

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

REACTOR FACILITIES BRANCH

FILE COPY

OCT 31 1975

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

License No. DPR-63
Inspection No. 75-22
Docket No. 50-220

Gentlemen:

This refers to the inspection conducted by Mr. K. Plumlee of this office on September 29 through October 2, 1975 at Nine Mile Point 1 of activities authorized by NRC License No. DPR-63 and to the discussions of our findings held by Mr. Plumlee with Mr. T. Perkins and other members of your staff at the conclusion of the inspection, and to subsequent telephone discussions between Mr. Plumlee of this office and Mr. E. Leach on October 8, 1975 and Mr. R. Burns on October 20, 1975.

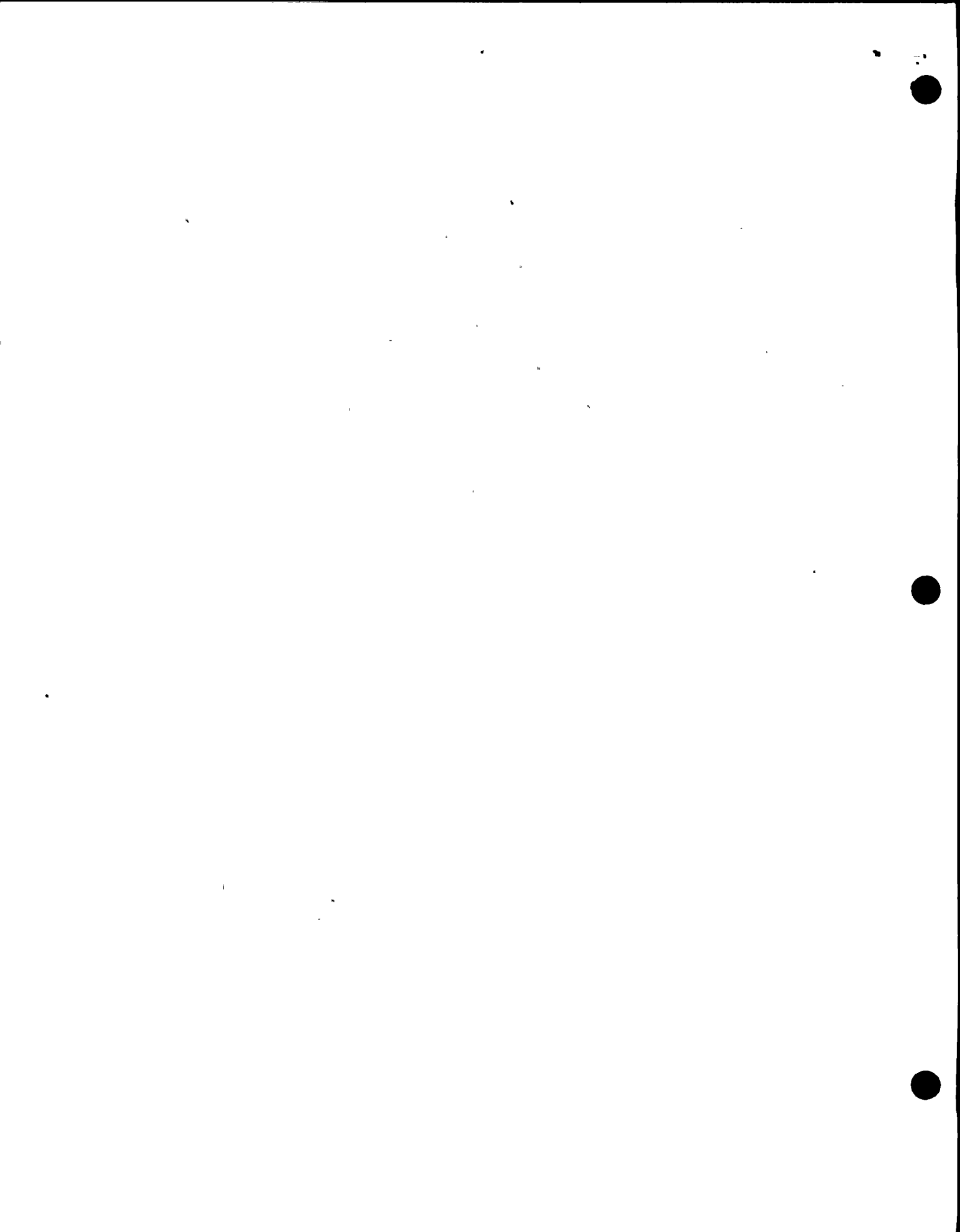
Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements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

Our inspector also verified the steps you have taken to correct the item of noncompliance brought to your attention in a letter dated August 14, 1975. We have no further questions regarding your action at this time.

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. These items of noncompliance have been categorized into the levels as described in our correspondence to you dated December 31, 1974. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations. Although Section 2.201 requires you to submit to this office, within 20 days of your receipt of this notice, a written statement of explanation, we note that these items of noncompliance were corrected prior to the completion of our inspection and therefore, no response with respect to these matters is required.



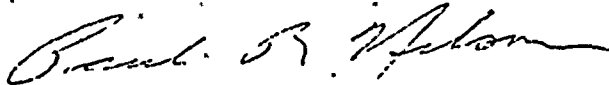
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In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this report contains any information that 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.

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,



Paul R. Nelson, Chief
Radiological and Environmental
Protection Branch

Enclosures:

1. Appendix A, Notice of Violation
2. Region I Inspection Report No. 50-220/75-22

cc: T. E. Lempges, General Superintendent, Nuclear Generation
T. J. Perkins, Station Superintendent
C. Jones, 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

