

DK Central File



UNITED STATES
-ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION 1
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

APR 9 1974

Niagara Mohawk Power Corporation
Attention: Mr. J. G. Haehl
President
300 Erie Boulevard
Syracuse, New York 13202

License No. DPR-17
Inspection No. 50-220/74-03

Gentlemen:

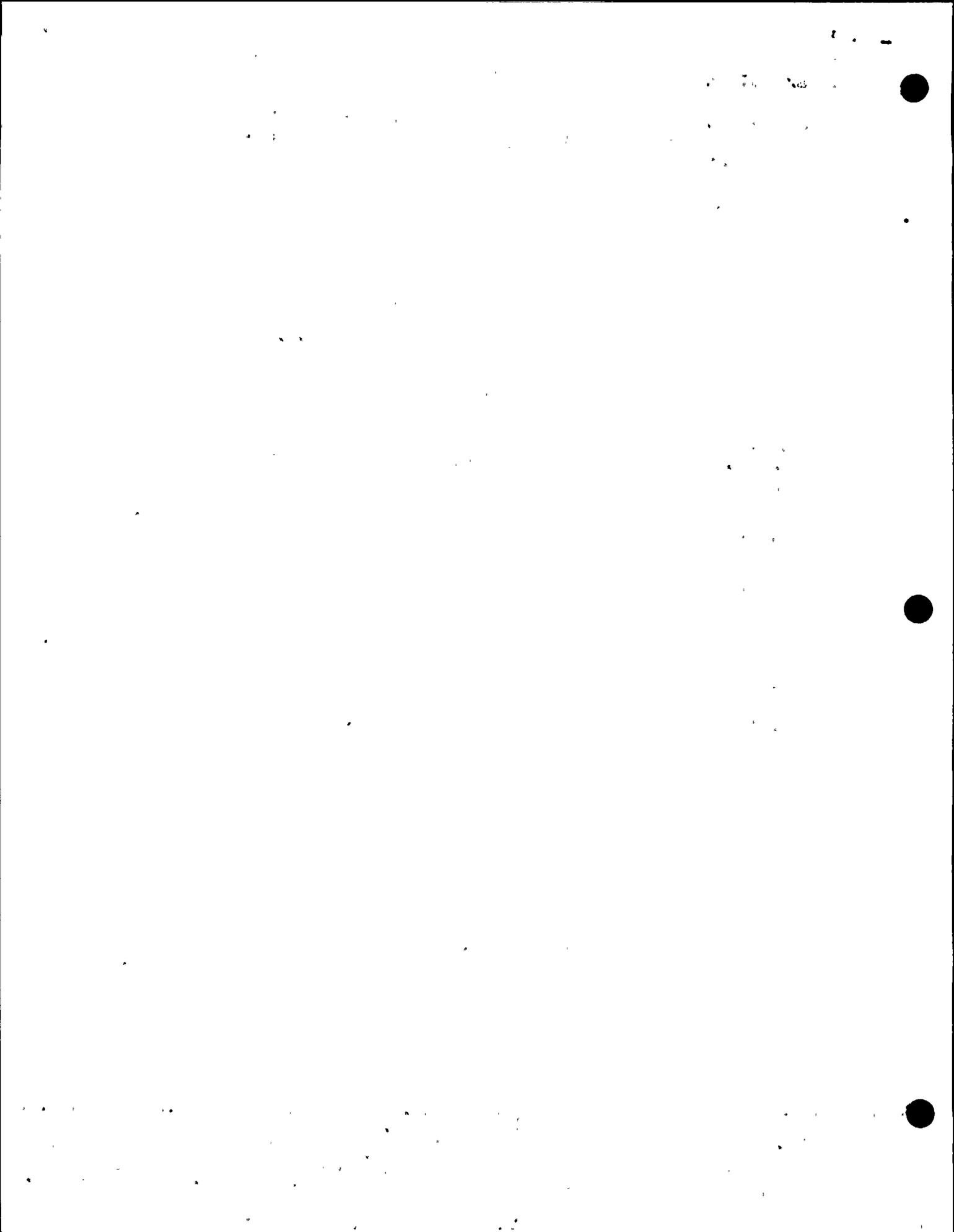
This refers to the inspection conducted by Mr. Meyer of this office on February 28 and March 1, 1974 at Nine Mile Point of activities authorized by AEC License No. DPR-17 and to the discussions of our findings held by Mr. Meyer with Mr. Burt and other members of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Regulatory Operations 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 violations or safety items were observed.

In accordance with Section 2.790 of the AEC'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 AEC'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.

Ry



Niagara Mohawk Power Corporation -2-

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

Sincerely,

Paul R. Nelson, Chief
Radiological & Environmental
Protection Branch

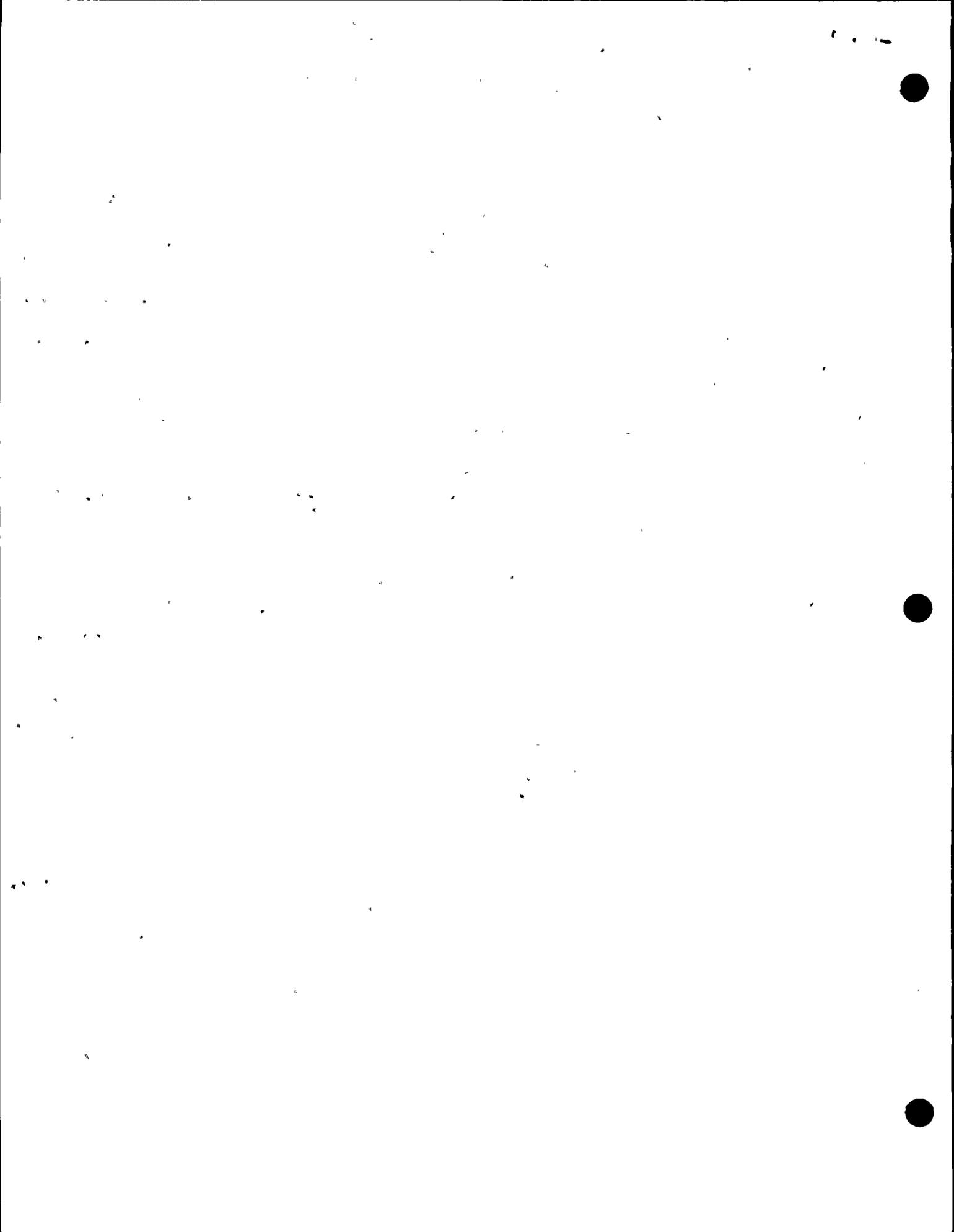
Enclosure:

RO Inspection Report No. 50-220/74-03

cc: E. B. Thomas, Attorney-at-Law
P. A. Burt, General Superintendent, Nuclear Generation
T. J. Perkins, Station Superintendent

(w/encls)
bcc: RO Chief, FS&EB
RO:HQ (4)
DL (4) plus 9 cys of report only
RO Files
DR Central Files
RS (3)
PDR
Local PDR
NSIC
DTIE
State of New York
OGC

OFFICE	CRESS (P)					
SURNAME	KNAPP/JAS	MEYER <i>RAM</i>	NELSON	GRELLY		
DATE	4-3-74		4/9/74	Co. 2/20/74		



U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I

RO Inspection Report No.: 50-220/74-03

Docket No.: 50-220

Licensee: Niagara Mohawk Power Corporation

License No.: DPR-17

300 Erie Boulevard West

Priority: _____

Syracuse, New York

Category: C

Nine Mile Point, Unit 1

Location: Scriba, New York

Type of Licensee: 1850 MWT BWR (GE)

Type of Inspection: Special Inspection - Temporary Employee Exposures (Generic)

Dates of Inspection: March 1, 1974

Dates of Previous Inspection: February 27-March 2, 1974

Reporting Inspector: *R. J. Meyer*
R. J. Meyer, Radiation Specialist

4/3/74
DATE

DATE

Accompanying Inspectors: *P. J. Knapp*
P. J. Knapp, Senior, Radiological and
Environmental Protection Branch

4/3/74
DATE

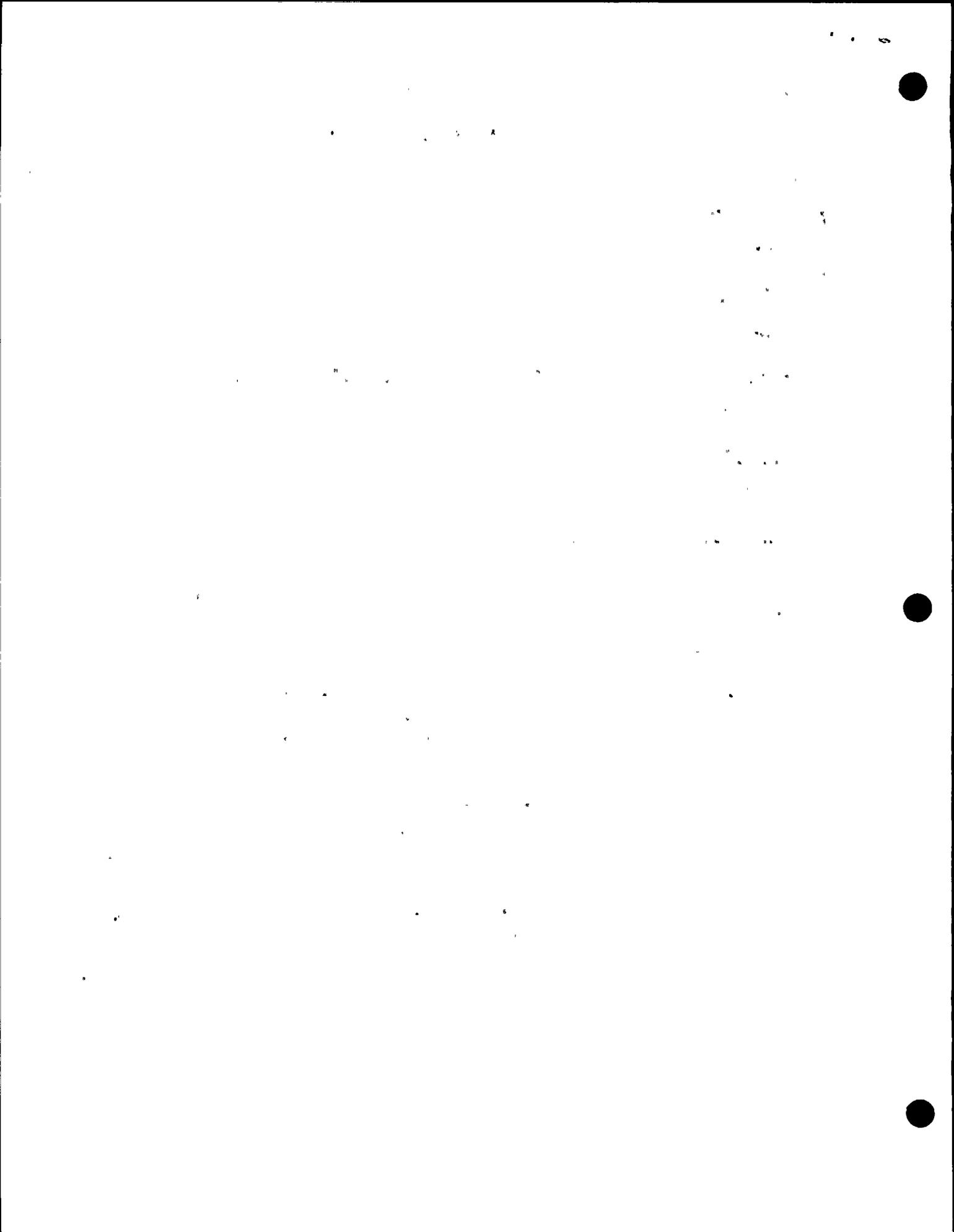
DATE

Other Accompanying Personnel: NONE

DATE

Reviewed By: *P. J. Knapp*
P. J. Knapp, Senior, Radiological and Environmental
Protection Branch

4/7/74
DATE



SUMMARY OF FINDINGS

Enforcement Action

A. Violations

None

B. Safety Items

None

Licensee Action on Previously Identified Enforcement Items

Not applicable

Unusual Occurrences

Not applicable

Other Significant Findings

A. Current Findings

The inspection was limited to a review of (1) the licensee's methods for maintaining temporary employee exposures within the limits specified in 10 CFR 20.101; and (2) discussions relative to the possibility of temporary employees having previous exposure or an overexposure which was not communicated to the licensee at the time of employment. The licensee's policy and philosophy are consistent with the requirements of the above referenced regulation.

B. Status of Previously Reported Unresolved Items

Not applicable

Management Interview

The following individuals attended the management interview held at the conclusion of the inspection on March 1, 1974.

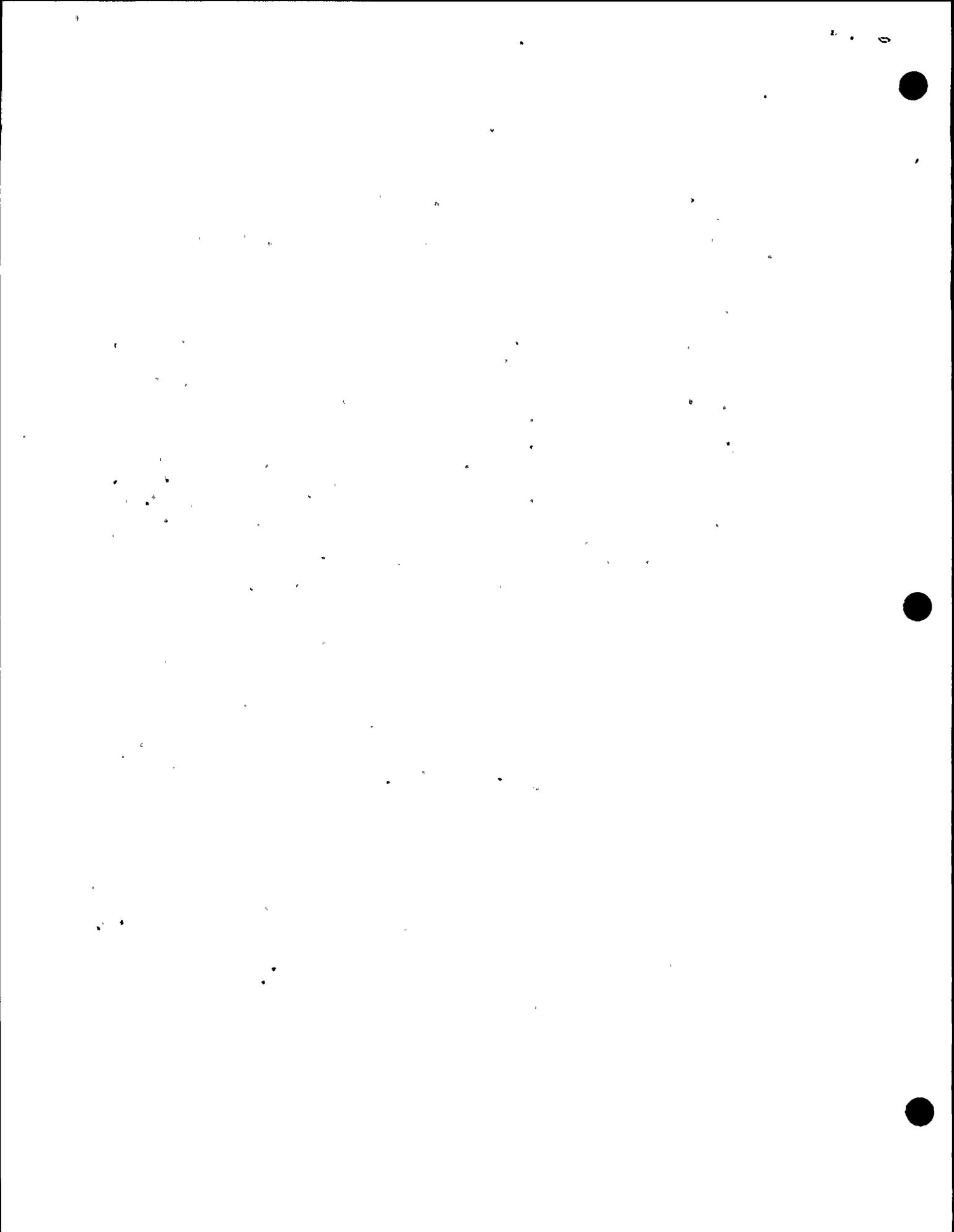


P. A. Burt, General Superintendent
T. Perkins, Plant Superintendent
R. Burns, Radiochemistry and Radiation Protection Supervisor

The following subjects were discussed:

- a. General - Potential for temporary employees receiving multiple exposures up to, or in excess of the limits specified in 10 CFR 20.101. (Details, Paragraphs 2a-d)
- b. Exposure Controls - Discussed the licensee's exposure control mechanisms. (Details, Paragraphs 3a-b)
- c. Training - Discussed radiation safety training for temporary employees. (Details, Paragraph 4a)

The licensee was receptive and responsive to all areas of interest.



