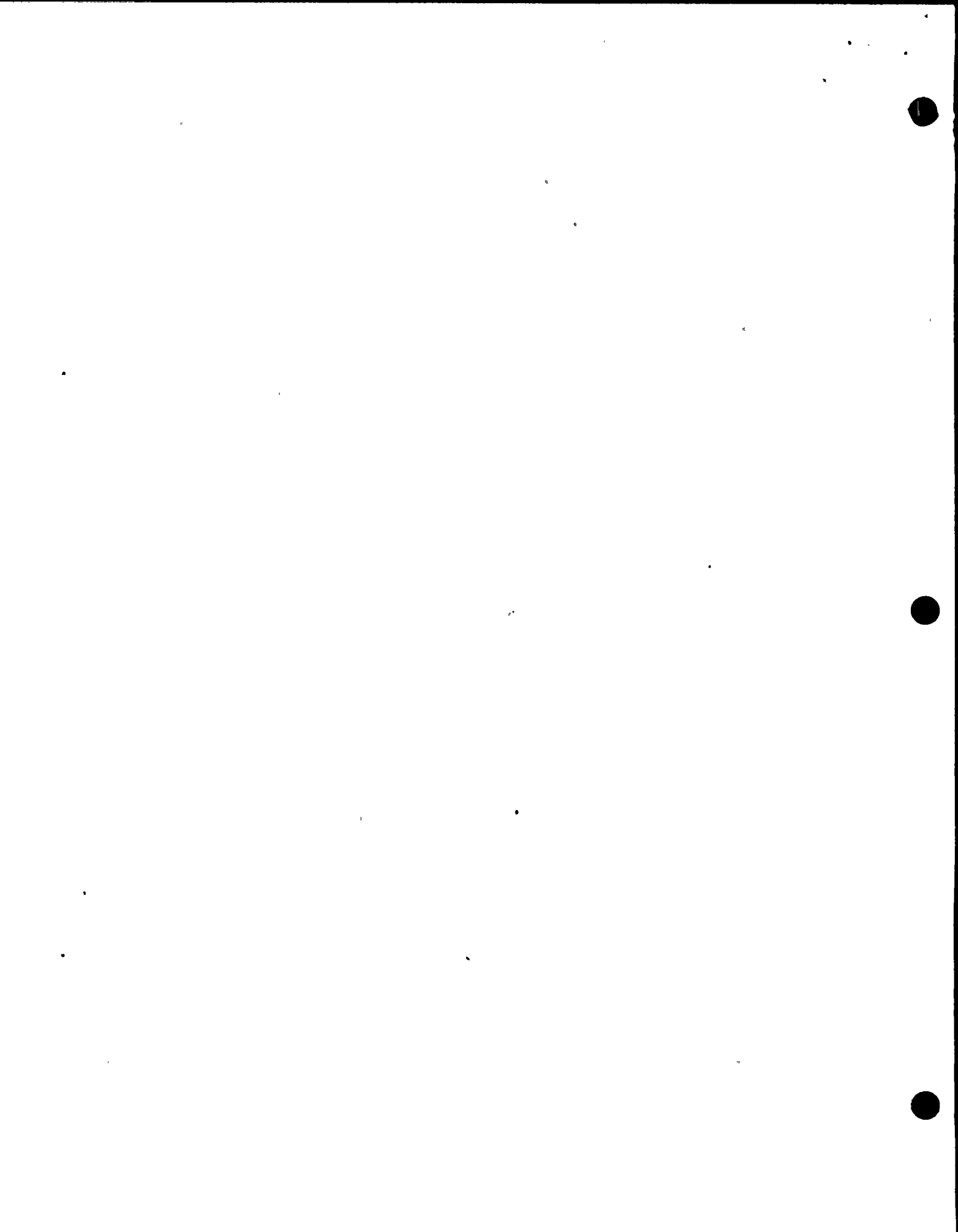
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REG:I Reading Room

Region Directors (II, III, IV) (Report Only)

State of New York

A. Z. Roisman, Counsel for Citizens Committee for
Protection of the Environment



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

IE Inspection Report No: 50-220/75-33

Docket No: 50-220

Licensee: Niagara Mohawk Power Corporation

License No: DPR-17

300 Erie Boulevard West

Priority: --

Syracuse, New York 13202.