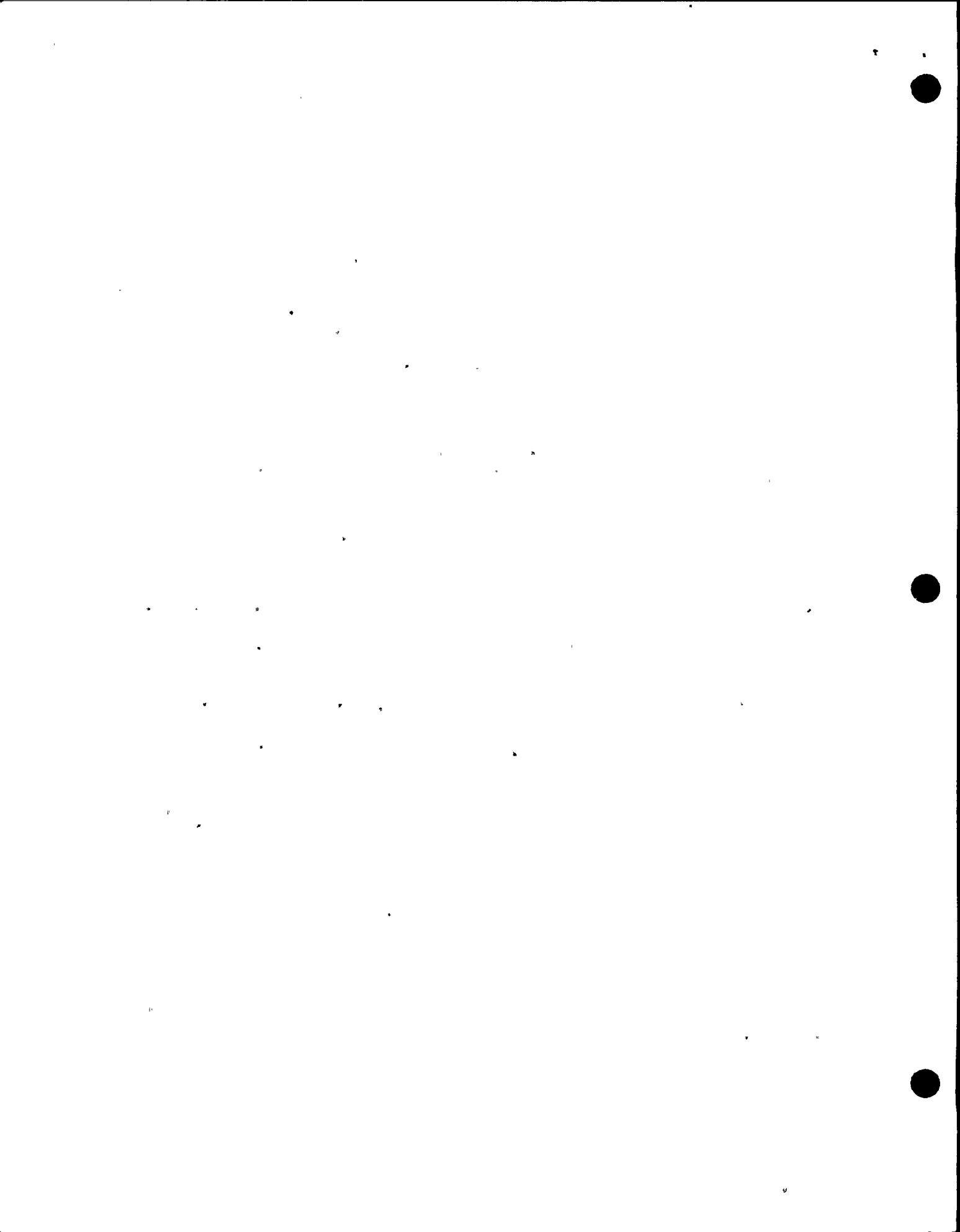
TIC

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



APPENDIX A

NOTICE OF VIOLATIONS

Niagara Mohawk Power Corporation
Syracuse, New York 13202
License No. DPR-63

Based on the results of an NRC inspection conducted on September 29 through October 2, 1975, it appears that certain of your activities were not conducted in full compliance with conditions of your NRC Reactor License No. DPR-63 as indicated below:

A. Contrary to 10 CFR 20.201(b), surveys to determine compliance with the 10 CFR 20.103 limits on the airborne concentrations to which individuals can be exposed were not performed on September 29, 1975 when workers heated and wire brushed steam turbine blades. During this job no respiratory protection was used.

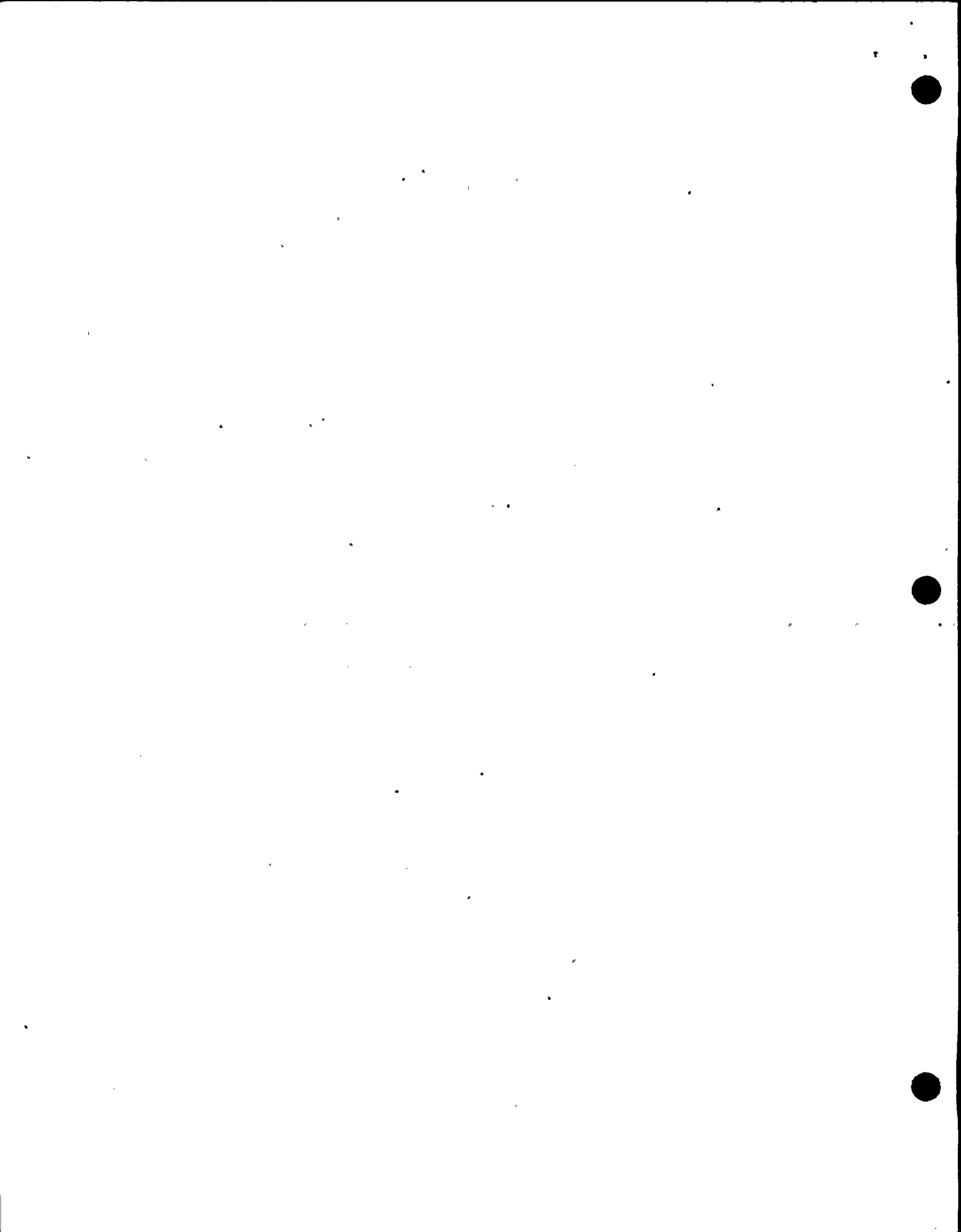
This item is an infraction.