DETAILS

1. Persons Contacted

P. A. Burt, General Superintendent
T. Perkins, Plant Superintendent
R. Burns, Radiochemistry and Radiation Protection Supervisor
E. Leach, Assistant to General Superintendent

2. General Discussion

- a. The inspectors reviewed with the licensee, existing practices, wherein licensees are utilizing the services of "contractors" to accomplish modifications and maintenance work at nuclear facilities. The contracted work, in some cases, involve high exposure use (man-rem), which is not available from the normal plant forces. In most cases, contractors maintain only a nucleus of supervisory personnel as permanent staff and procure additional personnel on an as needed basis. This is generally done through "Local Union Hiring Halls". This situation leads to the possibility that either temporary or permanent workers could receive a significant exposure (or an overexposure) during a quarter and subsequently receive an additional exposure (which could cause an accumulated dose in excess of regulatory limits) during the same quarter while working for a new customer.
- b. With respect to the above, one such situation occurred at the Nine Mile Point Station. The licensee had employed a contractor to accomplish plant modification work. The same contractor was also performing work at another nuclear facility. In this case, permanent contractor personnel had been at Nine Mile Point Station, during and subsequent to, work at the other facility. One of these individuals had received exposure, during the first quarter 1974, at the other facility, in excess of the limits specified in 10 CFR 20.101(b)(1).
- c. Since the above individual was considered to be a temporary employee at Nine Mile Point Station, he was issued a dosimeter and admitted to the plant in accordance with facility procedures. These procedures were noted to be generally consistent with the need for maintaining exposures at less than the limits specified in 10 CFR 20.101(a). The licensee, upon notification of the individual's exposure, recalled his dosimeter and restricted him from radiation area work. The individual, to that date, had not received exposure at the Nine Mile Point Station. The licensee stated that he would be restricted from radiation area work for the remainder of the first quarter 1974. Within the same time frame, several other personnel employed by the contractor, were



at both facilities. These individuals however, had not received exposures in excess of the limits.

- d. The inspectors discussed with the licensee, the potential for additional contractor personnel, in particular, those hired through union halls, who had received previous exposures or overexposures, appearing at the Nine Mile Point Station. The licensee stated that they would be alert to this situation, but pointed out that they were dependent upon an individual's integrity in supplying exposure history, particularly in the case of roving construction workers. The licensee was alerted to the fact that some individuals involved in work at the other facility had failed to appropriately provide previous exposure histories. The licensee stated that the work being performed by the contractor under discussion, did not involve high radiation exposures.

3. Exposure Controls (Nine Mile Point)

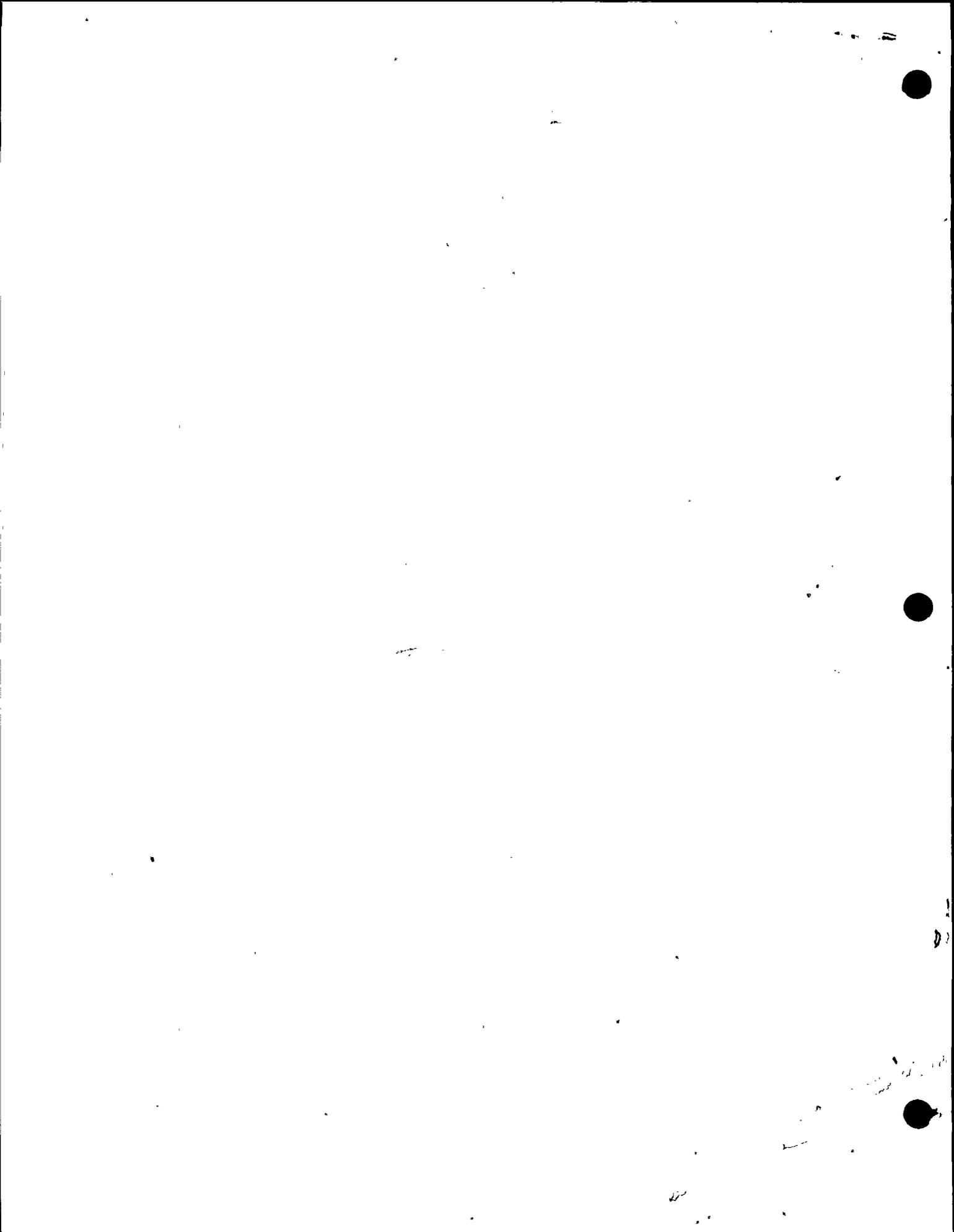
- a. The inspectors reviewed with the licensee, exposure control procedures and mechanisms that were currently in effect at the plant. It was determined that, in general, temporary employee exposures are controlled to those exposure limits specified in 10 CFR 20.101(a). Under this limit the licensee is not required to establish an exposure history on an individual. An administrative limit of 1000 millirem per quarter is further established by the licensee. When an individual reaches that limit and additional exposure is anticipated, an exposure history (AEC Form 4) is initiated. When an individual reaches the administrative limit, specific authorizations (written and signed), are required prior to receipt of additional exposure by that individual. Only at this time, would the licensee become aware of previous exposure. This would also depend upon the integrity of the individual.
- b. The work currently being performed by the contractor, according to the licensee, involves low radiation exposure. The licensee's review of exposure levels and extrapolated individual exposure use, showed that all work can be accomplished within the limits of 10 CFR 20.101(a). On that basis the licensee is employing procedural controls capable of maintaining individual exposures within those limits as required by 10 CFR, Part 20. Under these conditions, an overexposed individual (described in paragraph 2b and c) could have received an additional exposure of 1250 millirem during the exposure period (first quarter 1974). The inspectors suggested that the same situation could arise with other individuals. The licensee stated that this was unlikely, in



that they had been alerted to the possibilities.

4. Training

- a. The inspectors reviewed the licensee's training program with respect to temporary employees. It was noted that this training was consistent with the requirements of 10 CFR, Part 19.12, "Instructions to workers".





UNITED STATES
 ATOMIC ENERGY COMMISSION
 DIRECTORATE OF REGULATORY OPERATIONS
 REGION 1
 631 PARK AVENUE
 KING OF PRUSSIA, PENNSYLVANIA 19406

APR 5 1974

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

License No. DPR-17
 Inspection No. 50-220/74-02

Gentlemen:

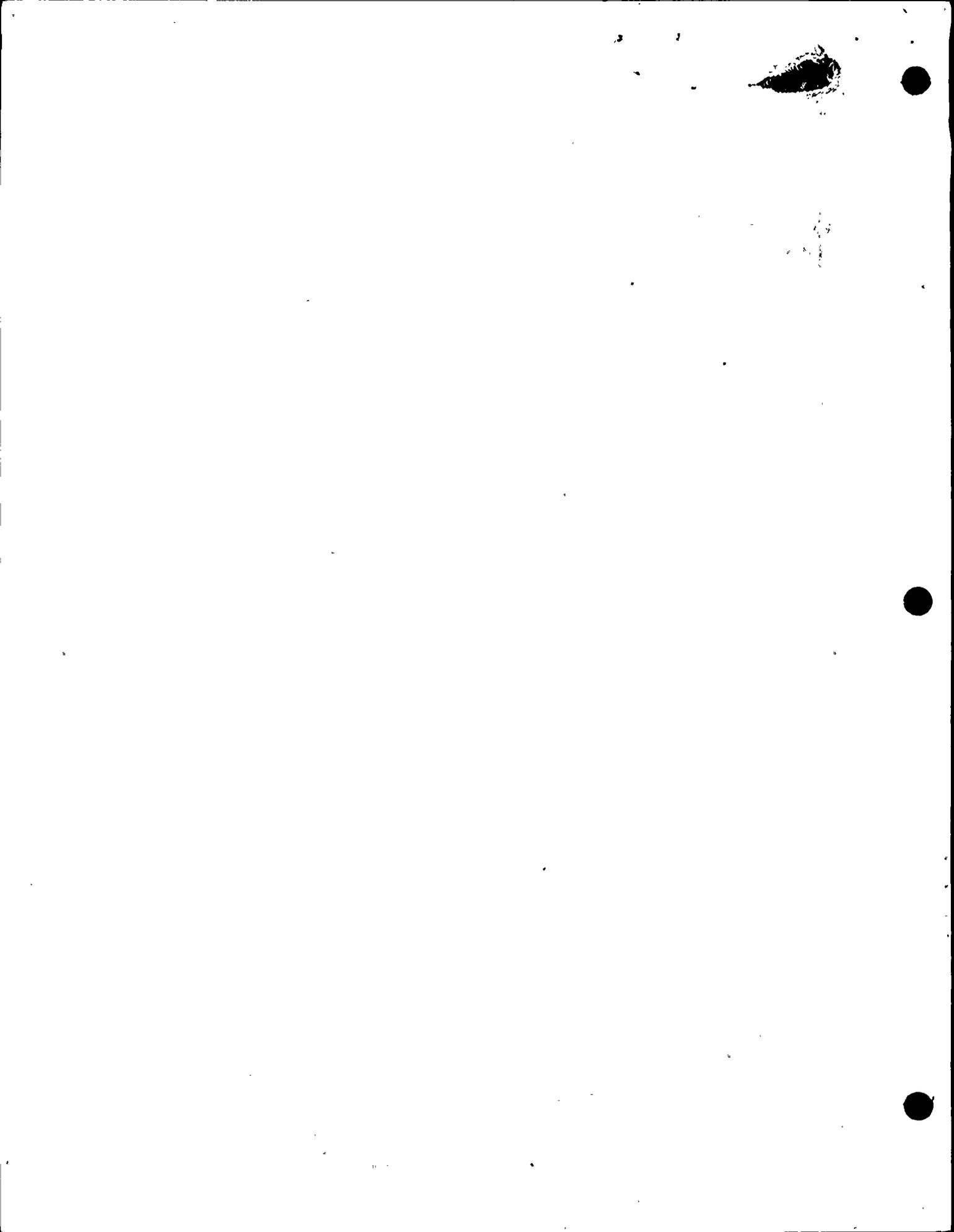
This refers to the inspection conducted by Mr. Plumlee of this office on January 27 to March 2, 1974 of activities authorized by AEC License No. DPR-17 and to the discussions of our findings held by Mr. Plumlee with Mr. Burt and Mr. Perkins of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Plumlee and Mr. Perkins on March 15, 1974.

Areas examined during this inspection are described in the Regulatory Operations 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, measurements made by the inspector, and observations by the inspector.

Our inspector also verified the steps you had taken to correct the violations brought to your attention in letters dated May 18, 1973, August 23, 1973, August 24, 1973 and September 28, 1973 following our previous inspections. We have no further questions regarding these matters.

During this inspection, it was found that certain of your activities appeared to be in violation of AEC requirements. The items and references to the pertinent requirements are listed in the enclosure to this letter. This letter constitutes a notice sent to you pursuant to the provisions of Section 2.201 of the AEC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within 20 days of your receipt of this notice, a written statement of explanation in reply, including: (1) corrective steps which have been or will be taken by you, and the results achieved; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved.

OFFICE ▶CRESS.....	<i>PLC</i>	<i>act. act.</i>			
SURNAME ▶	PLUMLEE/JAS	CAPTON	BHUNNER	<i>S'Reilly</i>		
DATE ▶	3-25-74 <i>3/29/74</i>	<i>4/4/74</i>	<i>4/4</i>			

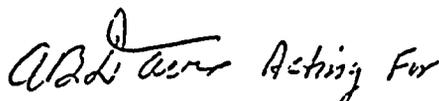


Niagara Mohawk Power Corporation -2-

In accordance with Section 2.790 of the AEC'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 AEC'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.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

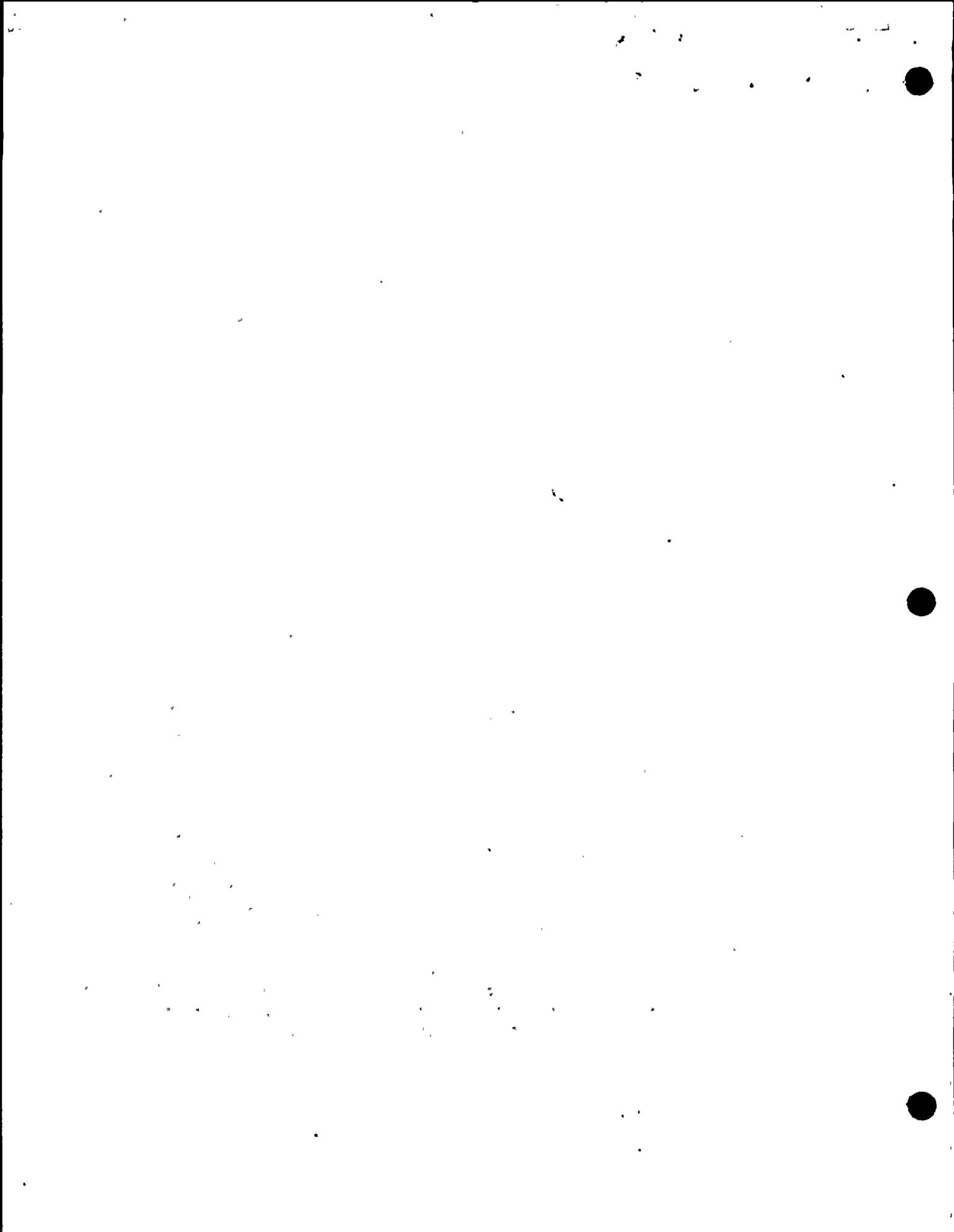


Eldon J. Brunner, Chief
Reactor Operations Branch

Enclosures:
Description of Violations
RO Inspection Report No. 50-220/74-02

cc: P. A. Burt
T. J. Perkins
E. B. Thomas, Attorney-at-Law

bcc: RO Chief, FS&EB
RO:HQ (4)
DL (4)
RO Files
DR Central Files
RS
PDR
Local PDR
NSIC
DTIE
State of Pennsylvania New York
OGC
Reg Reg Reading Room



ENCLOSURE 1

DESCRIPTION OF VIOLATIONS

Niagara Mohawk Power Company
Nine Mile Point 1
License No. DPR-17
Inspection No. 50-220/74-02

Two activities under your license appear to be in violation of AEC requirements as stated below.

The following apparent violation is considered to be of Category II severity:

1. The Final Safety Analysis Report in Part III 2.1 (page III-29) states that in the waste disposal building:

"To prevent any spilled liquid from cascading floor to floor, all stairways, open hatches, door openings and floor openings are bounded by concrete curbs, ramped sills, or lining extensions. These measures will localize any problems caused by the rupture of a pipe or tank resulting in the release of contaminated waste."