Category: C

Safeguards
Group: --

Location: Scriba, New York (NMP-1)

Type of Licensee: BWR, 1850 MWt (GE)

Type of Inspection: Special Announced

Dates of Inspection: December 17-18, 1975

Dates of Previous Inspection: December 16-19; 1975

Reporting Inspector: W. F. Sanders

W. F. Sanders, Reactor Inspector

Jan 8 1976
DATE

Accompanying Inspectors: None

DATE

DATE

DATE

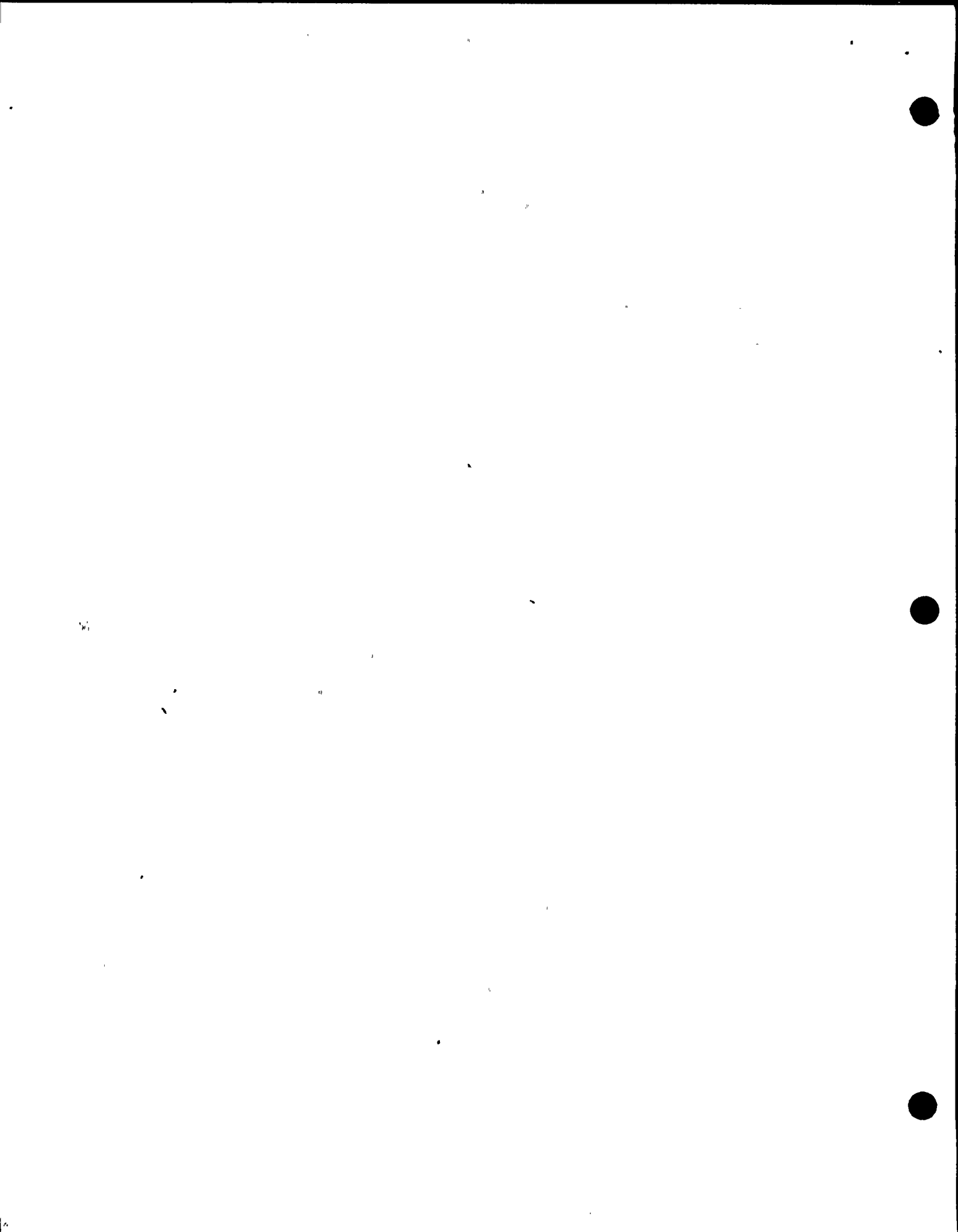
Other Accompanying Personnel: None

DATE

Reviewed By: R. C. Haynes

R. C. Haynes, Section Leader

1/12/76
DATE



SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

None

B. Deviations

None

Licensee Action on Previously Identified Enforcement Items

Not inspected.