B. Contrary to Technical Specifications section 6.11, requirements for adherence to procedures and Radiation Protection Procedures Manual sections II-B and III developed in accordance with Technical Specifications section 6.8.1 the following occurred on September 29, 1975:

1. Respiratory protection specified by Radiation Work Permit No. 2171 in order to comply with the above requirements and 10 CFR 20.103 limits was not used by workers who were heating and wire brushing steam turbine blades;
2. Workers leaving the turbine deck work area failed to comply with step off pad procedures for removal of protective clothing;
3. Workers leaving the turbine deck work area and the MSIV room failed to dispose of protective clothing in accordance with procedures.

This item is an infraction.

With respect to items A and B the inspector noted that corrective action was taken before the close of the inspection.



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

Inspection Report No: 50-220/75-22 Docket No: 50-220

Licensee: Niagara Mohawk Power Corporation License No: DPR-63

300 Erie Boulevard West Priority: _____

Syracuse, New York 13202 Category: C

Location: NMP-1, Scriba, New York Safeguards Group: _____

Type of Licensee: BWR, 1850 Mwt (GE)

Type of Inspection: Routine, Radiological Protection

Dates of Inspection: September 29 - October 2, 1975

Dates of Previous Inspection: September 25 - October 2, 1975 (Operations)

Reporting Inspector: Karl E. Plumlee
Karl E. Plumlee, Reactor Inspector

10/29/75
DATE

Accompanying Inspectors: _____

DATE

DATE

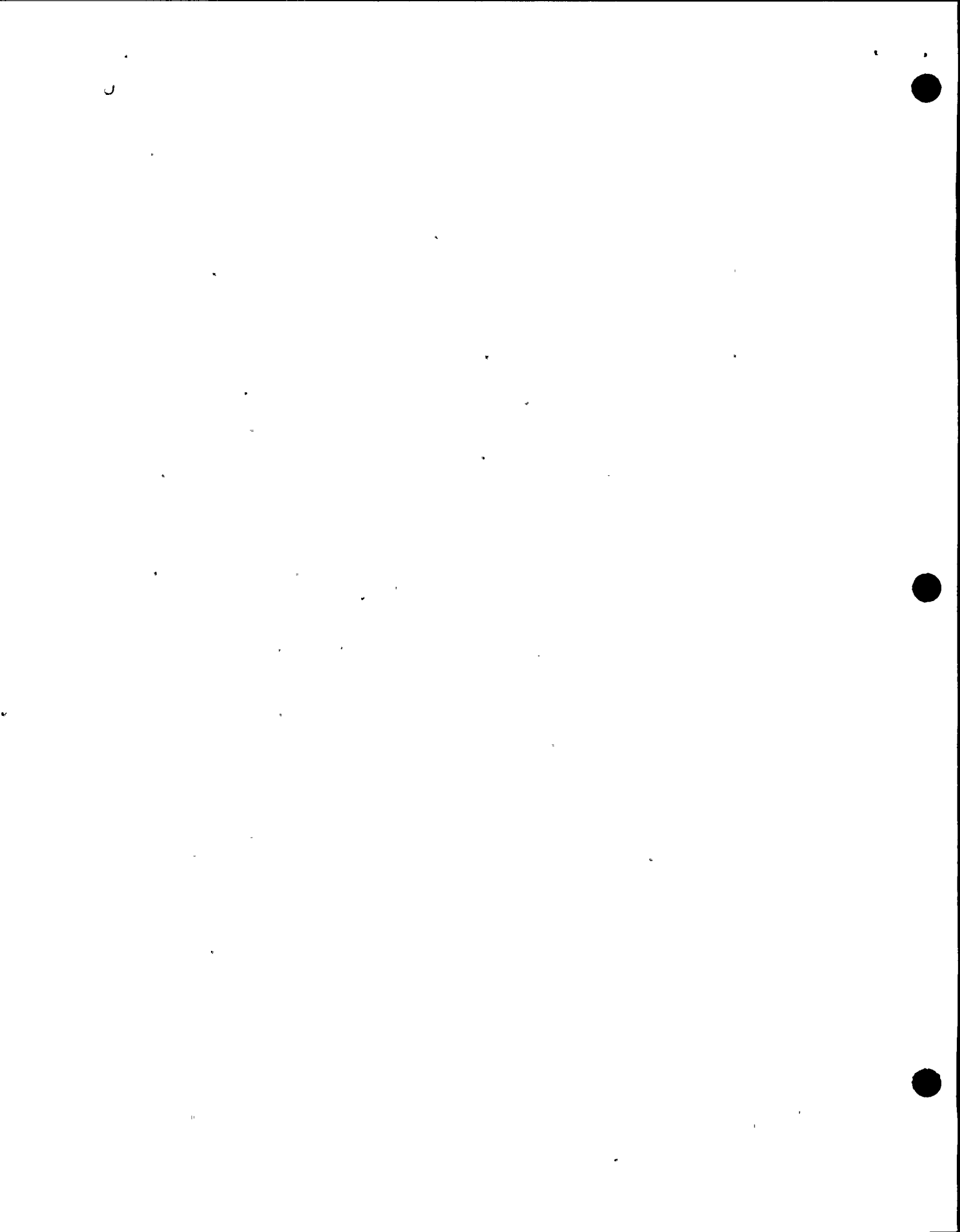
DATE

Other Accompanying Personnel: _____

DATE

Reviewed By: Peter J. Knapp
Peter J. Knapp, Chief, Facilities Radiation Protection Section

10/30/75
DATE



SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

1. Violations

None

2. Infractions

a. Contrary to 10 CFR 20.201(b) requirements for surveys to determine compliance with airborne concentration limits stated by 10 CFR 20.103 breathing zone monitoring was not performed on September 29, 1975 when workers heated and wire brushed steam turbine blades. No respiratory protection equipment was used. (Details, Paragraph 2)

b. Contrary to Technical Specifications section 6.11, requirements for adherence to procedures and Radiation Protection Procedures Manual sections II-B and III developed in accordance with Technical Specifications section 6.8.1 the following occurred on September 29, 1975:

(1) Respiratory protection specified by Radiation Work Permit (RWP) No. 2171 in order to comply with the above requirements and 10 CFR 20.103 limits was not used by workers who were heating and wire brushing steam turbine blades. (Details, Paragraph 2)

(2) Workers failed to comply with step off pad procedures stated by Radiation Protection Procedure III A 2 and posted at the step off pads. (Details, Paragraph 3)