Contrary to the above, no protection against spills was found at a stairwell down from the level where the floor drain collector tank pump is located.

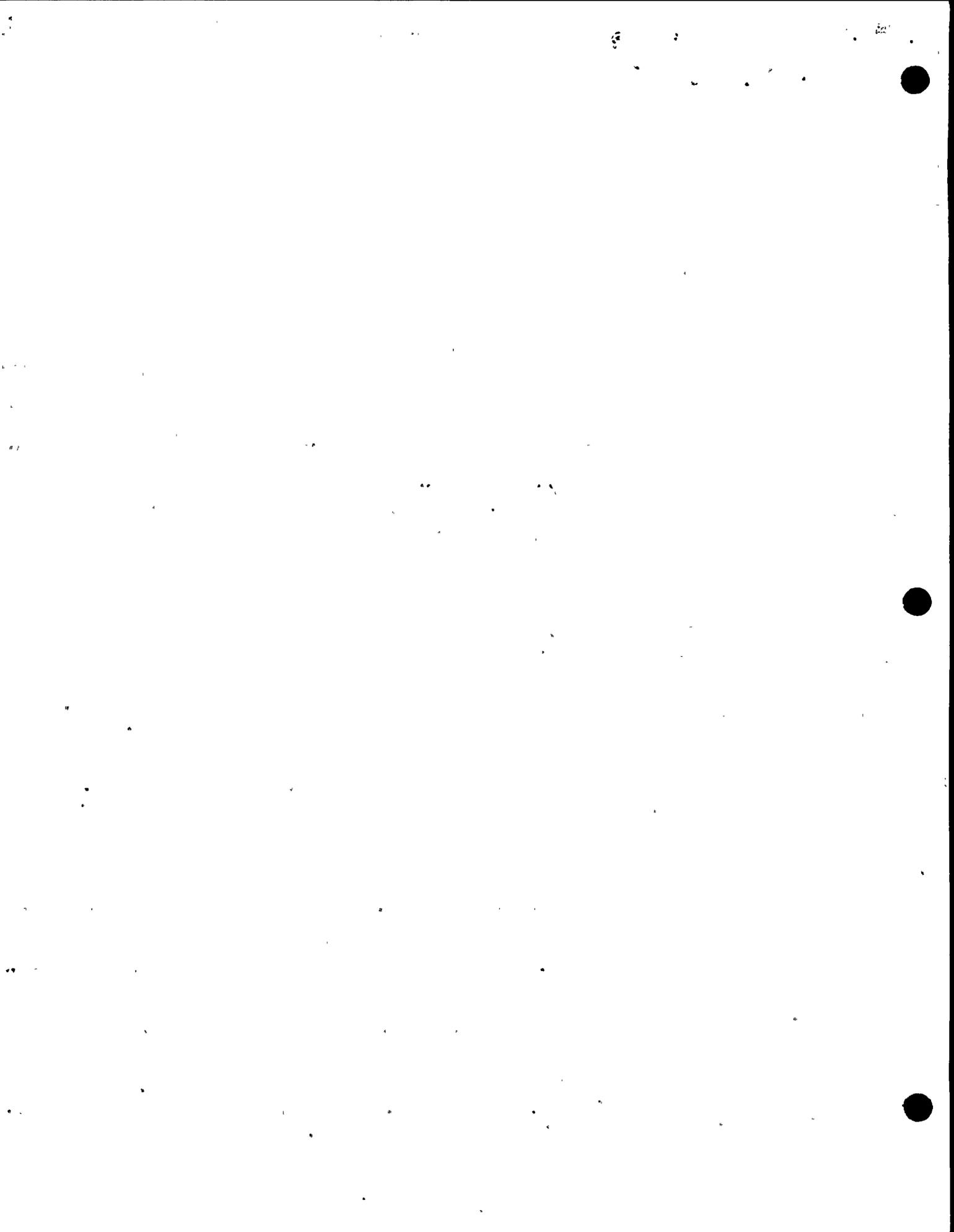
The following apparent violation is considered to be of Category III severity:

2. The Code of Federal Regulations in part 10 CFR 19.11 states in part:

"(a) Each licensee shall post current notices of the following documents: ... (2) The license, license conditions, or documents incorporated into a license by reference... ."

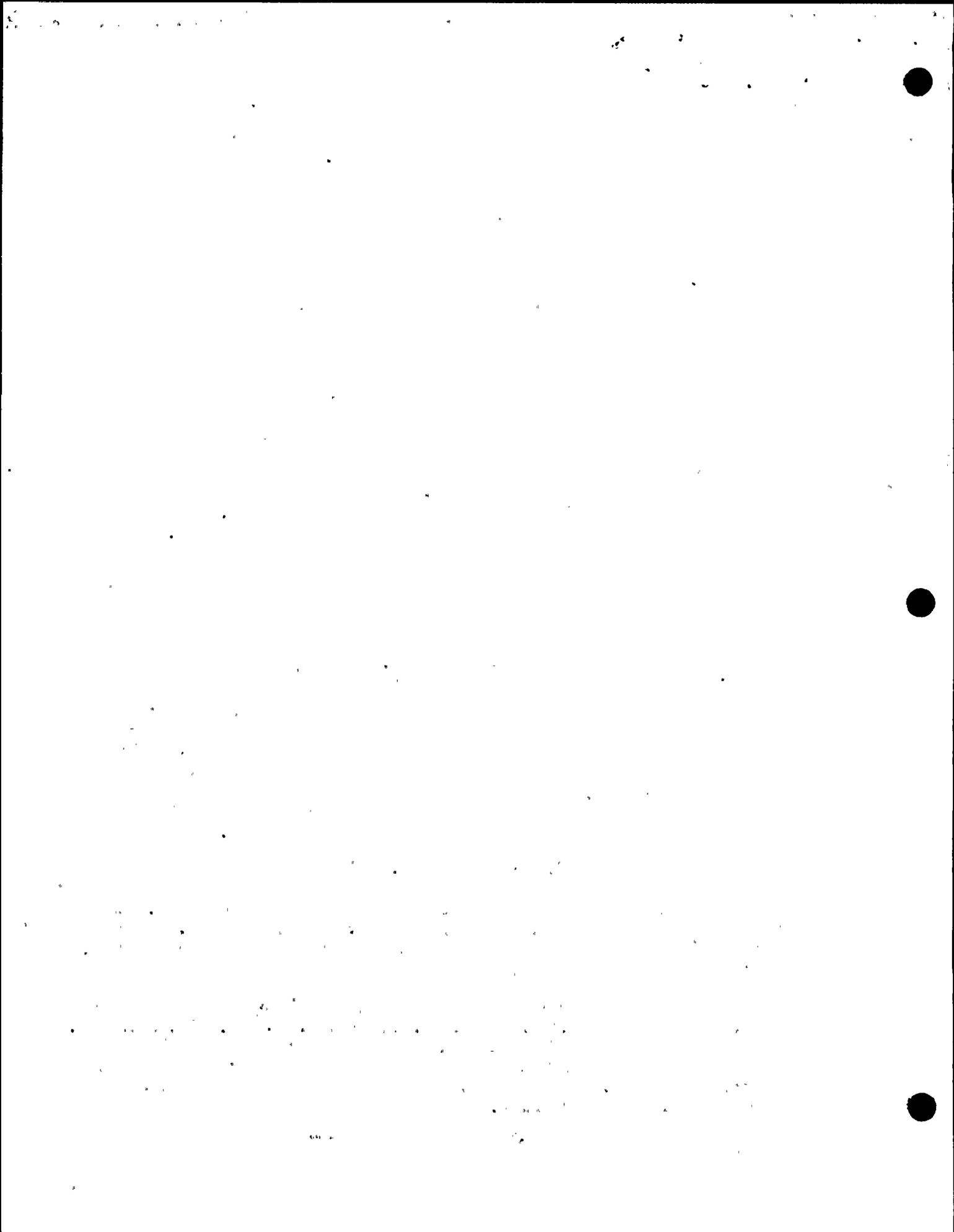
"(b) If posting a document specified in paragraph (a) (1), (2) or (3) of this section is not practicable the licensee may post a notice which describes the document and states where it may be examined."

Contrary to the above, no copy of the FSAR (as supplemented and amended) was found by inspection of the posted notices to workers. The FSAR is incorporated into the license by reference in paragraph 1 of the license.



U.S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I

RO Inspection Report No: 50-220/74-02 Docket No: 50-220
Licensee: Niagara Mohawk Power Corporation License No: DPR-17
Nine Mile Point Unit 1 Priority: _____
Category: C
Location: Scriba, New York
Type of Licensee: 1850 Mwt BWR (610 MWe - Net)
Type of Inspection: Special
Dates of Inspection: February 27-28 and March 1-2, 1974
Dates of Previous Inspection: February 19-21, 1974
Reporting Inspector: *K. E. Plumlee* 4/3/74
K. E. Plumlee, Reactor Inspector Date
Accompanying Inspectors: _____ Date
_____ Date
_____ Date
_____ Date
Other Accompanying Personnel: _____ Date
Reviewed By: *D. L. Caphton* 4/4/74
D. L. Caphton, Senior Reactor Inspector Date



SUMMARY OF FINDINGS

Enforcement Action

Violations

1. Control for Spilled Liquid in Waste Disposal Building.

Protection stated by the FSAR apparently was not provided to preclude possible cascading of contaminated spilled water down a stairway in the waste disposal building. (Details, Paragraph 5)

2. Posting of Information to Employees.

Information described by a sign pursuant to 10 CFR 19.11 was not all available at the location stated by the sign. (Details, Paragraph 2.e)

Safety

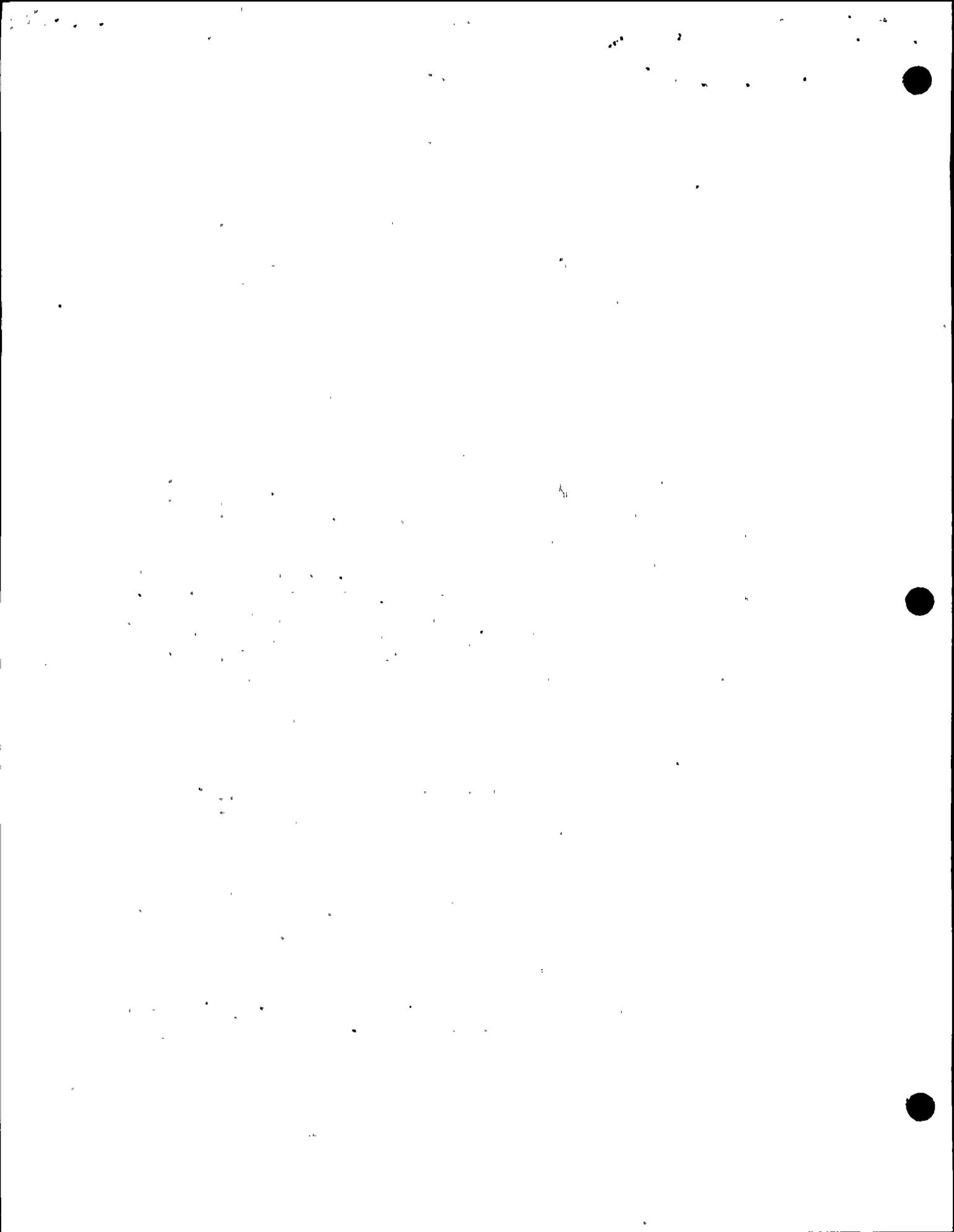
None

Licensee Action on Previously Identified Enforcement Items

As a followup to the management systems inspection conducted August 29 to September 1, and September 11-12, 1972, seven categories of apparent violations were identified in a letter to the licensee from F. E. Kreusi, RO:HQ, dated May 18, 1973. The licensee replied to the above by a letter dated July 5, 1973. Review during this inspection verified the licensee's corrective action on these items. The items are considered closed. (Details, Paragraph 7a)

As a followup to the March 7-9 and 28-30, 1973 inspection, five apparent violations were identified in a letter to the licensee from J. P. O'Reilly, Director, RO:I dated August 23, 1973. The licensee replied to the above by a letter dated September 13, 1973. Review during this inspection verified the licensee's corrective action on these items. The items are considered closed. (Details, Paragraph 7b)

As a followup to the May 14-16, 1973 inspection, one apparent violation was identified in a letter to the licensee from J. P. O'Reilly, Director, RO:I dated August 24, 1973. The licensee replied to the above by a letter dated September 10, 1973. Review during this inspection verified the licensee's corrective action on this item, which is considered closed. (Details, Paragraph 7c)



As a followup to the July 30 to August 2, 1973 inspection, three apparent violations were identified in a letter to the licensee from J. P. O'Reilly, Director, RO:I dated September 28, 1973. The licensee replied to the above by letters dated October 10 and November 27, 1973. Review on this inspection verified the licensee's corrective action on these items. This matter is considered closed.

Design Changes

1. The licensee plans to load 8 x 8 design fuel during the upcoming refueling outage. (Details, Paragraph 8)
2. The licensee apparently plans to remove an Electromatic relief valve and install a Target-Rock safety/relief valve in its place in conjunction with installation of a Prompt Relief Trip system and other changes recommended by G. E. (Management Interview, Item 8, and Details, Paragraph 8)
3. The licensee plans to relocate the second stage reheater drain tank level controller to a more accessible point as well as to repair or replace the controller during the upcoming refueling outage. The controller failed and has limited the maximum power level at ~95% during January and February 1974. (Management Interview, Item 6)

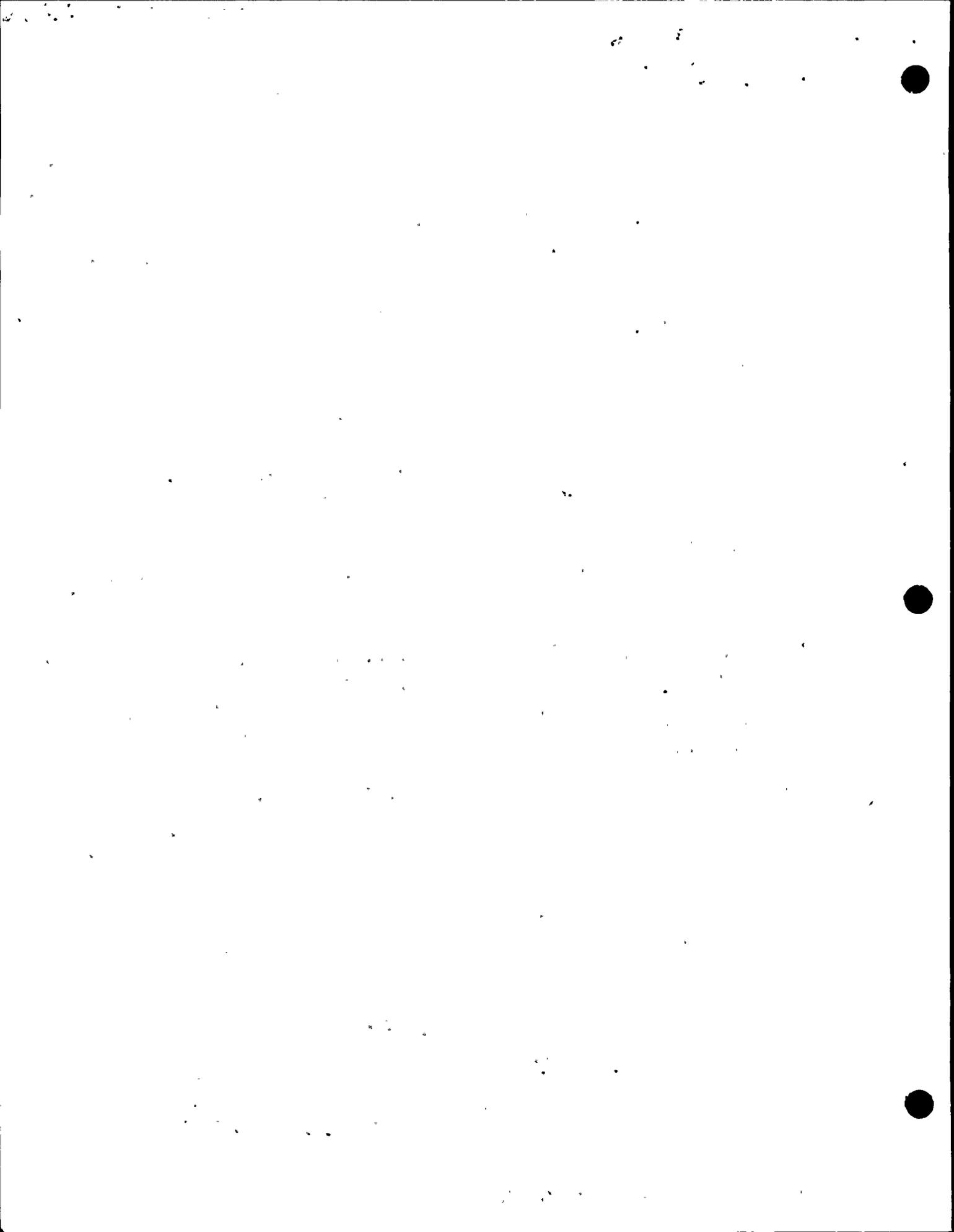
Unusual Occurrences

1. Drifting Set-Points

- a. A reactor low low water level trip was found 0.4 inches above the +2.6 inch maximum deviation stated by the Technical Specifications in a bases description. (Management Interview, Item 7 and Details, Paragraph 6e)
- b. A core spray differential pressure set point was found 0.5 inches below the 5 (+0,-1) psid setpoint range stated by the licensee's procedures. (Details, Paragraph 6f)