Design Changes

None identified.

Unusual Occurrences

A. Reactor Water Cleanup System Pipe Cracks

During an inspection of the reactor water cleanup system, station personnel observed water to be leaking through the insulation on the section of pipe leading to the regenerative heat exchanger. When the insulation was removed, a four inch long longitudinal crack in the pipe wall was observed. The crack was beyond the reactor coolant pressure boundary.

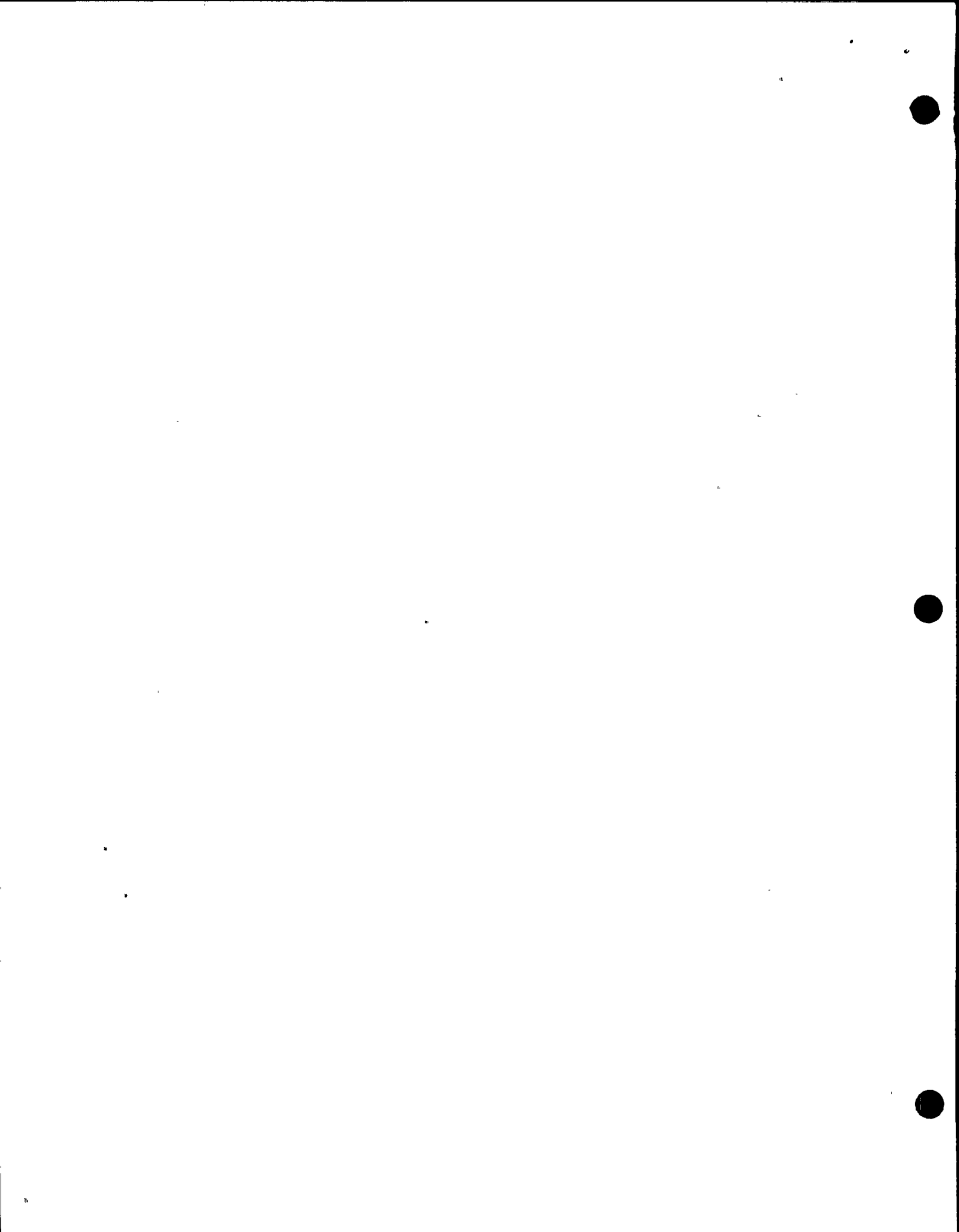
This item is considered unresolved pending completion of the licensee's efforts to determine the cause of the failure. (Details, Paragraph 4)