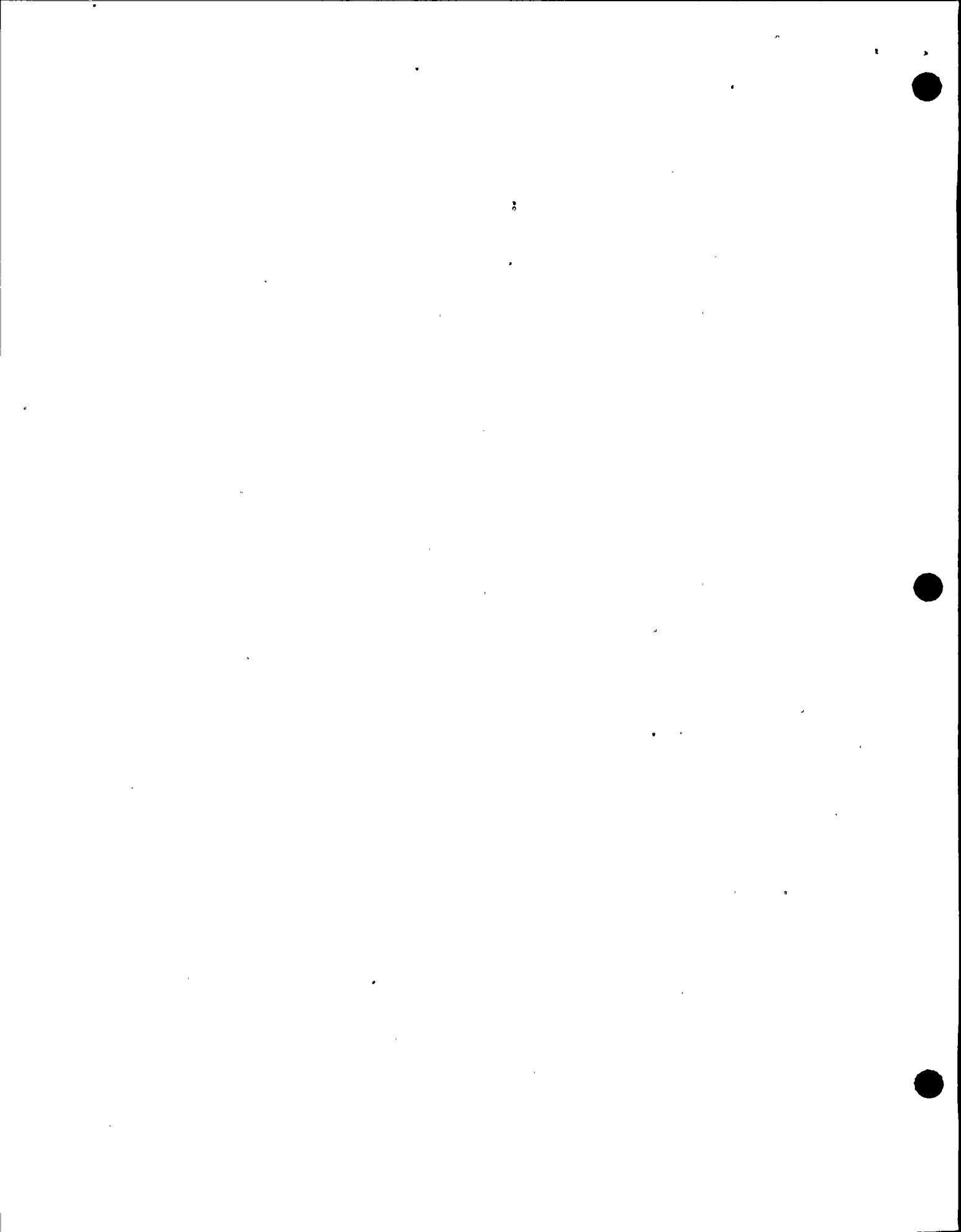
(3) Workers failed to dispose of removed protective clothing in accordance with Radiation Protection Procedure III A 6.2. (Details, Paragraph 3)

3. Deficiencies

None

B. Deviations

None



Licensee Action on Previously Identified Enforcement Items

A. Non-Licensed 0.5 gram Pu Source

The licensee has applied for a license amendment to possess the source. (Details, Paragraph 4)

This item will be followed up on a subsequent inspection.

Design Changes

None applicable.

Unusual Occurrences

None identified.

Other Significant Findings

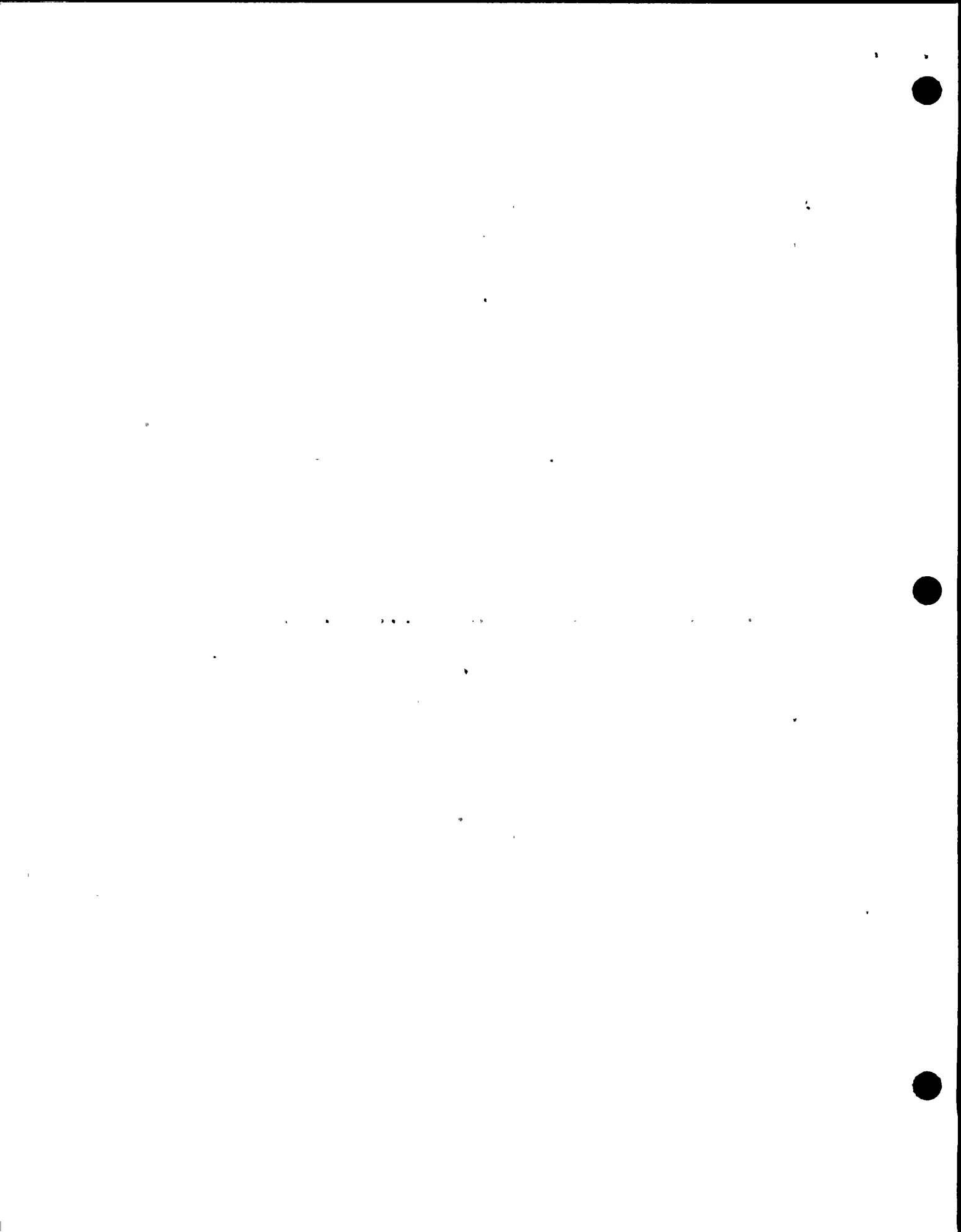
A. Current Findings

1. Acceptable Areas

- a. Health Physics staffing. (Details, Paragraph 5.a)
- b. Instrument supplies. (Details, Paragraph 5.b)
- c. Protective clothing supplies. (Details, Paragraph 5.b)
- d. Mask supplies. (Details, Paragraph 5.b)
- e. Contamination control. (Details, Paragraph 5.c)
- f. Survey records. (Details, Paragraphs 2 and 5.d)
- g. Personnel traffic control. (Details, Paragraph 5.e)