2. Mercury Switch Failure

The scram dump volume level trip failed apparently because the glass bulb of a mercury switch cracked and allowed the mercury to oxidize. (Details, Paragraph 6g)



3. Control Rod Undertravel on Scrams

On two reactor scrams, first 11 and then 15 of the 129 control rods inserted only to position 02, which is $\frac{1}{2}$ inch short of the expected fully inserted or 00 position. Selection for individual operation enabled full insertion of each rod that undertraveled on scram. (Details, Paragraph 6a, and Management Interview, Item 2)

4. Problems with 115kv Off-site Power Availability

- a. Off-site power was lost, causing a reactor scram from 207°F (just-critical conditions) during a startup, when a plant electrician inadvertently bumped a relay that caused interruption of power from the 115kv reserve line. The other 115kv line had been deenergized for line work and was not available. (Details, Paragraph 6h)
- b. Availability of the reserve power transformer was lost for a few hours when a ground occurred on the 4kv secondary line, at the transformer. No interruption of reactor operation occurred. (Details, Paragraph 6h)

5. Recirculation Flow Anomaly, Resulting in a Scram

An unexpectedly large increase in recirculation flow occurred at 77% power during a startup, on November 20, 1973. A high flux reactor scram followed, and an anticipatory turbine trip occurred. (Details, Paragraph 3 and 6b)

6. IRM Spike during planned shutdown, resulting in a scram

An unexplained spike and scram on the intermediate range monitor (IRM) scrambled the reactor at 850 psi during a planned shutdown on November 26, 1973. (Details, Paragraphs 3 and 6c)

Other Significant Findings

A. Current Findings

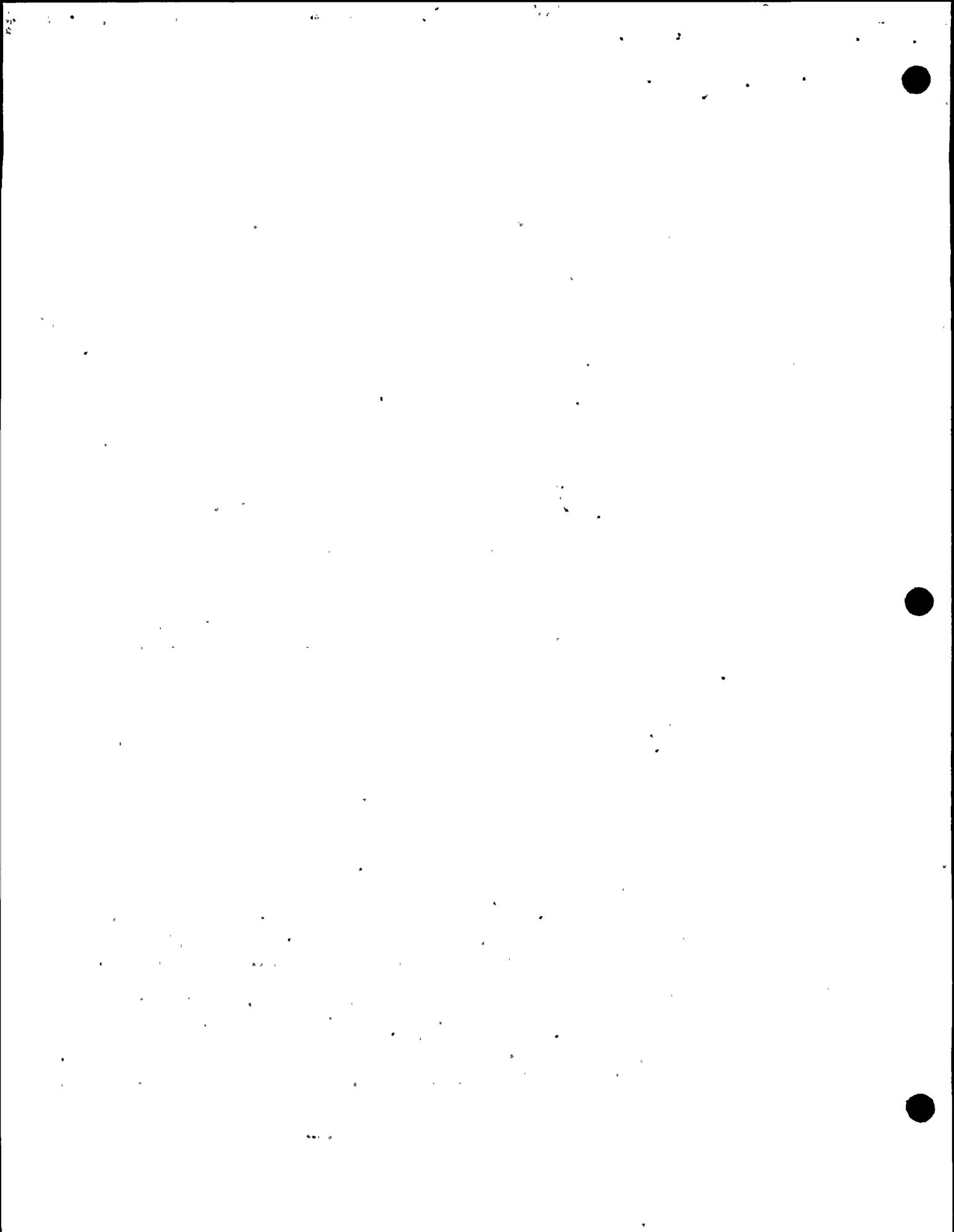
None

Status of Previously Reported Unresolved Items

1. Cable Tray Cover in Drywell

The licensee's representative stated that the cable tray cover, which had been found sagging on a previous inspection* of the

*Inspection Report 50-220/73-07



drywell, had been straightened. The licensee attributed this problem to shutdown maintenance activities. This item is considered closed.

Management Interview

The management interview was conducted on March 1, 1974 with Mssrs. P. A. Burt and T. J. Perkins. The following items were discussed.

1. Apparent Violations

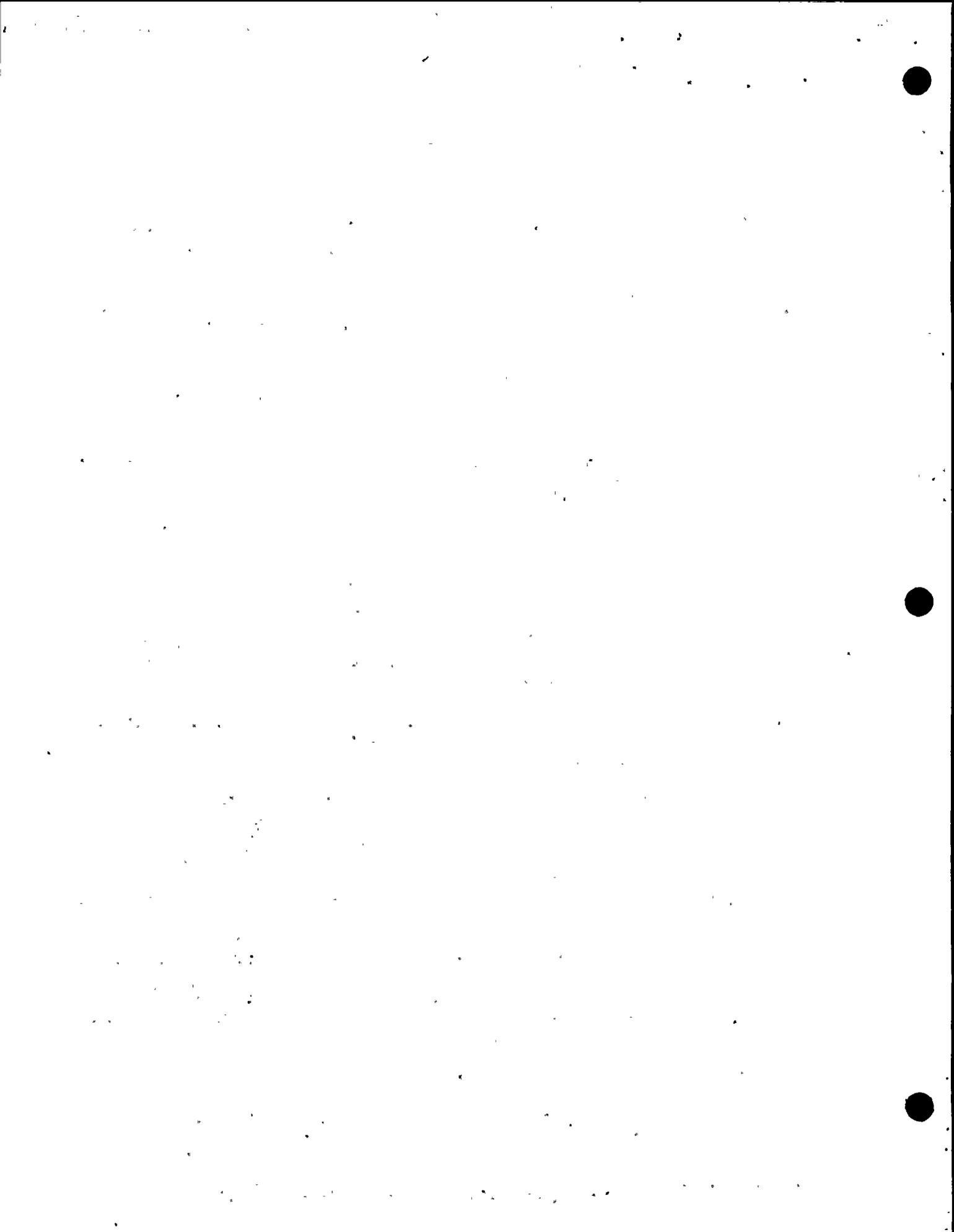
- a. Control of spills in waste disposal building. The inspector stated that an apparent violation was lack of a curb or other protection against spillage of contaminated water down a stairway in the waste disposal building, although protection was required by a statement on Page III-29 of the FSAR. (Details, Paragraph 5)
- b. Misplaced (posted) information to employees. The inspector stated that an apparent violation was lack of a copy of the FSAR at the location described by signs posted pursuant to 10 CFR 19.11 describing the location of the FSAR and other information. (Details, Paragraph 2e)

The inspector stated that in addition to the violation the posted signs were not specific as to which of two locations contained any given document described, and that the availability of all items was poor because of lack of conspicuous labeling. The inspector stated that he considered ready availability of this information to be a requirement of 10 CFR 19.11.

2. Maintenance Planned on Control Rod Drives

The inspector stated that he had reviewed the licensee's plans and schedule for repairing up to 129 control rod drive units during the forthcoming refueling outage but had not found a clear indication that rebuilding kits were on hand or that spare drives were ready.

The licensee's representative stated that sufficient rebuilding kits had been ordered and should be on hand but he had not yet verified their receipt. The overhaul of spares will be under the direction of G. E. Company representatives who will train, and also oversee work by Nine Mile Point personnel on that job until completed.



The licensee's representative stated that replacement of control rod drive units would include all that failed to scram to position 00 (nineteen in all), and all others having deficiencies such as high stall condition flow. He continued, that further rod maintenance would depend on evaluation of the need following inspection and testing during the outage, if necessary all 129 drives would be rebuilt.

3. Refueling Procedure Status

The inspector stated that there were no completed procedures for refueling available for review even though SORC minutes indicated conditional approval on February 8, 1974. The inspector asked what was delaying the procedures.

The licensee's representative stated that procedural details were still being resolved in accordance with the SORC action.

4. Schedule for Test of HPCI Lineup and Startup with Reserved Off-site (Hydro-) Power as Sole Supply)

The inspector asked if an approved procedure and a definite date had been established for testing the HPCI lineup* under power grid blackout (simulated) conditions.

The licensee's representative stated that details and the date of the test were still being resolved but the intent was to complete the test during the upcoming refueling outage.

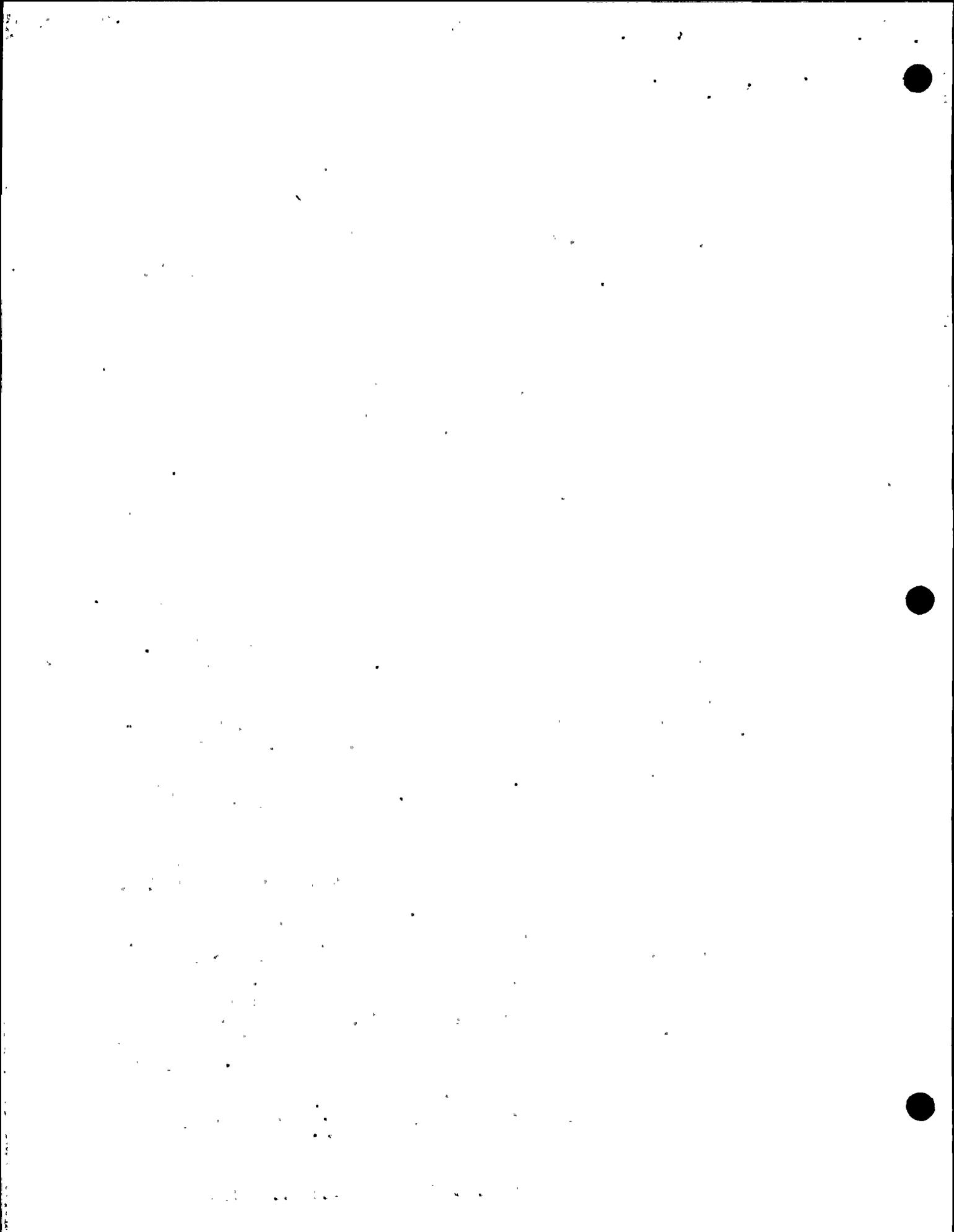
5. Schedule for Completion of Radwaste System Modification

The inspector asked what schedule applied to completion of modifications to the radwaste system. The inspector stated a concern over maintenance requirements of the present system up to the time that modifications would be completed. (Details, Paragraphs 4b and 5)

The licensee's representative stated that the modifications would be completed by the close of 1975, as scheduled, barring unforeseen problems. He continued, that valves were a present procurement problem. He added that no major problem was foreseen in using the present system through 1975.

6. Reheater Tank Level Controller Replacement

The inspector asked when the second stage reheater tank level controller would be fixed.



The licensee's representative stated that relocation and repair or change out would be made during refueling and that replacement would be feasible thereafter if there is another failure, without waiting for a shutdown.

7. Application of Set-Point Lock for Barton #288 Switches

The inspector stated that the licensee had committed to modify the Barton #288 differential pressure switches to avoid set-point drift (Unusual Occurrence l.b.), and the inspector asked for a description of progress with this change.

The licensee's representative stated that routine instrument calibration schedules would be followed and that the modification would be made at the time each instrument was next due for calibration, with 100% completion by the end of the refueling outage.

8. Installation of a Prompt Relief Trip (PRT) System

The inspector stated that he had seen information on SRAB review of PRT items and he understood that some wiring had been pulled preliminary to connecting up circuits. The inspector stated that prior concurrence by the Director of Licensing (DL) appeared necessary before either activation of a PRT or carrying out some of the other steps recommended by the G. E. Letter to Niagara Mohawk Power Company dated September 13, 1973 which apparently are contrary to present Technical Specifications. (Details, Paragraph 8)

The licensee's representative stated that no immediate change was planned and that DL concurrence would be obtained when necessary.