Other Significant Findings

A. Current Findings

1. Acceptable Areas

The valve wall thickness verification program has been completed. (Details, Paragraph 3)



2. Unresolved Items

See Unusual Occurrences above.

B. Status of Previously Identified Unresolved Items

Not inspected.

Management Interview

An interview was held by the inspector with Mr. T. J. Perkins, Plant Superintendent, at the conclusion of this inspection. The inspector's comments were acknowledged.

A. Items Discussed

1. Purpose of Inspection

The inspector stated the purpose of this inspection was to review the results of the valve wall thickness verification program and to review the information related to the cracks in the 6 inch diameter, schedule 80 reactor water cleanup system pipe (reference: Licensee Event Report 50-220/75-36).

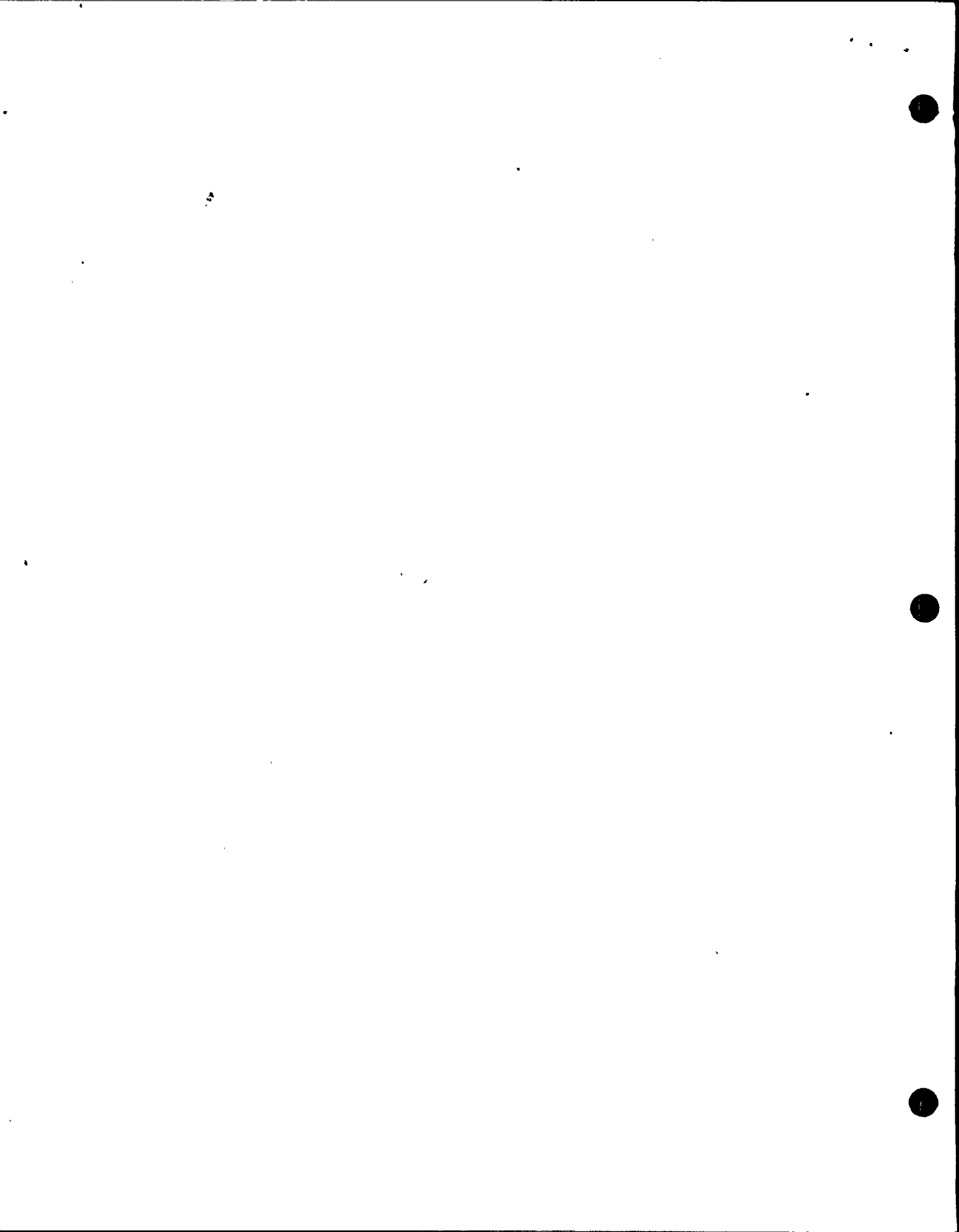
2. The Valve Wall Thickness Verification Program