2. Unresolved Items

Operation of new liquid radwaste concentrator. (Details, Paragraph 8)



B. Status of Previously Unresolved Items

1. Licensee's guidelines for reduction of man-Rem of exposure during refueling.

Remains unresolved. (Details, Paragraph 6)

2. Dewatering of solid waste drums.

Remains unresolved. (Details, Paragraph 7.b)

Management Interview

A management interview was held at the site on October 2, 1975 sequentially following the interview for inspection No. 50-220/75-21.

Persons Present

(Licensee's Staff)

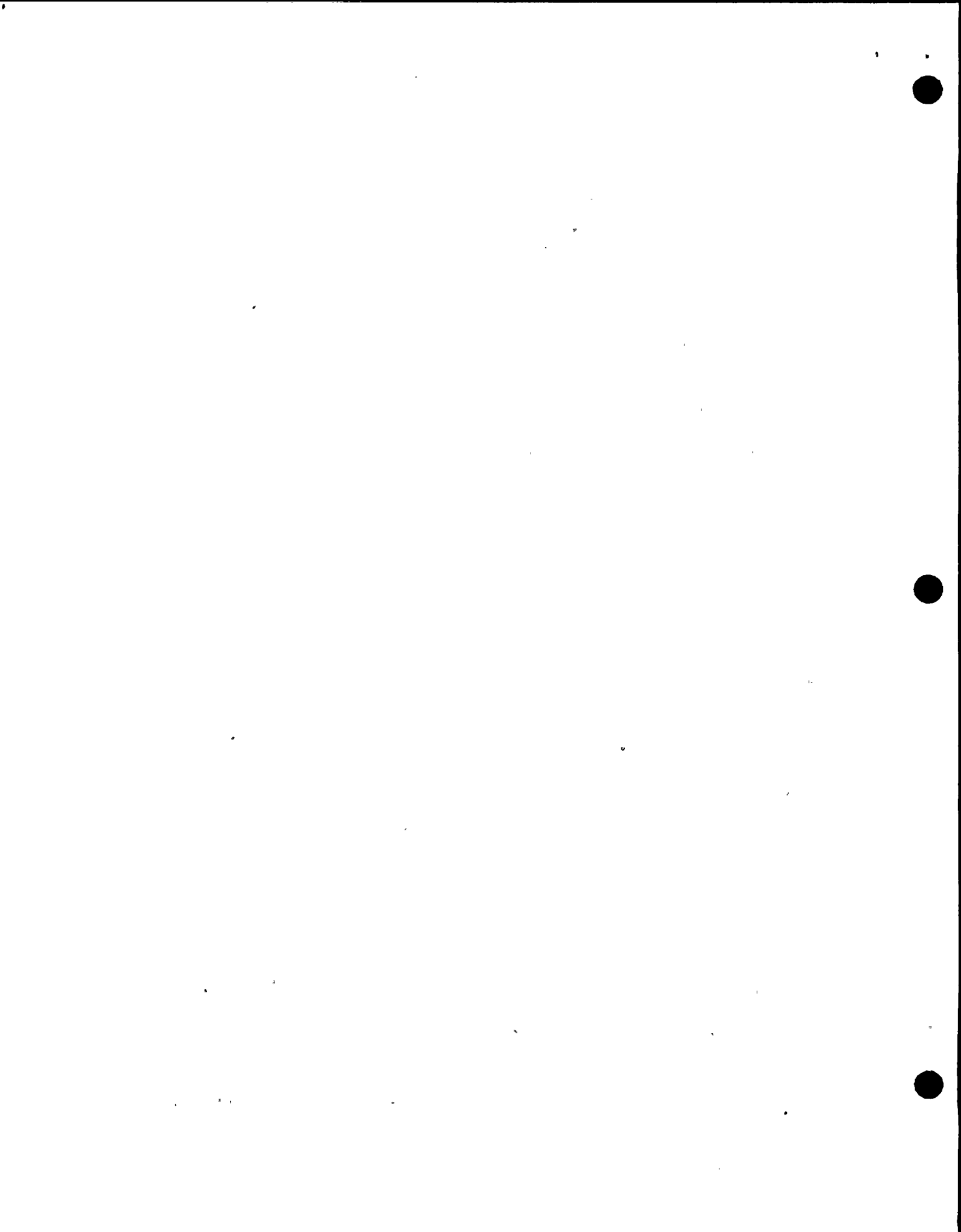
R. Baker, Maintenance Supervisor
R. Burns, Radiochemistry and Radiation Protection Supervisor
T. Dente, Reactor Analyst Supervisor
J. Duell, Assistant Radiochemistry and Radiation Protection Supervisor
E. Leach, Assistant Radiochemistry and Radiation Protection Supervisor
T. Perkins, Station Superintendent
C. Stuart, Operations Supervisor

(Nuclear Regulatory)

R. Hurd, Reactor Inspector (Reactor Operations Branch)
T. Martin, Reactor Inspector (Reactor Operations Branch)
K. Plumlee, Reactor Inspector (Radiological and Environmental Protection Branch)

Items Reviewed During Interview

The following radiological protection items were reviewed.



A. Purpose and Scope of the Inspection

The inspector stated that this was an inspection of radiological protection during refueling and of the licensee's progress with dewatering of solid waste drums.

B. Unresolved Items

The previously unresolved items were discussed as stated under Other Significant Findings.

C. Items of Noncompliance

The inspector stated the apparent items of noncompliance as listed under Infractions.

The licensee stated that corrective action had been completed on these items.

The inspector stated that the Regional Office would review these items and inform the licensee of their disposition.

D. Radwaste Building Ventilation

The inspector stated that air flowed toward the operator in the drum filling area of the radwaste building when traced.

The licensee stated that after they became aware of this, the ventilation system filters had been changed and the condition was corrected. The licensee suggested that this item could now be closed out by reinspection.