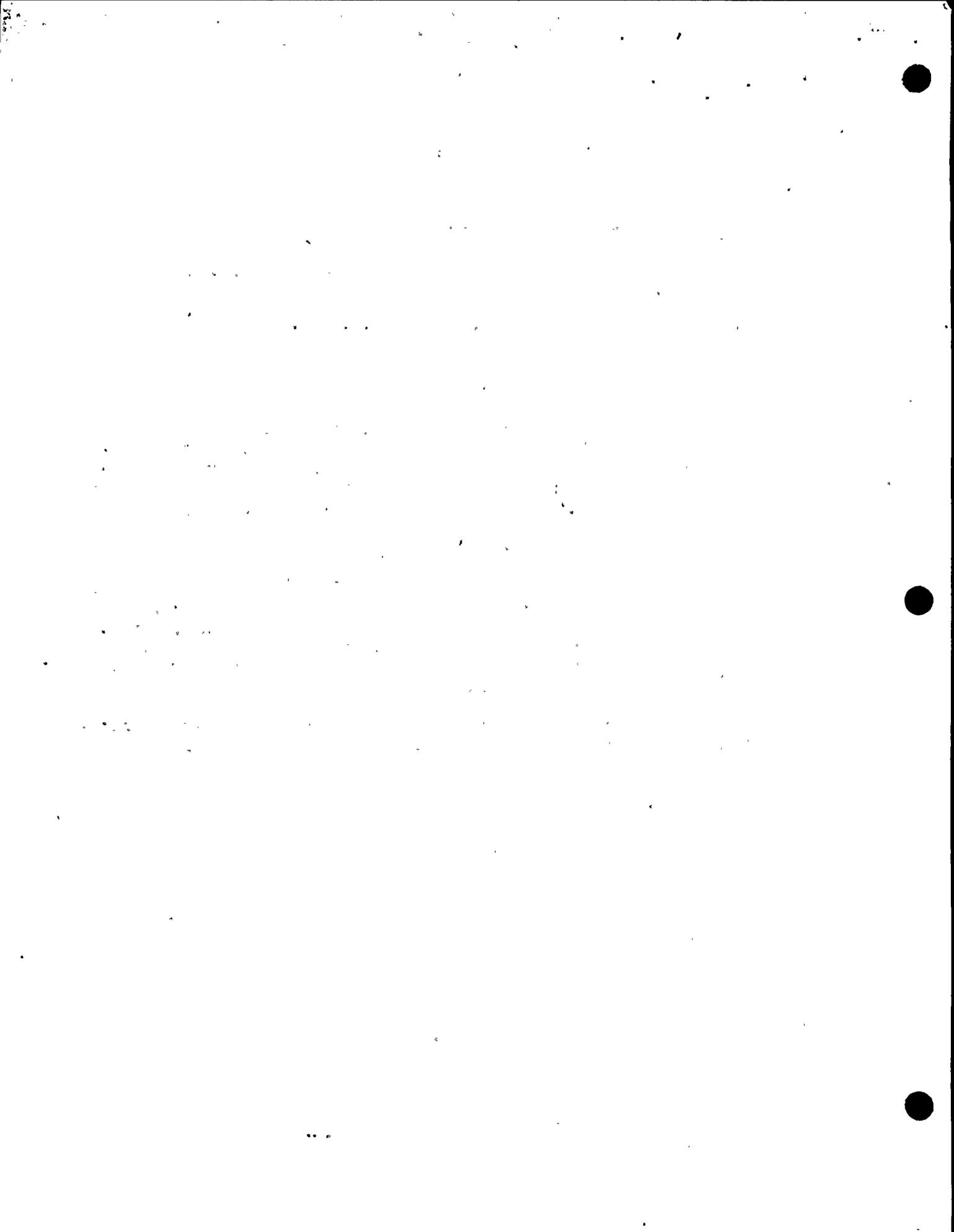
9. Review and Updating of Procedures

The inspector asked what progress was made with procedure review.

The licensee's representative stated that as Nine Mile Point 1 operating procedures were reviewed the format would be made consistent with the Fitzpatrick procedures; and that site* radiation protection procedures were already issued; site administrative procedures would be issued about April 1, and site emergency procedures would be issued about May 1, 1974. He added that the Operator Training and Requalification Plan had already been implemented, and that a revision was in progress on the security plan.

The licensee's representative stated a reluctance to spend the funds involved in security matters before receiving approval for the plan.

* "Site" indicates applicability to both NMP #1 and FitzPatrick



10. Licensee's Reporting Requirements

The inspector discussed Regulatory Guide 1.16 with the licensee's personnel.

The licensee's representative stated that they were following the Guide, in all reports to the AEC.

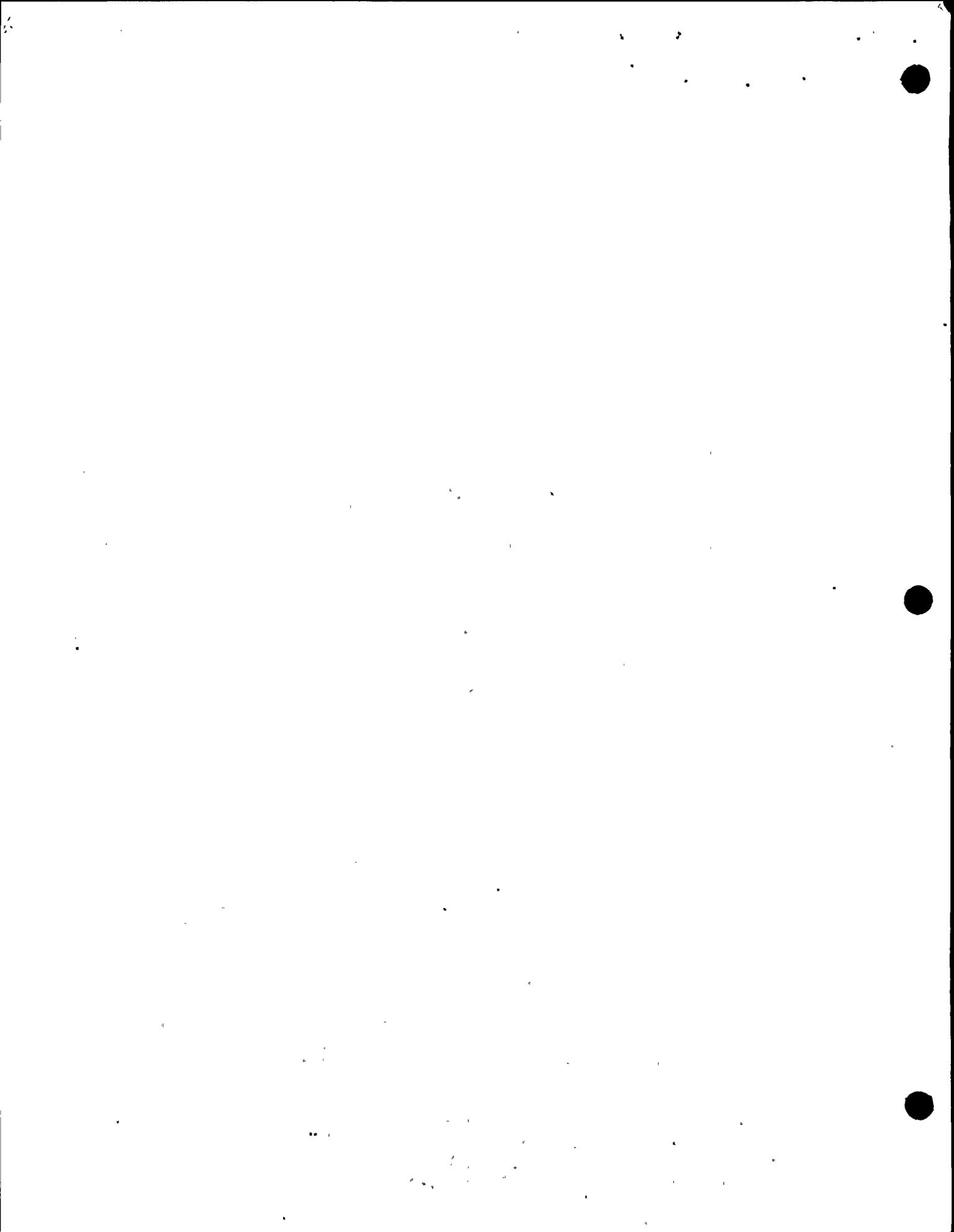
11. Offshift Inspection

The inspector stated that he had made an offshift inspection of operation at 3 AM on February 27, 1974. The inspector stated that the purpose was to verify the number of operations personnel present and the conduct of work at that time. Within the scope of the inspection, no problem was found. (Details, Paragraph 9)

12. Inspection of Waste Disposal Building

The inspector stated that he had inspected the area where the floor drain collector tank pump was located because of a concern over upkeep of equipment and management of spills. He continued, that an apparent violation was found in that area (see Violations, and Management Interview, Item 1A), however, the spilled water had been collected by the drain system.

The condition of the pump, which had broken and caused an estimated 1,500 gallon spill, was discussed. (Details, Paragraph 5)



DETAILS

1. Persons Contacted

The following persons were interviewed:

P. A. Burt, General Superintendent Nuclear Generation
T. J. Perkins,* Superintendent Nine Mile Point Nuclear Generating
Station
C. L. Stuart, Jr.,** Assistant to Superintendent
M. D. Jones,* Assistant to Superintendent
M. A. Silliman, Results Supervisor
R. J. Pasternak, Reactor Analyst Supervisor
T. J. Dente, Assistant Reactor Analyst Supervisor
K. A. Dahlberg, Assistant to the General Superintendent
J. Duell, Assistant Radiochemistry and Radiation Protection Supervisor
V. Upcraft, Area Safety Supervisor
E. W. Curry,* Station Shift Supervisor
F. C. Lilly,* Station Shift Supervisor
R. L. Raymond,* Station Shift Supervisor
J. J. Shea,* Station Shift Supervisor
R. Ingham,*** Shift Operating Foreman
T. Jermyrn,*** Nuclear Auxiliary Operator
M. Turner, Auxiliary Operator
H. T. Master, Maintenance Foreman
J. J. Luber, Plant Operations Clerk

2. Organization and Administration

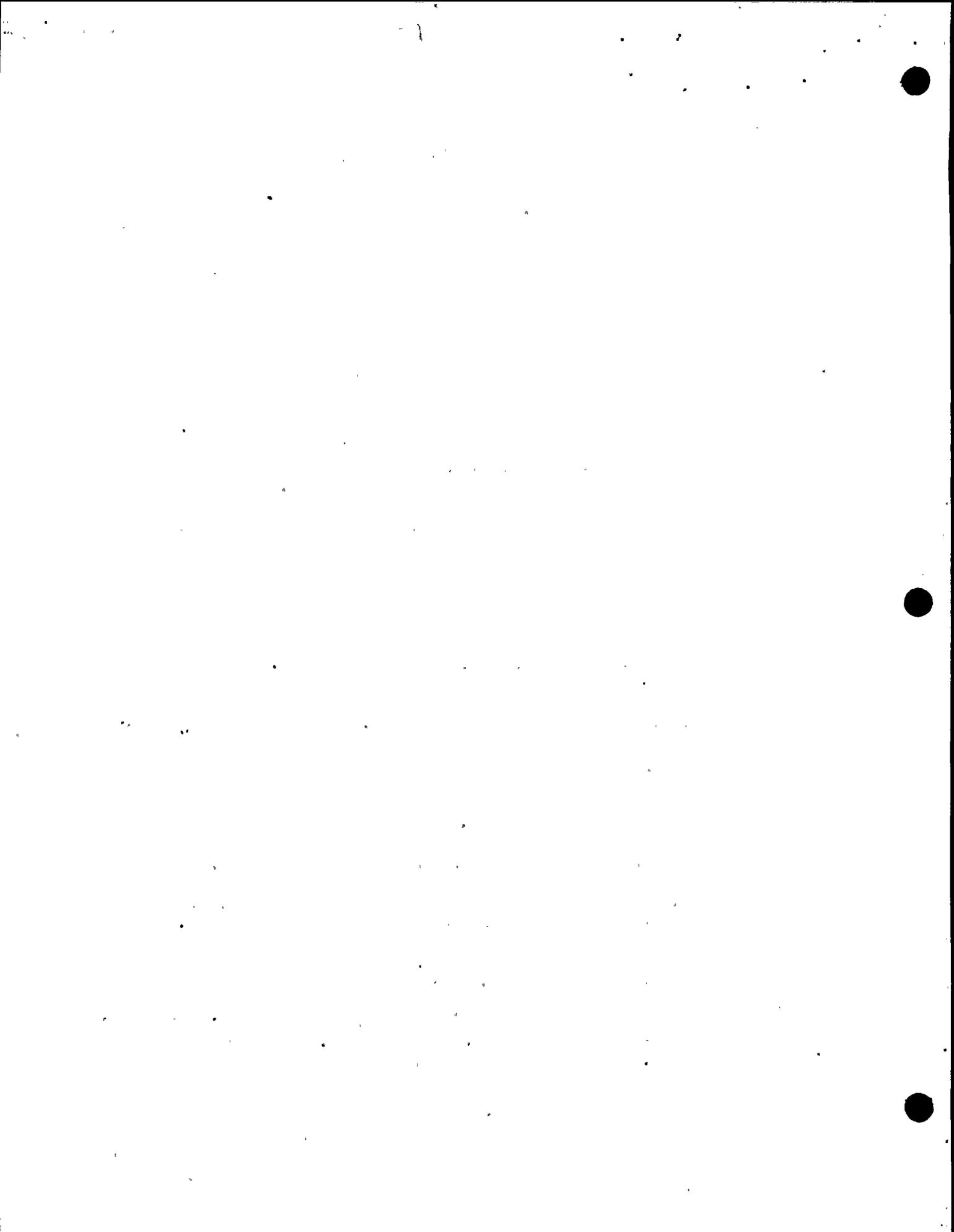
a. Corporate Structure

The licensee's representative stated that no change directly affecting supervision of Nine Mile Point 1 was made in the corporate management since the preceding inspection of this item during March, 1973.**** Attachment No. 1 to this report is a copy of the licensee's corporate organization chart.

b. Nuclear Generation Organization

The licensee's representative stated that some additions and reassignments of personnel had been made since March, 1973, but none of these were in the direct line of supervision of

* Licensed Senior Reactor Operator (SRO)
** Station Shift Supervisor and SRO
*** Licensed Reactor Operator (RO)
**** Inspection Report No. 50-220/73-01



shift operation. Attachment No. 2 is a copy of the licensee's organization chart showing responsibility for supervision of shift operation. Changes not yet shown by Attachment No. 2 are the assignment of K. A. Dahlberg as assistant to the General Superintendent and V. Upcraft as Area Safety Supervisor.

c. Safety Review and Audit Board (SRAB)

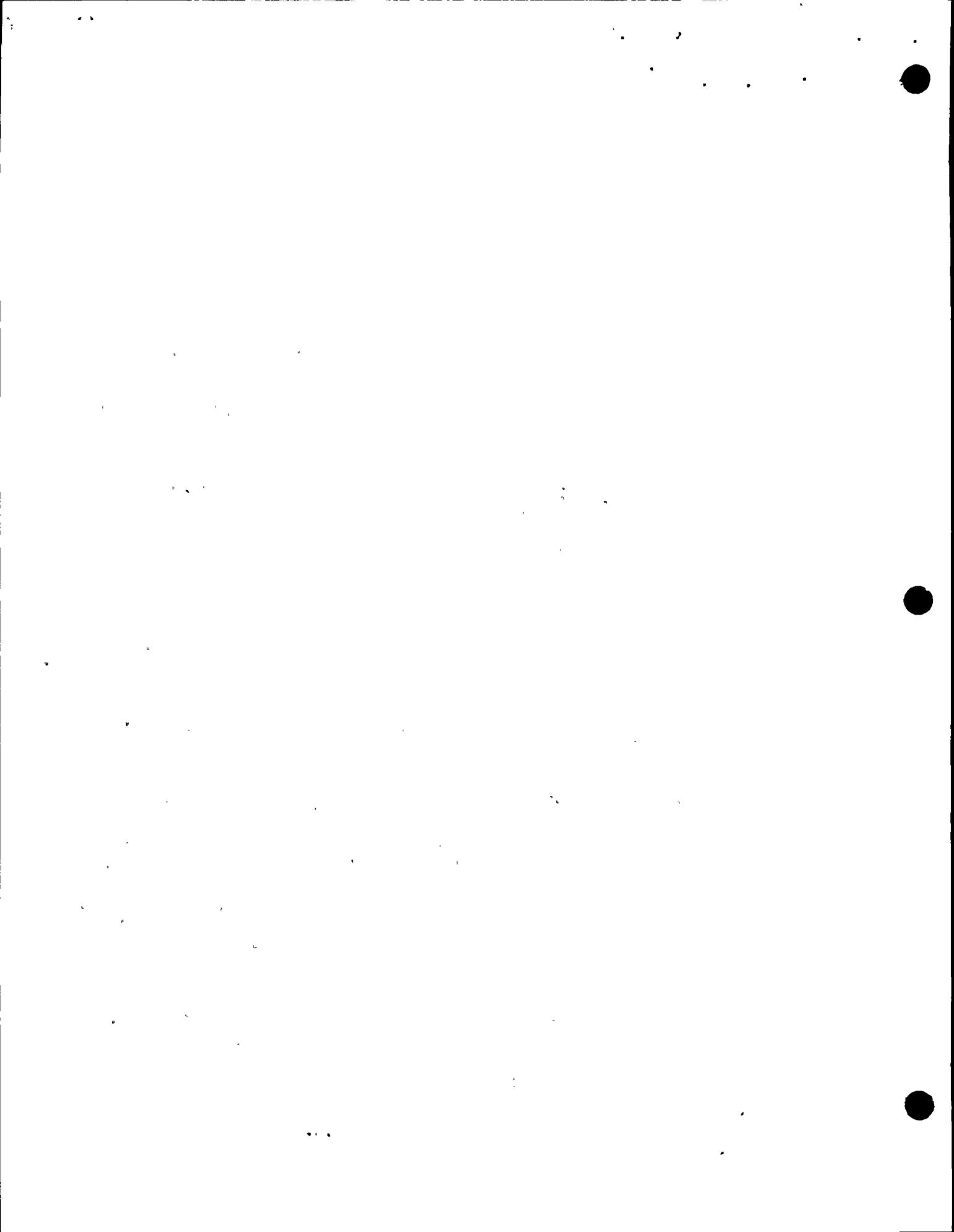
The inspector reviewed minutes of 8 SRAB meetings from February 5 to October 24, 1973 (at least quarterly meetings are required by the Technical Specifications). Minutes for the most recent meeting were not yet available. The current membership is as follows, and is unchanged since March, 1973.