The inspector stated that the final segment of this measuring program was inspected and found to be acceptable. (Details, Paragraph 3)

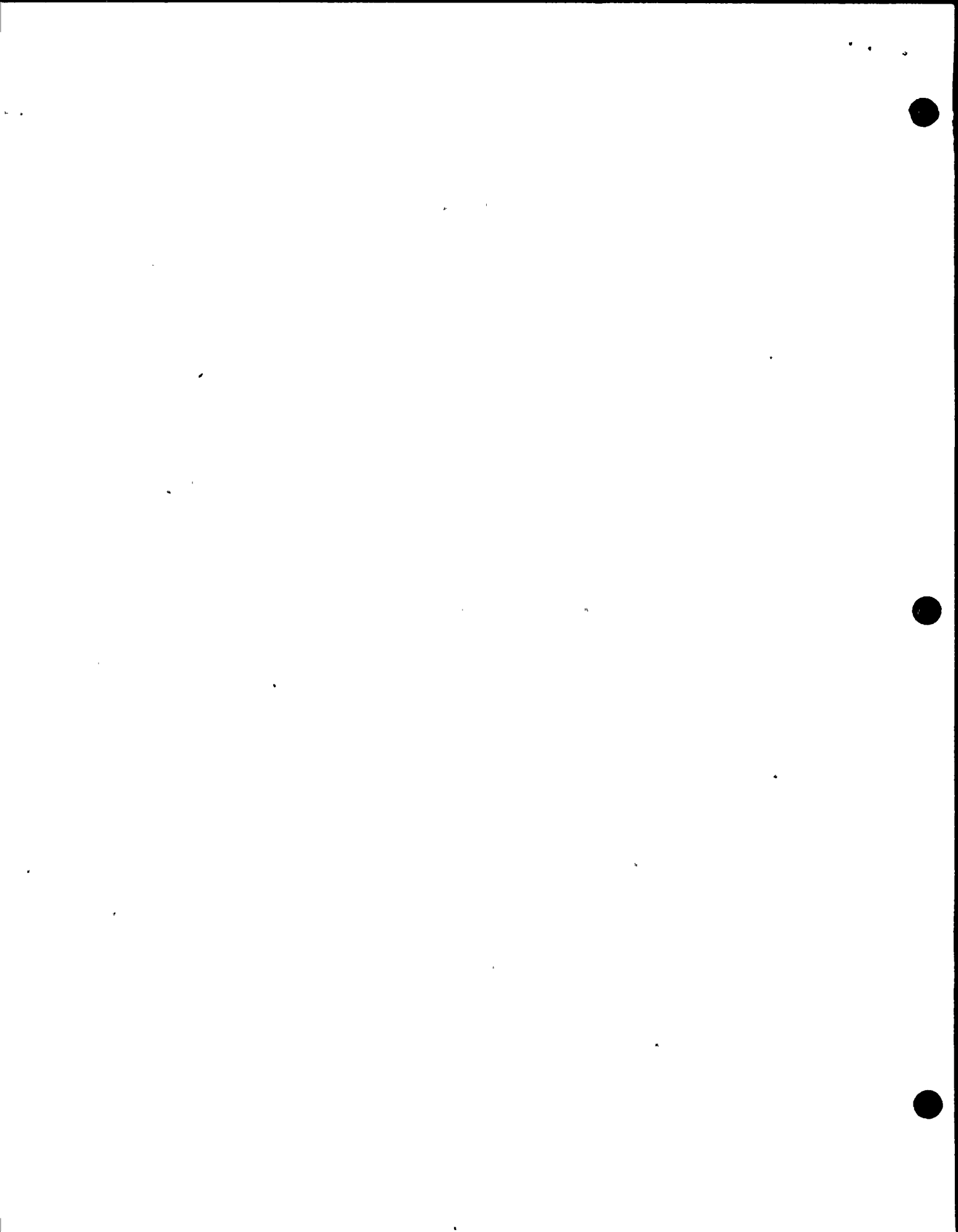
3. Reactor Water Cleanup System Pipe Cracks