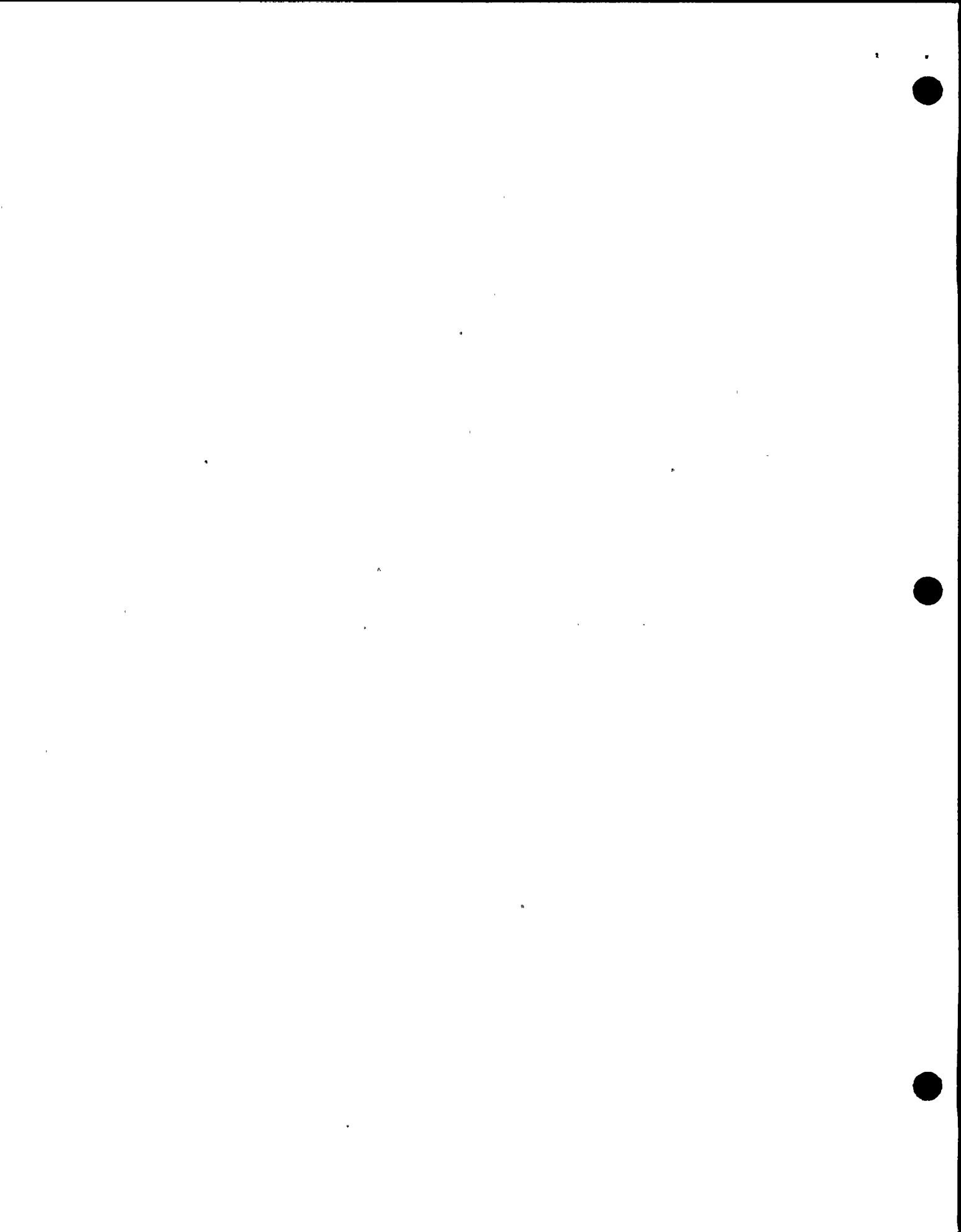
The inspector stated that he would reinspect this item immediately after the interview. (Ventilation was acceptable when reinspected, Details, Paragraph 7.a)

E. Licensee's Monitoring of Individual Exposures and Job Exposures During the Outage

The licensee stated that daily tallies of individual exposures would be maintained until computer printout was provided and that the computer would then provide daily totals of several job exposures as well as individual totals. (Details, Paragraph 6)

F. Acceptable Items

The acceptable items were reviewed as listed under Current Findings.



DETAILS

1. Persons Contacted

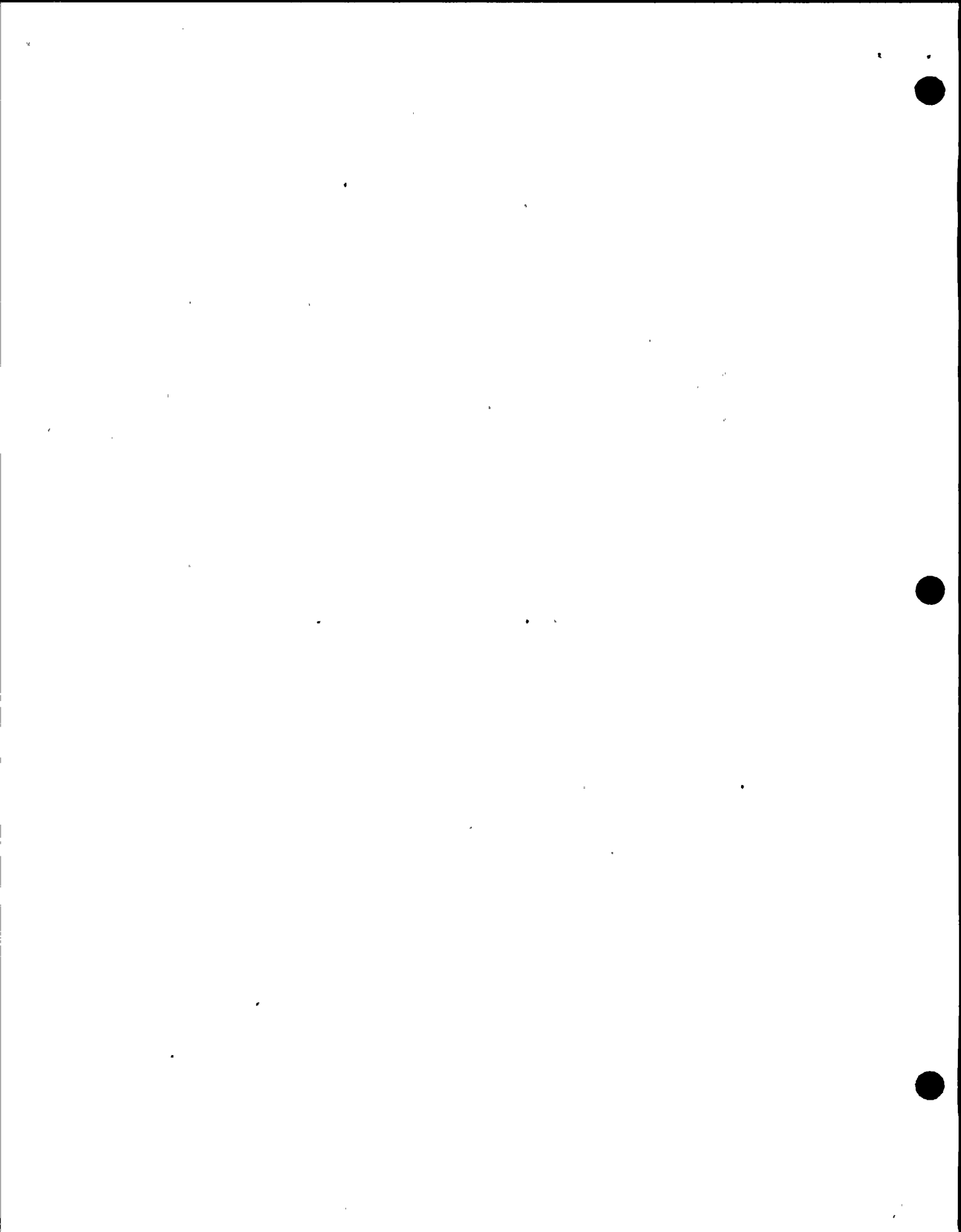
R. Baker, Maintenance Supervisor
R. Burns, Radiochemistry and Radiation Protection (R&RP) Supervisor
T. Dente, Reactor Analyst Supervisor
J. Duell, Assistant R&RP Supervisor
E. Leach, Assistant R&RP Supervisor
Z. Miahky, Acting (Health Physics) Foreman - Dayshift
G. Montando, Acting (Health Physics) Foreman - Nightshift
T. Perkins, Station Superintendent
R. Raymond, Station Shift Supervisor
F. Smith, (Niagara Mohawk Power Corporation) Steam Plant Maintenance Foreman
C. Stuart, Operations Supervisor
A. Vanghel, NISCO employee