G. K. Rhode, Chairman (Manager - System Engineering)
P. A. Burt, (General Superintendent Nuclear Generation)
L. Geller, Consultant
M. C. Leverett, Consultant (GE)
C. V. Mangan (Manager System Engineering Generation and Licensing)
C. R. Montgomery, Consultant (GPU)
M. H. Pratt, Consultant (Retired NMP Co. Vice President Engineering)
W. A. Rumberger, (Division Manager Central Engineering)
F. J. Schneider, (Retired NMP Co. Vice President Operations)

d. Site Operations Review Committee (SORC)

The inspector reviewed minutes of 46 SORC meetings from May 15, 1973 to February 22, 1973 (at least monthly meetings are required by the Technical Specifications). The current membership is as follows and is unchanged since March, 1973:

P. A. Burt, Chairman (General Superintendent Nuclear Generation)
T. E. Lempges, (Superintendent James A. FitzPatrick Nuclear Power Plant)
M. A. Silliman, (Results Supervisor)
J. L. Wise, (Resident Engineer, FitzPatrick Plant, PASNY)
R. W. Smith, (Maintenance Supervisor)
R. A. Burns, (Radiochemistry and Radiation Protection Supervisor)
L. E. Bollin, (Instrument and Control Supervisor)
R. J. Pasternak, (Reactor Analyst Supervisor)



e. Information to Employees

Inspection of posted information required by 10 CFR 19.11 identified the following problems:

- (1) Although the FSAR as amended was described by the posted signs, no copy was found at either of two locations stated by the signs.
- (2) The signs did not specify at which of two locations any given document was kept.
- (3) No conspicuous label was applied to (most of) this information to make it quickly identifiable from other filed information stored on the same shelf.

3. Operations

a. General Description of Operation

Review of the licensee's records indicated that since inspection on October 17-20, 1973* the reactor was typically operated at 1700 to 1800 MWt except for the following shutdowns.

October 18-23, 1973 - Outage for repair of drywell leaks.

November 16-18, 1973 - Planned outage for operator's licensing examinations.

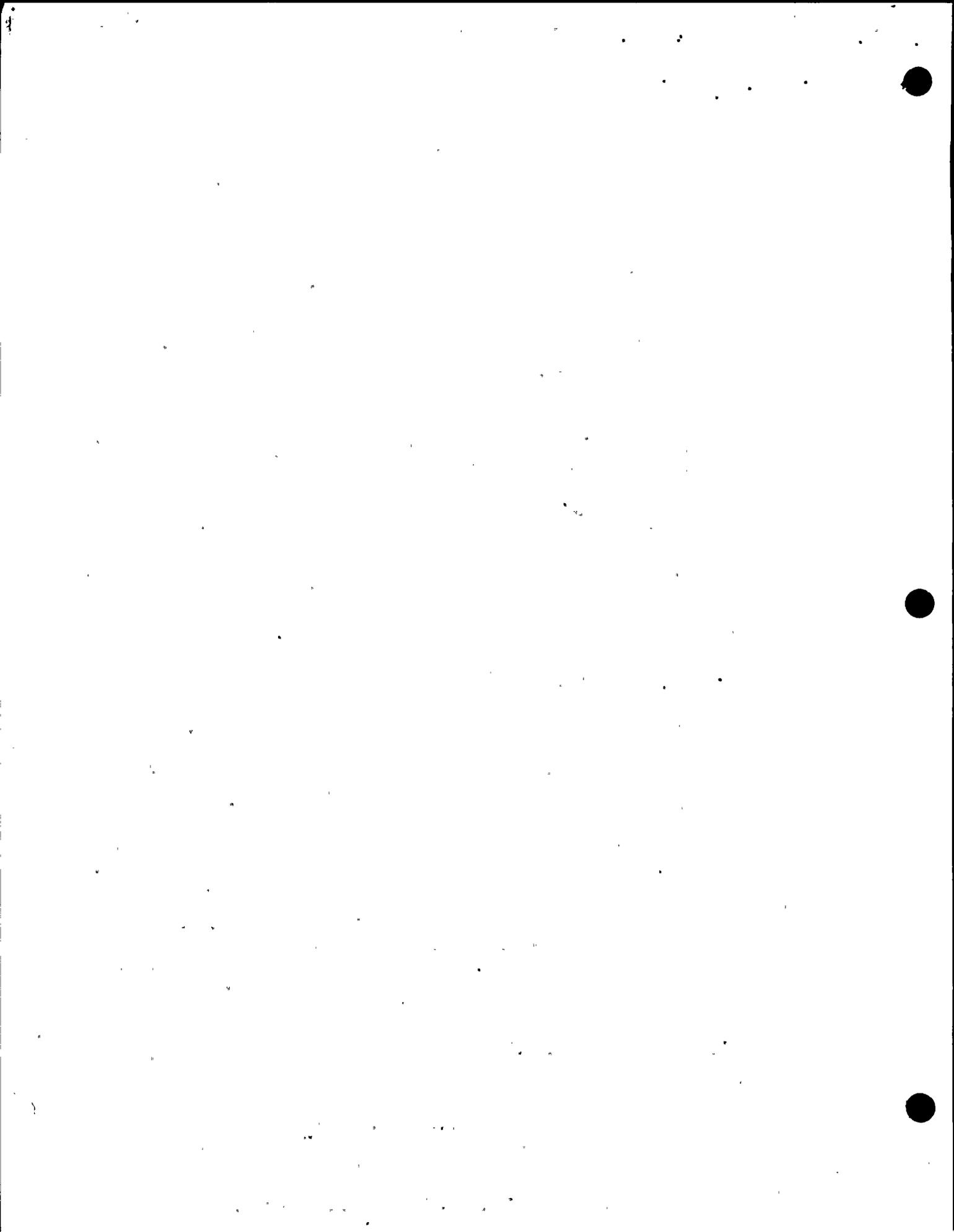
November 20, 1973 - Scram during return to power (Unusual Occurrence, No. 5)

November 26-29, 1973 - Outage for repair of drywell leaks.

Power was limited because of: (1) Limitations while preconditioning fuel during return to power and also after changes in control rod positions; (2) Failure of the second stage reheater drain tank level controller early in January, 1974; and (3) Icing of cooling water during cold weather, necessitating reverse cycling of intake and discharge flow.

b. Operations Records

The inspector reviewed the Station Shift Supervisor's (SSS) Log Books and the Shift Operating Foreman's (SOF) Log Books for the period between October 20, 1973 and March 1, 1974, and startup check sheets for October and November, 1973. No problem was identified.



4. Facility Procedures

a. Procedures and Schedule for the Refueling Outage

The licensee's personnel referred to procedures used previously for replacement of control rod drive units, which are approved procedures.

The licensee's personnel showed the inspector their worksheets indicating provision of time and manpower for the upcoming outage, which includes changing several rod drives. (Management Interview, Item 2)

The licensee's personnel were still working out the details of the refueling procedure. (Management Interview, Item 3)

The licensee's representatives are continuing their review and updating of procedures. (Management Interview, Item 9)

b. Inspection of Procedure No. 28, Liquid Waste System

The inspector reviewed Procedure No. 28, and read the liquid waste building log books for December 3, 1973 through March 1, 1974. The inspector spot-checked completed liquid waste transfer forms for December 1973 and January, 1974.

The procedure now requires grab sampling for pH determinations. The waste neutralizer tank pH meter was stated by the licensee's representative to be removed permanently from service. The records indicated that waste neutralization was routinely performed, but only a few entries of measured pH were found. The recorded values were within the range of pH 6 to 9 stated by the procedures.

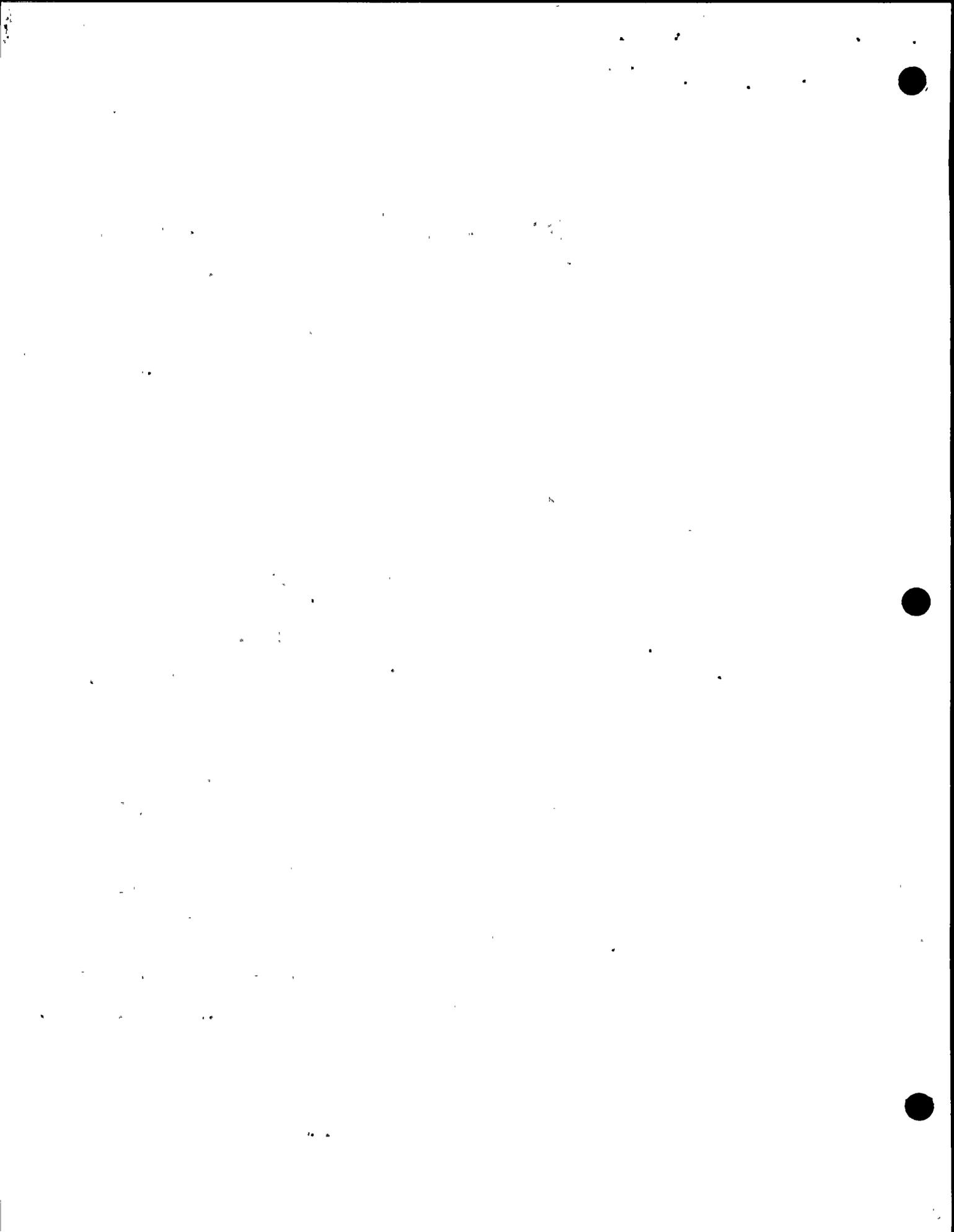
A previous inspection* had identified a problem with upkeep and calibration of the waste neutralizer tank pH meter. No problem was found on this inspection involving the present use of grab samples and a portable pH instrument at the sink. This item is considered closed.

5. Management of Water Spills

a. Waste Disposal Building Spill

The licensee's representative described the spill of about 1,500 gallons of water when the pump for the floor drain

*Inspection Report No. 50-220/73-04, Management Interview, Item C



collector tanks broke open, on February 26, 1974. Apparently the water went to the floor drain system and was automatically pumped back into the floor drain collector tank. When inspected, the tank was being drained by a cross-tie to another pump as needed.

Inspection of the failed pump indicated that about ten square inches of the impeller casing had broken out and that an 18 inch long arc-shaped crack formed the outer boundary of the opening and extended clockwise and counterclockwise beyond the missing piece (Inspector's estimates).

Inspection of the impeller and the shaft sleeve (under the packing) indicated that they were badly worn (but usable). The inboard bearing felt rough.

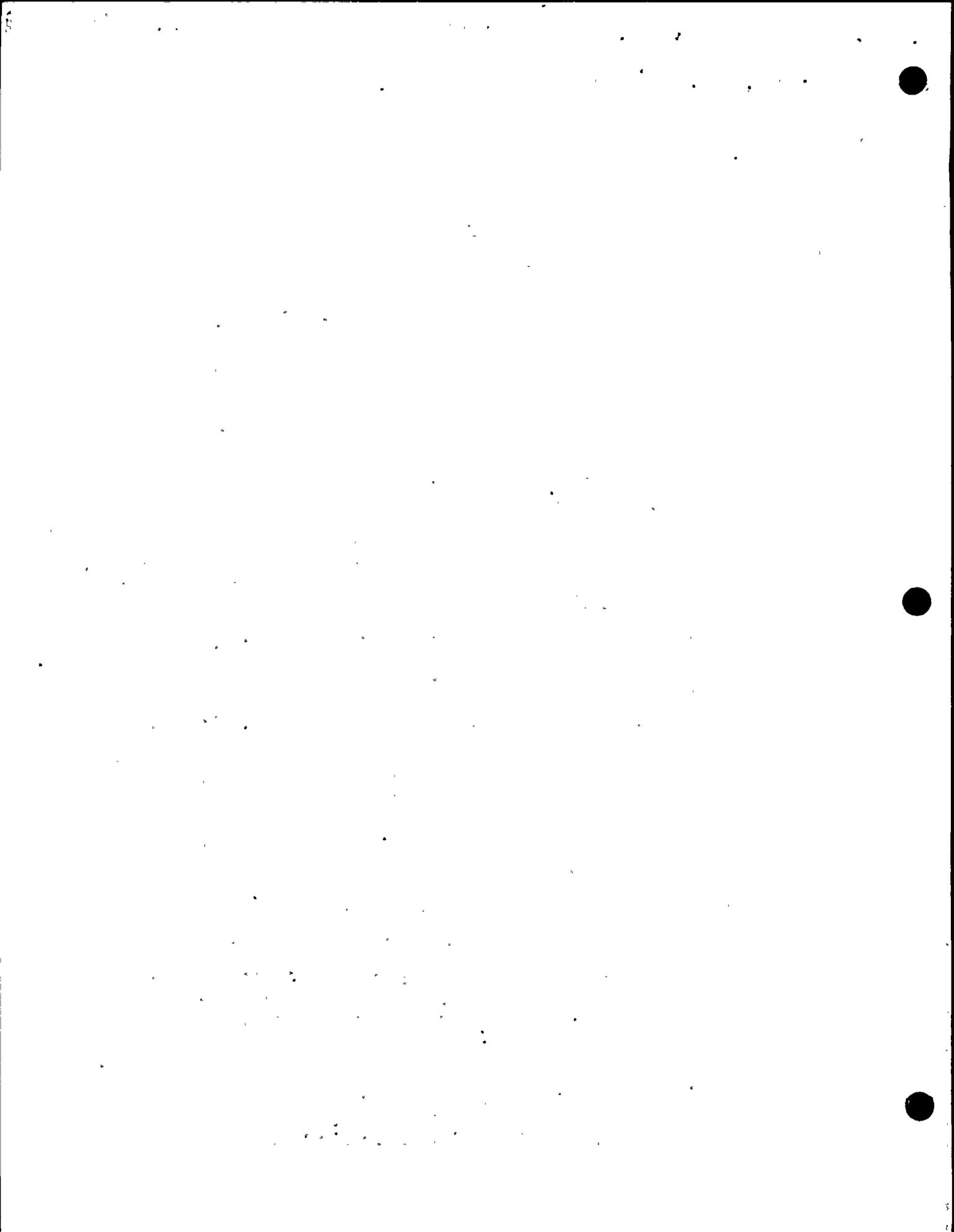
Inspection of the surroundings resulted in identification of a stairwell (down to another level) for which there apparently was no curb or other protection against spillage.

The inspector noted that protection against floor to floor spillage was described by the FSAR in part III 2.1 (Page III-29), and that the above condition was in apparent violation of that description. (See Violations, and Management Interview, Item 1a)

b. Filter Precoat Tank Overflow

The licensee's representative described the spill of about 1,000 gallons of water when a valve failed on February 12, 1974, and the filter precoat tank overflowed as a result. The spill was collected by the floor drain system.

The licensee's corrective action was to isolate the reactor water cleanup system, and to replace a butterfly valve liner. The system had previously been out of service for about 12 hours, and was out of service for several more hours during valve repair. The licensee's process records indicated that reactor water conductivity increased from about 0.4 micromhos/cm initially, up to ~0.8 micromhos/cm during that interval, and that water activity increased but no technical specification limits were reached.



6. Abnormal Occurrences and Unusual Events

a. Control Rod Undertravel on Scrams

Scrams on November 20* and 26,** 1973 resulted in first 11 and then 15 rods failing to reach the expected fully inserted position, however the undertravel was only ½ inch. The licensee committed to overhaul these rod drive units,* as stated during the Management Interview, Item 2, and by Paragraph 4a.

The inspector reviewed the procedure status and schedule status for this work.

b. Recirculation Flow Anomaly

A scram occurred* on November 20, 1973 when an abrupt increase in recirculation flow followed an adjustment by the operator. The licensee's representative stated that no specific cause was established but no recurrence has been identified with this item.