The inspector stated that a visual inspection was made of the removed defective section of pipe to observe the general pipe condition and the size, shape and orientation of the visible pipe crack. Based on conversations with licensee representatives, the inspector stated that he understood the following actions were being implemented to determine the cause of the failure:

- a. The full pipe section is being prepared for shipment to a "hot" laboratory for decontamination and metallographic examination to determine the cause of failure..
- b. Residues present on the pipe surfaces and a section of the pipe insulation will be checked for the presence of chlorides and other contaminants.



- c. A report will be prepared by the licensee after the metallurgical examination is completed. (Details, Paragraph 4)



DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation

T. Lempges, General Manager, Nuclear Generation
T. Perkins, Plant Superintendent
R. Abbott, Assistant Maintenance Supervisor
R. Baker, Maintenance Supervisor

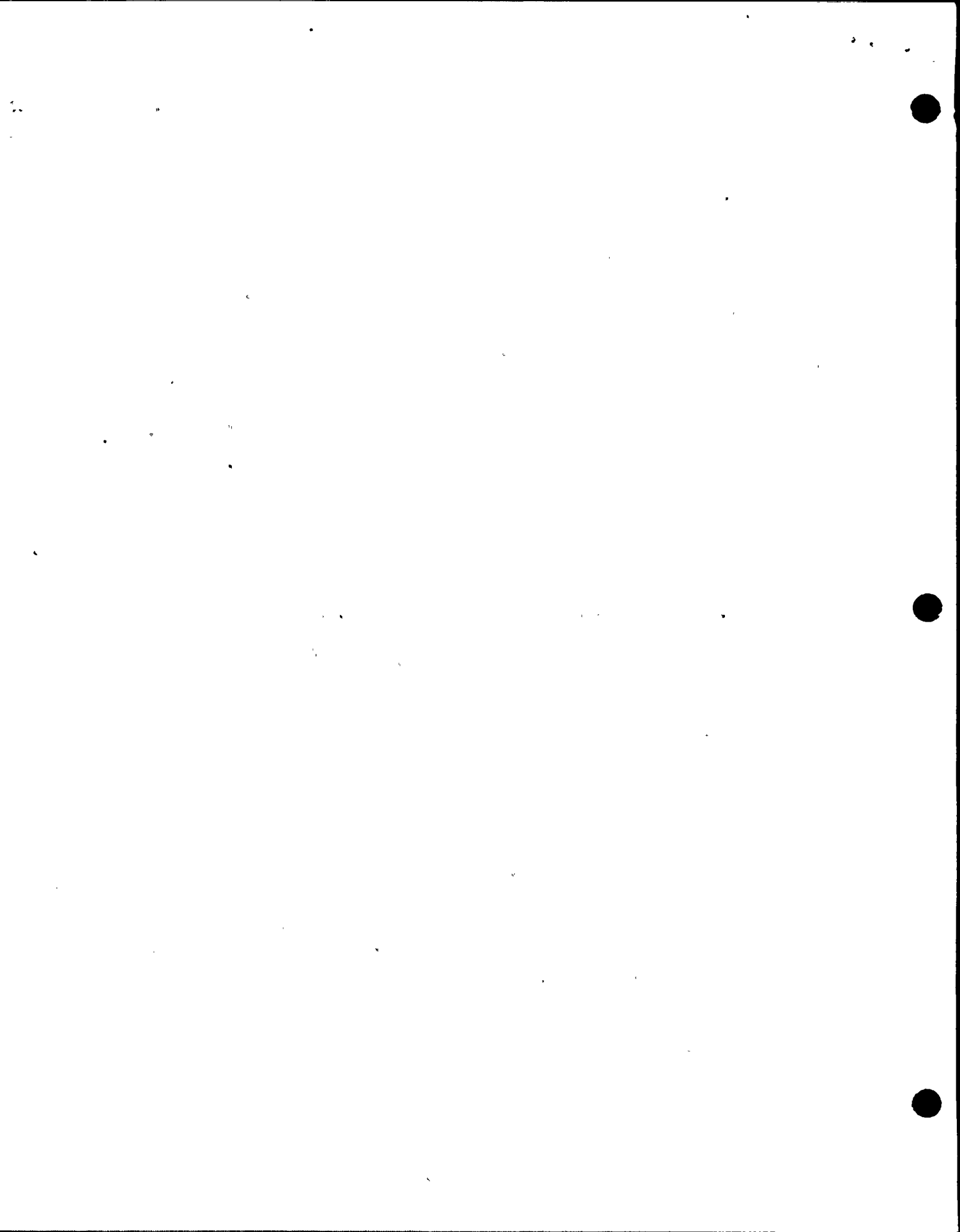
2. General

The scope of this inspection was to review the documentation of licensee's program for measurements of the wall thickness of valves within the reactor coolant pressure boundary and to inspect the reactor water cleanup system pipe cracks reported by the licensee to the NRC Region I office. (reference: LER 50-220/75-36)

3. Valve Wall Thickness Verification Program

The licensee responded to the valve wall thickness verification program outlined in the Region I letter of June 22, 1972 with a commitment to develop and complete a measuring program within three (3) successive annual outages commencing with the spring outage of 1973. Inspections were accomplished in the spring of 1973 and 1974 with a plan to complete the inspection in 1975. The measuring program was completed during the fall outage of 1975. The inspector reviewed the measuring program procedure, ISE-QAI-48 "Thickness Measurement of Carbon and Stainless Materials," Revision I dated September, 1975 and found it to be acceptable to the requirements outlined in the Region I letter. In addition, the following documentation was reviewed, and was found to comply with the licensee program referenced above.

- a. Calibration of the ultrasonic measuring equipment.
- b. Calibration to establish measurement accuracy (Within 2%).
- c. Qualification of personnel in accordance with procedure.