2. Turbine Maintenance

During the inspection of working conditions on September 29, 1975, the inspector observed three men who were manually wire brushing, heating and observing work on steam turbine blades without use of respiratory protection contrary to the RWP (No. 2171) which specified supplied air or double charcoal filter respirators when brushing. No breathing zone air sampling was being done. The nearest air sampler was more than fifty feet away. The lead man was not close at hand.

The air sampling and surveys on which the RWP was based showed concentrations which exceeded the limits for work without respirators and no check had been made at this job location when the work began. The applicable conditions on RWP No. 2171 appeared to be (based on RWP entries and smear and survey records):

- a. Radiation levels up to 300 mrem/hr.
- b. Smears up to 3,500 dpm/100 cm².
- c. Airborne levels exceeding 10 CFR 20, Appendix B, Table I, during brushing or grinding.



The acting foreman stopped the job and required corrective action before its resumption. This included discussion, reinstruction of workers, a survey and strict adherence to RWP conditions. Whole body counts taken on September 30 were no higher than the following, for the above men: ^{60}Co 34 nanocuries; ^{54}Mn 20 nanocuries; ^{137}Cs 9 nanocuries; and ^{131}I 38 nanocuries (reported by telephone contacts, K. Plumlee to E. Leach on October 8 and R. Burns to K. Plumlee on October 20).

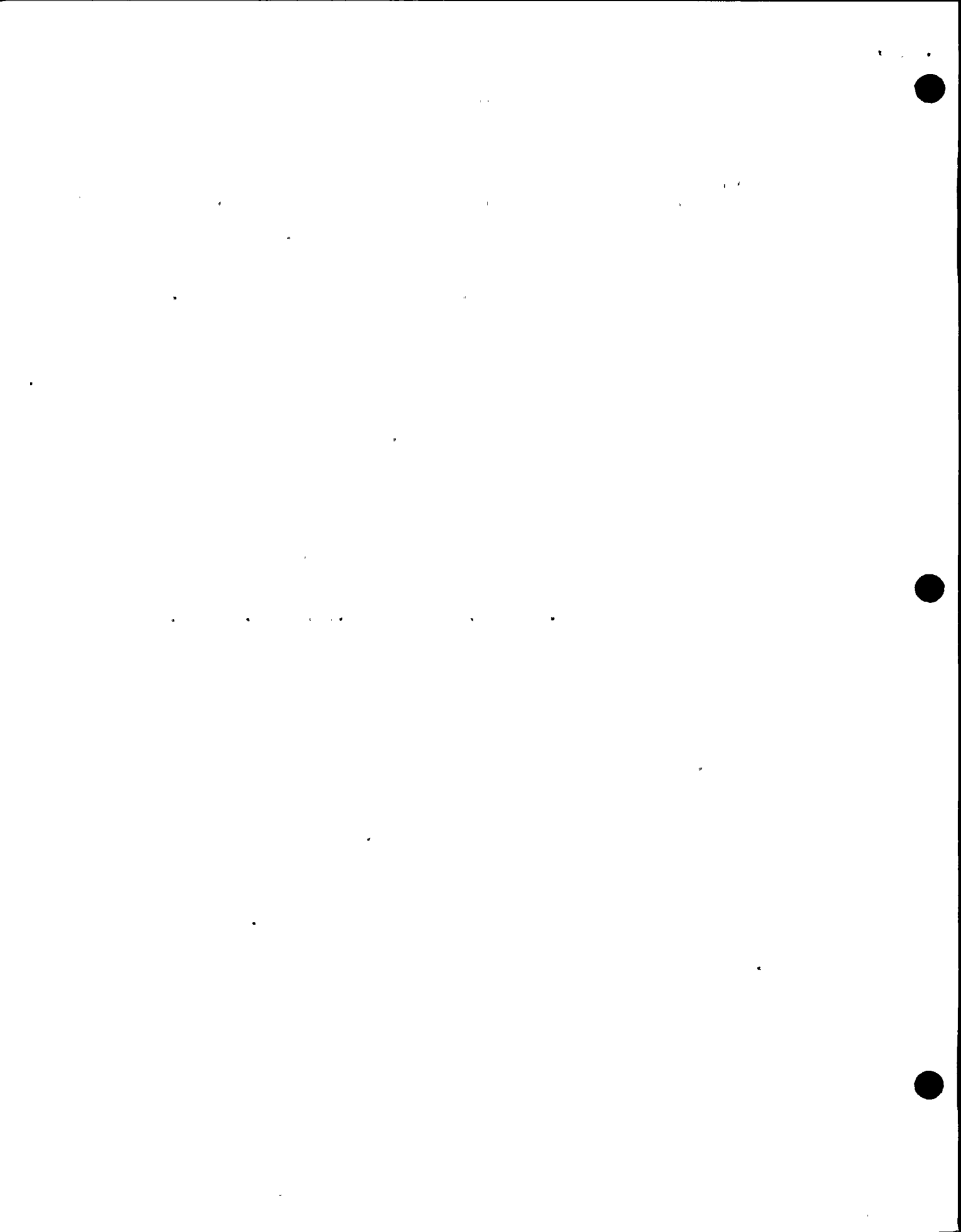
The inspector identified the failure to monitor the breathing zone of these men as an item of noncompliance with 10 CFR 20.201(b) which requires surveys to determine compliance with limits stated in 10 CFR 20.103.