Inspection did not identify any further problem.

c. Intermediate Range Monitor (IRM) Scram

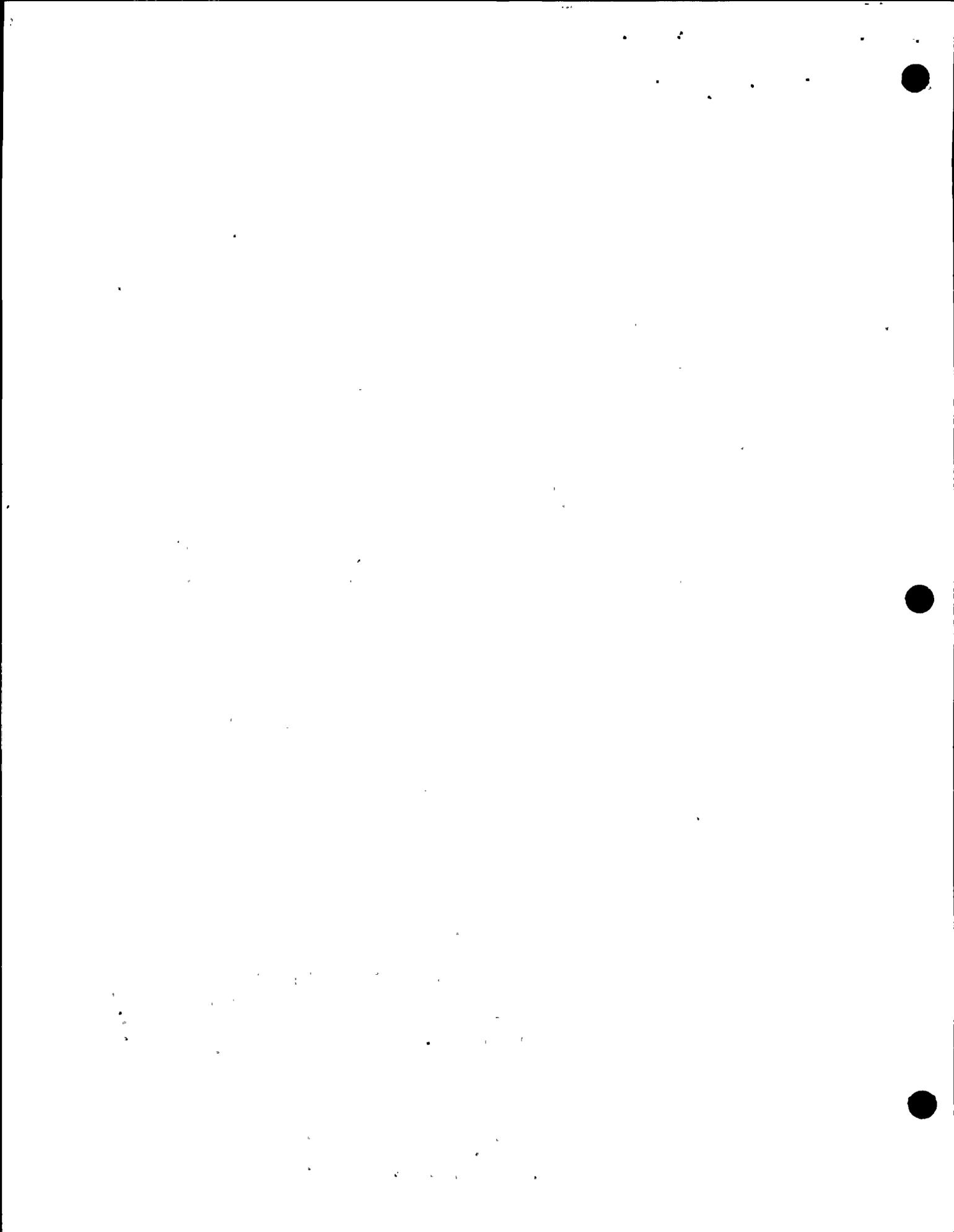
The IRM circuit spiked and scrambled the reactor** on November 26, 1973 during a planned shutdown, with reactor pressure at 850 psi. The licensee's representative stated that routine calibration and maintenance of IRM equipment were considered sufficient to assure upkeep of this equipment.

Inspection did not identify any further problem with the IRM's.

d. Trip Circuit for Recirculation Pumps

The licensee had installed a circuit which was to trip all recirculation pumps if reactor pressure reached 1150 psig, but later disconnected this circuit***. The SORC review of this item identified (after it was installed) that the circuit was connected to a 1080 psig trip instead of a 1150 psig trip. (No explanation of this delay was found).

* Licensee's letter to DL dated November 28, 1973
** Licensee's letter to DL dated December 3, 1973
*** Licensee's letter to DL dated November 30, 1973



Inspection indicated that the installation had been made on a routine ANA (apparatus needing attention) maintenance order and had been done as directed. The licensee's representative stated that the designer specified connection to the 1080 psig trip and that review prior to installation failed to identify the discrepancy.

Inspection indicated that no trip had occurred during the time this circuit was active, and that the requirements for this trip were being re-evaluated.

e. Reactor Low Low Water Level Set Point Drift

The licensee's routine surveillance test on November 10, 1973 found* one of the four reactor low low water level trips operating at three inches above the nominal setpoint as compared to a Bases statement for the Technical Specifications in part 3.6.2 stating a maximum allowable deviation of +2.6 inches from the nominal setpoint. The trip was readjusted, and tested satisfactorily.

Inspection of the licensee's daily, monthly, and quarterly surveillance records did not identify any subsequent problem with water level switches. (See Management Interview, Item 7)

f. Core Spray Header Differential Pressure Set Point Drift

One (of two) core spray differential pressure setpoints was found at 3.5 psid instead of the 5 (+0, -1) psid setpoint stated by the licensee's procedures when routinely tested** on February 25, 1974.

The licensee's commitment and schedule for corrective action on this item was discussed during the Management Interview, Item 7 (Barton #288 Switches).

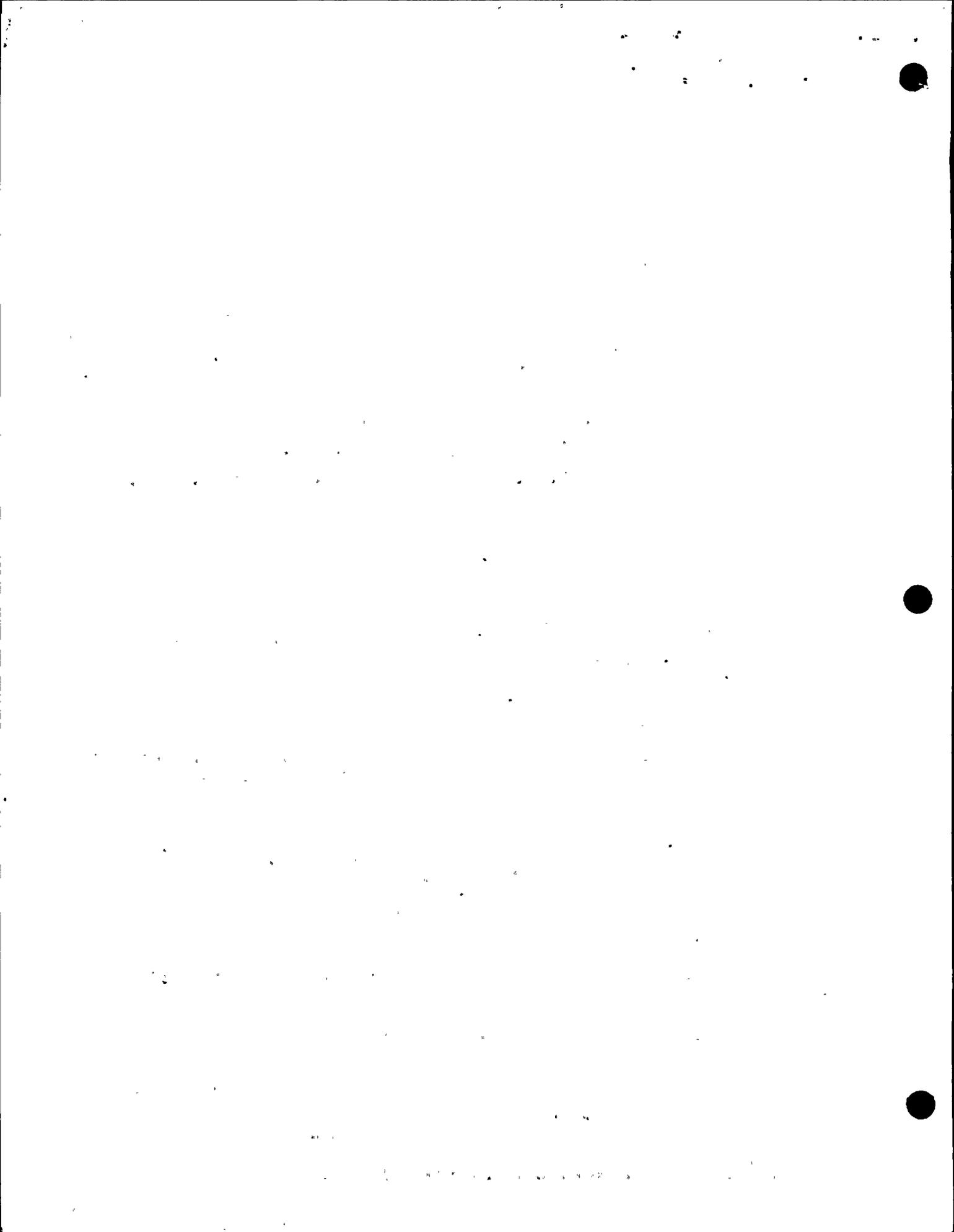
g. Mercury Switch Failure (Scram Dump Volume Level Trip)

Electrical failure of the scram dump volume level trip was found by the licensee's routine test on December 1, 1973.*** The licensee's investigation identified a cracked glass bulb containing a mercury switch, and the failure was attributed to oxidation of the mercury by air leakage. The switch was replaced.

* Licensee's letter to DL dated December 19, 1973

** Licensee's letter to DL dated March 8, 1974

*** Licensee's letter to DL dated December 10, 1973



The licensee is requiring inspection of mercury switches for evidence of oxidation on routine surveillance tests, where feasible.

Inspection did not identify any recurrence of this problem.

h. Off-Site Power Loss

The availability of the reserve 115kv off-site power line was lost on November 13 and again on November 17, 1973*. The first occurrence resulted from a ground on the 4kv (secondary) conductor at the transformer. The other 115kv line was energized at the time and no interruption of reactor operation occurred.

The second interruption was at a time when the other 115kv line was deenergized for line work and the reactor was just critical during startup. The power loss resulted from an accidental bump of a relay. The reactor scrambled.

The licensee's corrective action was reviewed and no subsequent problem was identified by inspection.

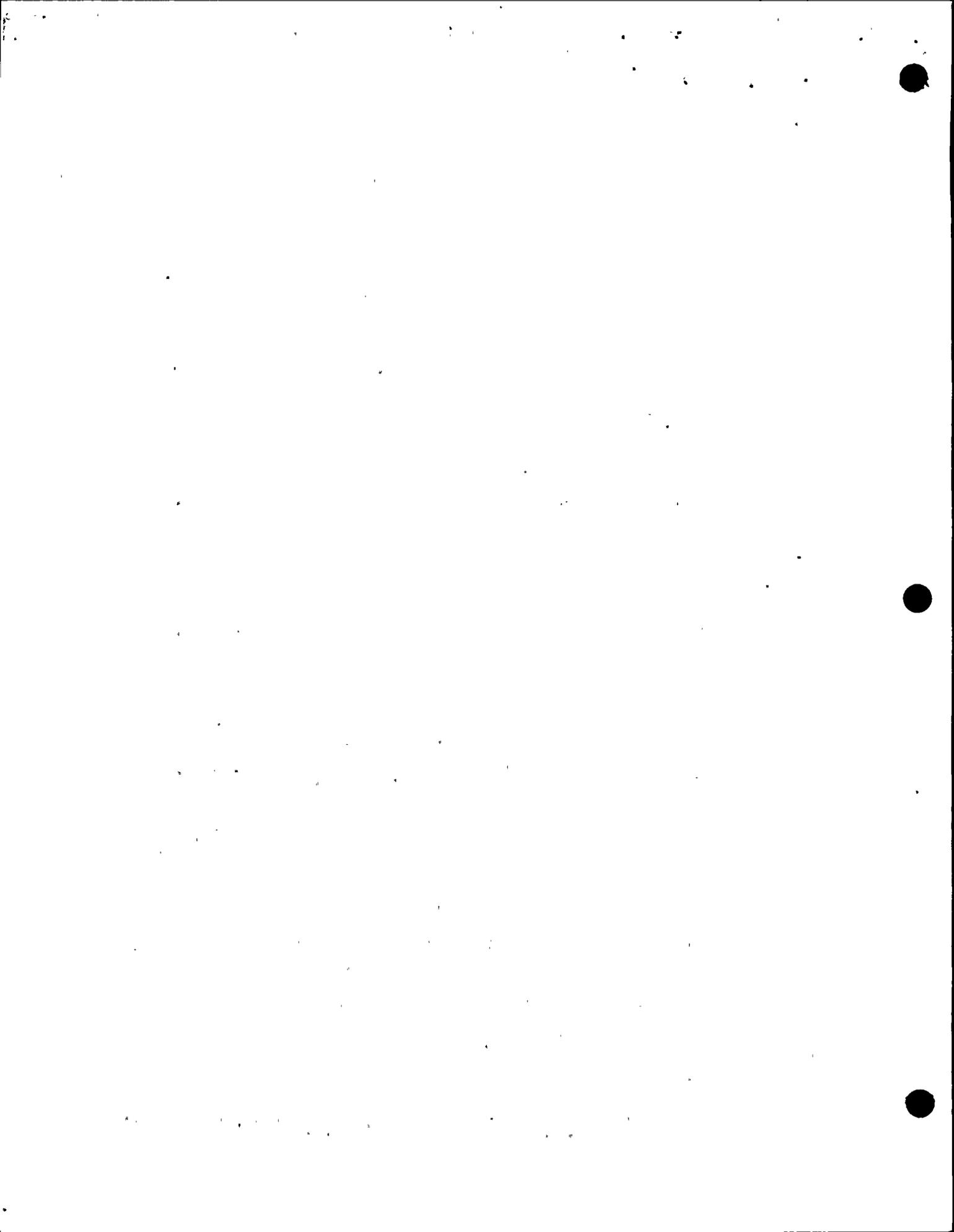
7. Inspection of Corrective Action on Previously Identified Enforcement Items

Inspection indicated that the licensee's corrective action had been carried out as stated by the reply to each of the following items (a, b, c, and d).

a. The letter from F. E. Kreusi to the licensee dated May 18, 1973 (following a management systems inspection), required the licensee to reply on the following (seven) items:

- (1) Scram testing of control rods with reactor pressure above 800 psig.
- (2) Verification of liquid poison system pump discharge pressure and flow.
- (3) Check of reactor coolant system leakage at least once per day.
- (4) SRAB reviews and recommendations for corrective action on violations.

* Licensee's letter to DL dated November 21, 1973



- (5) Upkeep of respiratory protection equipment.
- (6) SORC reviews of procedures.
- (7) Preparation of written safety analyses on changes to the facility.

The licensee replied to each of the above by a letter dated July 5, 1973.

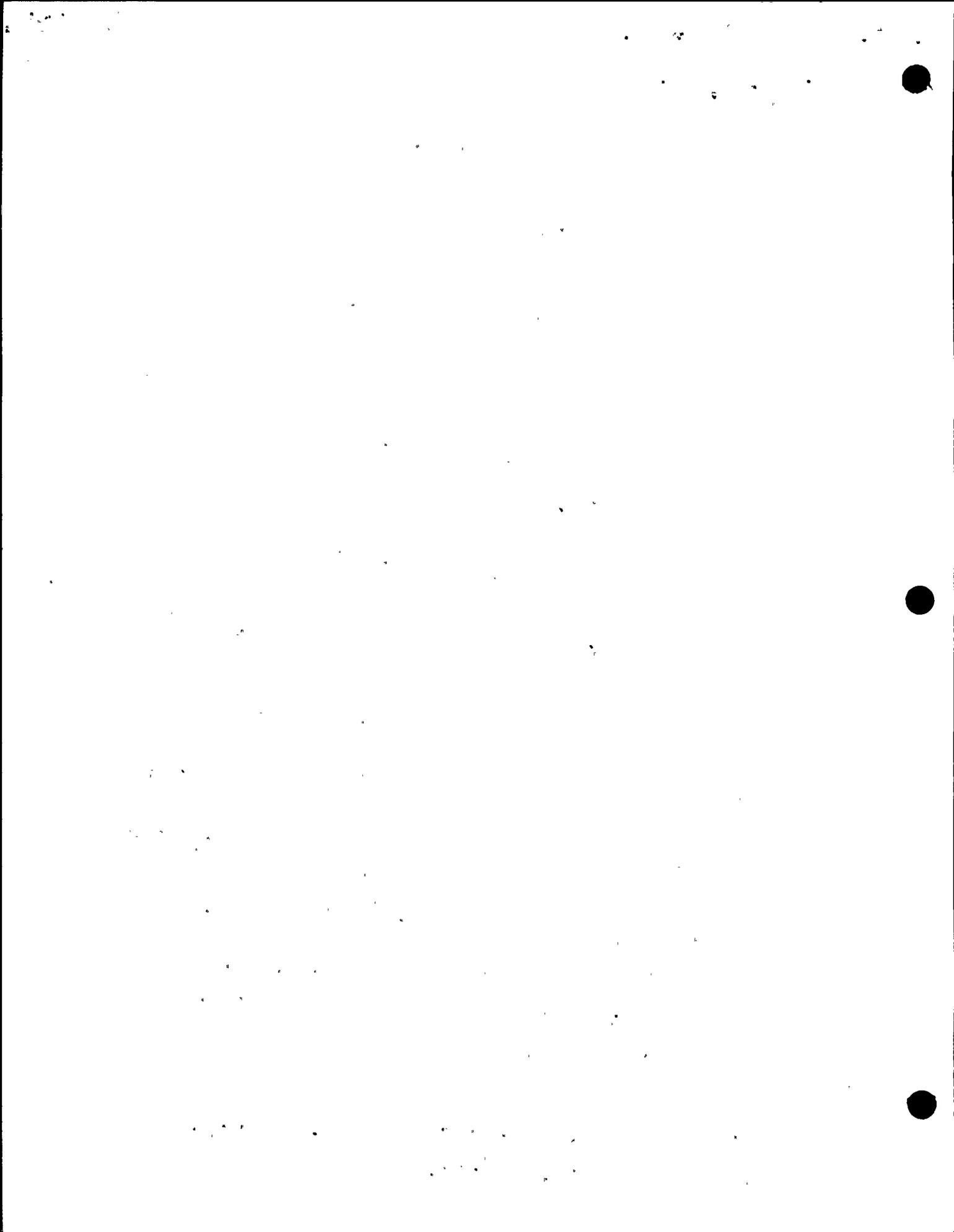
Inspection verified the licensee's corrective action by discussion with the licensee's personnel and by examination of the following records:

Startup Check Sheets	(Item (1))
Monthly Surveillance Records	(Item (2))
Daily Process Checksheets	(Item (3))
SRAB Meeting Minutes	(Item (4))
Radiation Protection Procedure Manual and Checksheets	(Item (5))
SORC Meeting Minutes	(Item (6))
Submission for review by the SORC (filed with the licensee's SORC minutes)	(Item (7))

b. The letter from J. P. O'Reilly to the licensee dated August 23, 1973 required an explanation on the following (five) items.