"General Electric Co., Engineering Practices and Procedures Manual 5.27."



- d. Records of measuring data which list data points, manufacturer, valve type, material, rating and valve wall thicknesses.

The inspector found that the program met the requirements of the Region I letter of June 22, 1972 and the measured wall thickness met the requirements as established by calculations in accordance with USAS B 16.5 - 1967.

4. Reactor Water Cleanup System Pipe Cracks

A visual inspection was made of the section of pipe from the reactor water cleanup system which was found to have a through wall crack. The crack was found during an inspection of the cleanup system area. Station personnel observed water leaking through the pipe insulation on a section of pipe leading to the regenerative heat exchanger. The insulation was removed showing a (4") four inch longitudinal crack on the outside of the elbow. The crack was outside of the reactor coolant pressure boundary and could be isolated.

A new pipe section has been installed and a surface type examination has been performed on the defective pipe. This pipe is a six inch diameter, schedule 80, A 376 type 304 stainless steel pipe. The defect was categorized by an independent consultant and described in a report of December 3, 1975 by J. G. Sylvester Associates, Inc. The crack was located on the outside radius of a 45° cold bend in a longitudinal orientation and was approximately four (4) inches in length. The crack was also visible on the inside of the pipe with a flashlight and appeared to be approximately 2" to 3" in length. This examination was confined to the plant and limited to a surface examination due to the levels of radioactive contamination of the pipe. The cause of failure was not concluded by this examination.

During this inspection, the inspector performed a visual examination of the defective pipe section and observed certain residues adhering in patches on the pipe surfaces.

The inspector was informed that the following actions would be implemented to determine the fracture mechanism.



- a. The defective pipe section will be sent to a "hot" laboratory operated by General Electric Company in Vallecitos, California.
- b. The pipe section will be decontaminated and the surface residue examined for the presence of chlorides and contaminants.
- c. The pipe cracks will undergo metallographic examination and be evaluated to determine cause of failure.
- d. A report will be submitted by the licensee.