- (1) Posting of radiation area.
- (2) Surveillance and corrective action involving dry well leakage.
- (3) Review and reporting of operating abnormalities.
- (4) Approval of procedures.
- (5) Reporting requirements.

The licensee replied to each of the above by a letter dated September 13, 1973.



Inspection verified the licensee's corrective action by discussion with the licensee's personnel and by examination of the following records:

- There were six subsequent inspections (Item (1)) where inspectors toured parts of the facility*, finding no radiation posting problems.
 - Records of two shutdowns to fix drywell leakage (Paragraph 3a). (Item (2))
 - Minutes and records of correspondence for SRAB and SORC (Paragraphs 2c and 2d). (Item (3))
 - Minutes of SORC (Paragraphs 2c, 2d and 4, and Management Interview, Item 9). (Item (4))
 - No recent problem was identified involving reporting requirements**. (Item (5))
- c. The letter from J. P. O'Reilly to the licensee dated August 24, 1973 required an explanation on the following item.
- (1) Approval of refueling procedures.

The licensee replied to the above by a letter dated September 10, 1973.

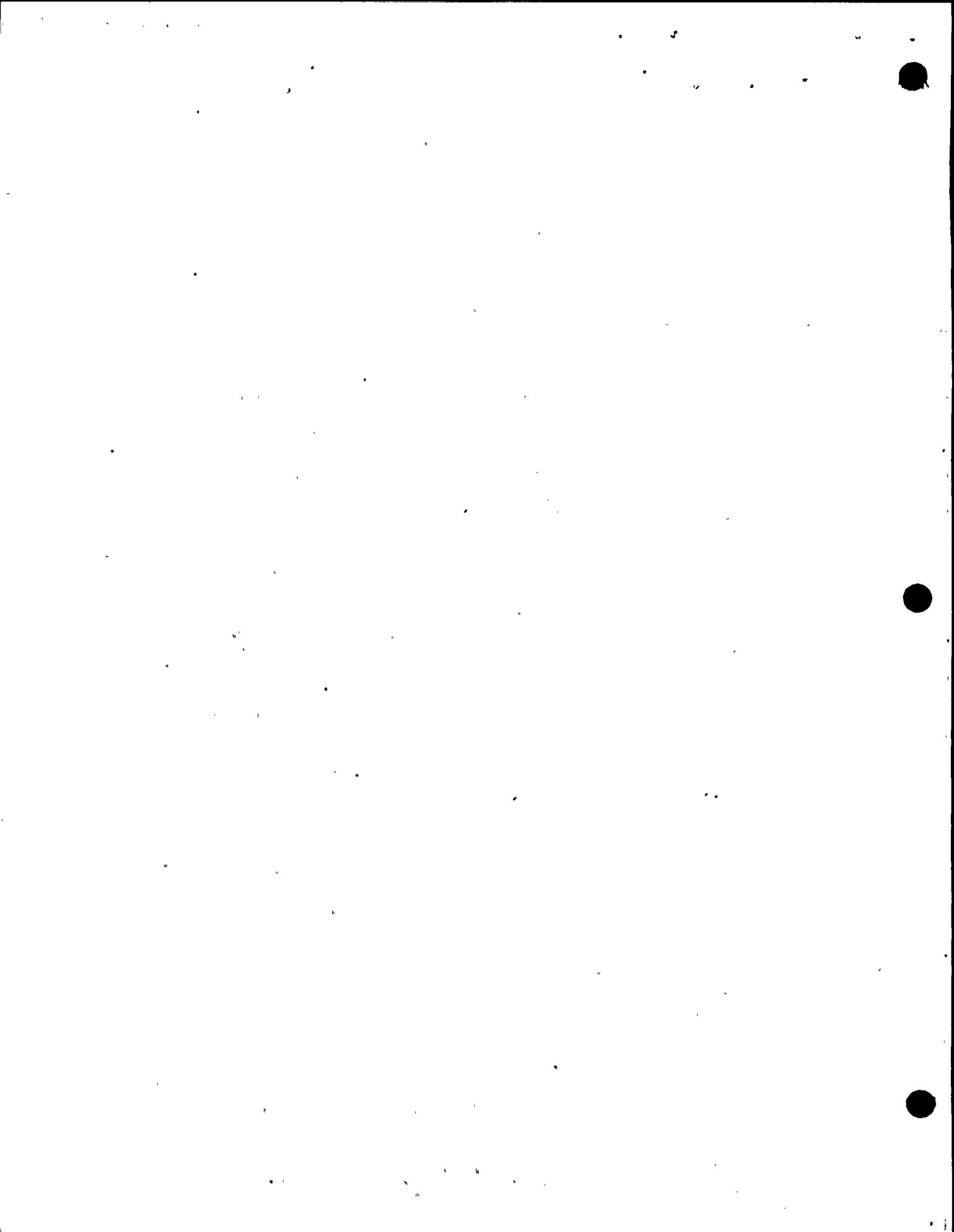
Inspection verified the licensee corrective action on the above item. (Management Interview, Item 3)

- d. The letter from J. P. O'Reilly to the licensee dated September 28, 1973 required an explanation on the following (three) items.
- (1) Exposure of employee in excess of 3 rem per calendar quarter.
 - (2) Leak testing of manhole cover on the drywell.
 - (3) Late reports.

The licensee replied to the above by letters dated October 10 and November 27, 1973.

* Inspection Reports Nos. 50-220/73-02, 03, 06, -07, and 08 and 50-220/74-02

** Inspection Reports Nos. 50-220/73-07, 08 and 50-220/74-02



Inspection verified the licensee's corrective action by examination of the radiation safety program, records, and procedures* and by examination of SRAB and SORC records (Paragraphs 2c and 2d) and SSS and SOF logbooks (Paragraph 3b).

8. Changes Recommended by G. E.

The SRAB minutes for the October 2, 1973 meeting indicated that plans are being made for the following changes, which were recommended in a letter to the licensee from the G. E. Company dated September 13, 1973.

- a. Remove one Electromatic brand relief valve and replace it with a Target Rock brand Safety/Relief Valve.
- b. Raise the lowest safety valve set points to 1240 psi (required by current Technical Specifications to be as low as 1218 psi).
- c. Install a "Prompt Relief Trip" (PRT) system.

The licensee has proposed** refueling with 8 x 8 design fuel (instead of 7 x 7 design) on the upcoming outage. The licensee's representative stated that 96 new fuel bundles were to be installed. When asked if 7 x 7 design new fuel was available, the licensee's representative stated that there was not enough available to refuel the reactor, to the best of his knowledge.

The licensee's representative stated that 160 fuel channels would be changed during refueling, because of a problem with dimensional tolerances.

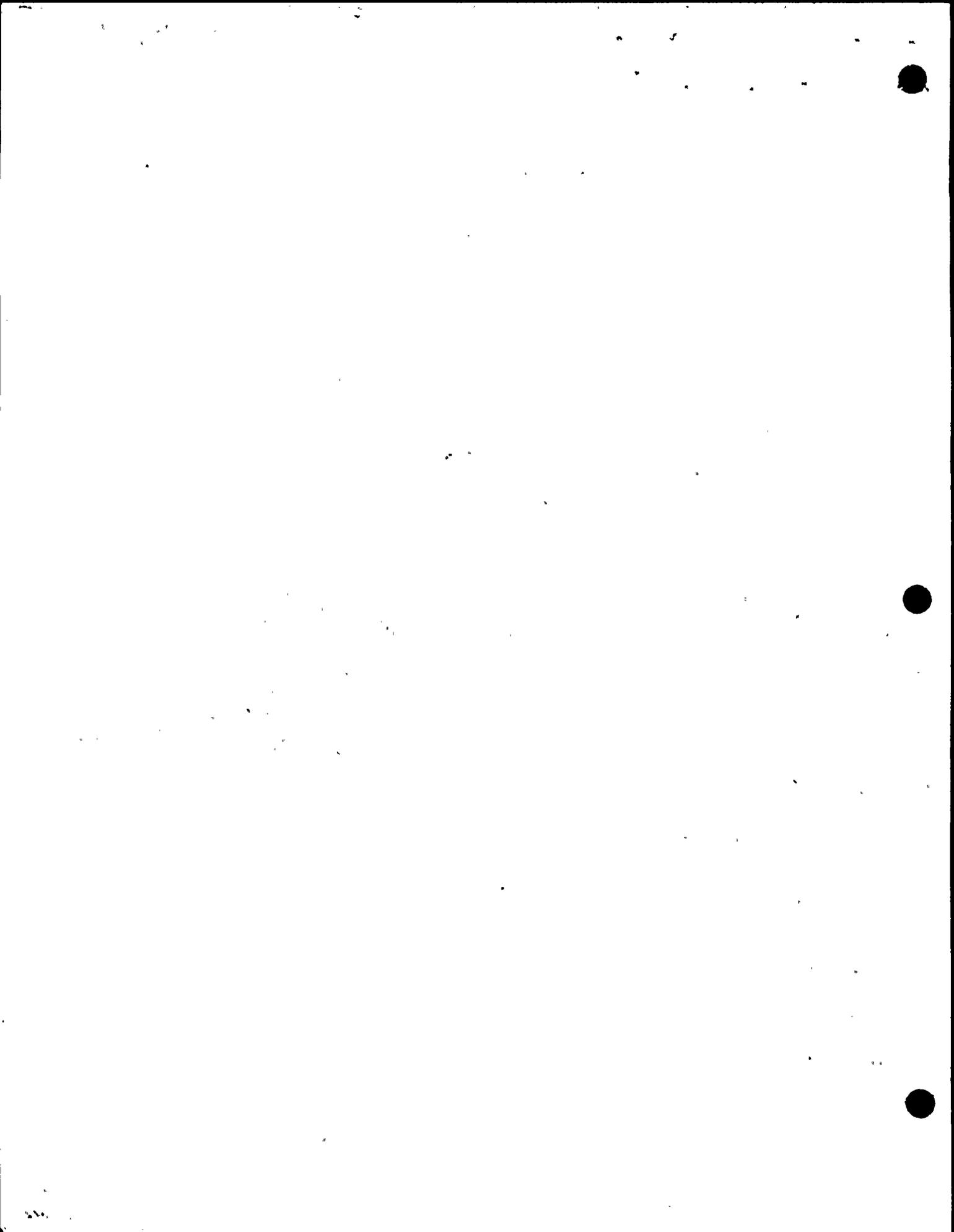
9. Offshift Inspection

Offshift inspection identified the following operating crew on duty on the 12PM - 8AM shift, February 27, 1974 (duties as described by the licensee's representative). No deficiency was found.

- J. Shea***, Station Shift Supervisor
- M. Jones***, Assistant Station Shift Supervisor
- R. Ingham****, Shift Operating Foreman
- W. Bandla****, E Operator
- C. Gerber****, Temporary E Operator
- D. Runion, C Operator
- S. Brown, B Operator

No problem was found by the offshift inspection.

* Inspection Report No. 50-220/73-08
** Licensee's Letter to DL dated September 14, 1973
*** SRO
**** RO



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Chairman — Board of Directors

JOHN G. HAEHL, JR.
President & Chief Executive Officer

WILHELM N. CARLSON
Administrative Assistant

MISS KATHLEEN R. MCSHANE
Secy. to Chairman & President

MISS LOIS WICKHAM
Secy. to Chairman & President

STAFF

LINE

SENIOR VICE PRESIDENT - GENERAL COUNSEL

Lauman Martin

VICE PRESIDENT AND ASSOCIATE
GENERAL COUNSEL

John H. Terry

EXECUTIVE VICE PRESIDENT - ENGINEERING,
OPERATIONS AND EMPLOYEE RELATIONS

James Bartlett

VICE PRESIDENT ; ENGINEERING

Philip D. Raymond

VICE PRESIDENT - ELECTRIC OPERATIONS

Rudolph R. Schneider

VICE PRESIDENT - GAS OPERATIONS

William R. Matthews

VICE PRESIDENT - EMPLOYEE RELATIONS

John J. Ehlinger

SYSTEM DIRECTOR - SAFETY

W. Scott Hayward

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O. Mark DeMichele

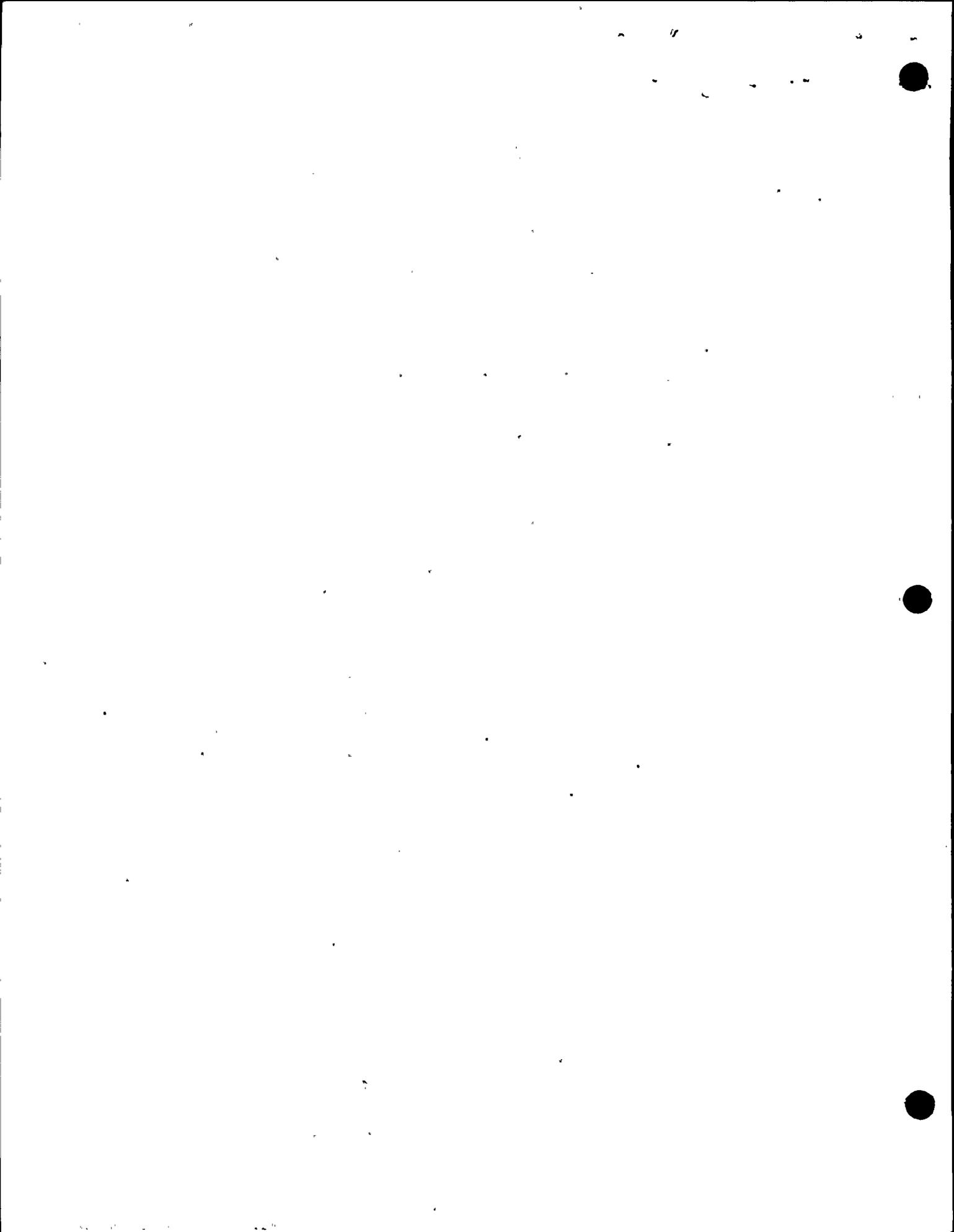
VICE PRESIDENT -
GENERAL MANAGER -
CENTRAL DIVISION
James J. Miller

VICE PRESIDENT
GENERAL MANAGER -
EASTERN DIVISION
William J. Donlon

VICE PRESIDENT -
ASSISTANT GENERAL MANAGER
Richard H. Kukuk

VICE PRESIDENT -
GENERAL MANAGER
WESTERN DIVISION
Richard F. Torrey

VICE PRESIDENT -
ASSISTANT GENERAL MANAGER
Robert M. Cleary



VICE PRESIDENT - GENERAL MANAGER
CENTRAL DIVISION

GENERAL SUPERINTENDENT
NUCLEAR GENERATION
P. Allister Burt

ASSISTANT TO GENERAL SUPERINTENDENT
Thomas W. Roman
George A. Shelling
Edward W. Leach
Richard B. Abbott
E. Charles Steinman

SUPERINTENDENT NINE MILE POINT
NUCLEAR GENERATION STATION
Thomas J. Perkins

ASSISTANT TO SUPERINTENDENT
OPERATIONS
Charles L. Stuart, Jr.

ASSISTANT TO SUPERINTENDENT
Michael D. Jones
William C. Drews

STATION SHIFT SUPERVISOR
Alexander Vanghel
John J. Shea
Elliott W. Curry
Francis C. Lilly
Robert L. Raymond

SUPERINTENDENT JAMES A. FITZPATRICK
NUCLEAR POWER PLANT
Thomas E. Lempges

ASSISTANT TO SUPERINTENDENT
OPERATIONS
Douglas L. Pike

ASSISTANT TO SUPERINTENDENT
Andrew R. Andersen
Watson V. Childs
James E. Timperlake
Seymour G. Caster

STATION SHIFT SUPERVISOR
Herbert R. Michaels, Jr.
Donald J. Matthews

MAINTENANCE SUPERVISOR
Roland W. Smith

MAINTENANCE FOREMAN B
Hercules T. Master, Jr.
Patrick J. Kelly

RESULTS SUPERVISOR
Melvin A. Silliman

RADIO CHEMICAL & RADIATION
PROTECTION SUPERVISOR
Robert A. Burns

ASSISTANT RADIO CHEMICAL &
RADIATION PROTECTION SUPERVISOR
Eric A. Mulcahey
James N. Duell

INSTRUMENT & CONTROL SUPERVISOR
Leslie E. Bollin

ASSISTANT INSTRUMENT & CONTROL
SUPERVISOR
Robert Baker

REACTOR ANALYST SUPERVISOR
Raymond J. Pasternak

ASSISTANT REACTOR ANALYST
SUPERVISOR
Thomas J. Dente