The inspector identified the failure to use respiratory equipment specified by the RWP as an item of noncompliance with the Technical Specifications in Section 6.11 which requires adherence to radiation protection procedures, and with Radiation Protection Manual Section III B.1.1. which specifies use of respiratory protection equipment when brushing surfaces contaminated greater than 1,000 dpm per 100 cm^2 .

3. Disposal of Protective Clothing Removed at Steppoff Pads.

Part of the inspection effort was to determine the workers compliance with Radiation Protection Procedures section III on removal of protective clothing at steppoff pads. Observation on September 29 determined the following:

- a. Contrary to the procedure (above) some workers were expected to hang clothing for reuse following the lunch break. At the turbine deck and MSIV exits the RWP's did not specify reuse, but part of the work crew saved clothing for reuse.
- b. If discarded in accordance with procedures (above) the clothing would have been checked for contamination level before reuse (after laundering). Typically, no checks were made on clothing reused on the turbine deck.



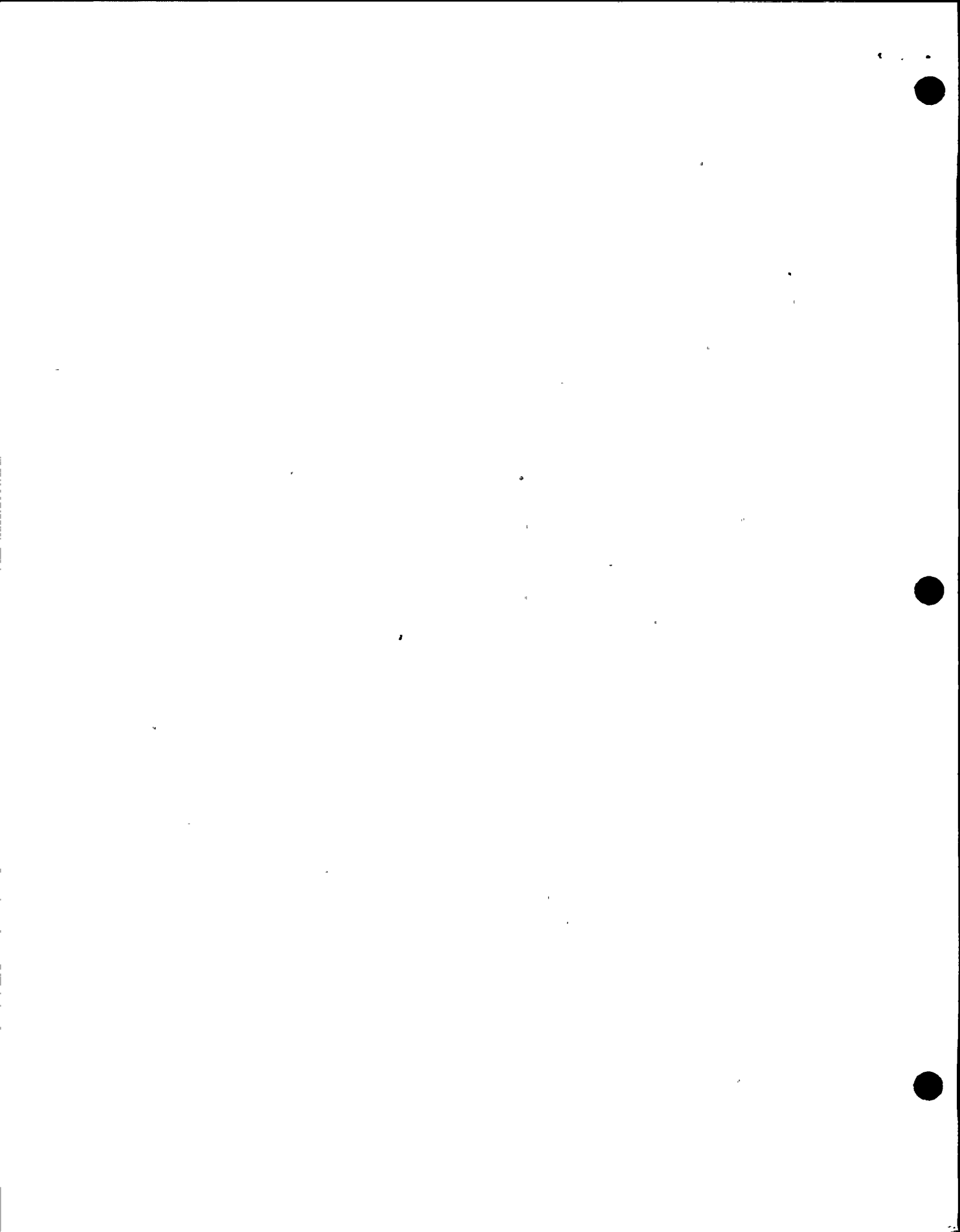
- c. Workers placed used protective clothing in unique places apparently to avoid mixups during reuse. No other identification was provided. Abandoned coveralls were removed from the stepoff pad at the MSIV room and others were observed hanging near the turbine deck stepoff pad.
- d. Overfilled receptacles for discarded protective clothing were observed at the MSIV room.
- e. Inconsistent and improper stepoff pad use was observed at the turbine deck. As examples, contrary to the above procedures, posted instructions and oral admonitions some workers removed the outer layer of shoe covering before reaching the first stepoff pad and others wore the outer layer of shoe covering on or beyond the stepoff pad. On-the-spot questioning of a worker indicated that he had no previous experience with stepoff pads but had been instructed on this matter. He was down to stocking feet on the stepoff pad partly as a result of imitation of the man ahead of him who had used an extra layer of shoe covering and partly because his shoes slipped off with the coveralls.

The inspector identified items a through e above, as examples of noncompliance with Technical Specifications section 6.11 (above) and with Radiation Protection Procedures section III stepoff pad procedures disposition of protective clothing after removal, and require adherence to RWP conditions.

The licensee's immediate corrective action included addition of a specification on RWP's as to reuse of clothing and protective equipment following rest periods and lunch including any checks to be made for contamination; more frequent emptying of receptacles and accelerated processing of clothing and equipment; and further training of personnel on September 30.

4. Non-Licensed Pu Source

The licensee reported to Regional Office I by a letter dated September 5, 1975 that application had been made for a license amendment authorizing possession of a Pu source (Identified in Inspection Report No. 50-220/75-12).



The amendment was not yet issued when this inspection took place. Routine follow up will continue until the amendment is issued. The licensee's corrective action on this item appears appropriate at this time.

5. Acceptable Areas of the Inspection

a. Staffing

Part of the inspection effort was to verify that the number of personnel and their qualifications are in compliance with the requirements on radiological protection staffing stated by the Technical Specifications in section 6.

In addition to the above, inspection verified that the licensee required records of experience and qualifications of contract personnel who perform radiological protection functions. No written requirements were available but the licensee's stated acceptance criteria appeared to be met in selecting these men. Their job was to screen, audit and tabulate information from completed RWP's, including shift-by-shift totals of exposure to each worker during the outage.

No problem was identified in the items discussed above.

b. Supplies

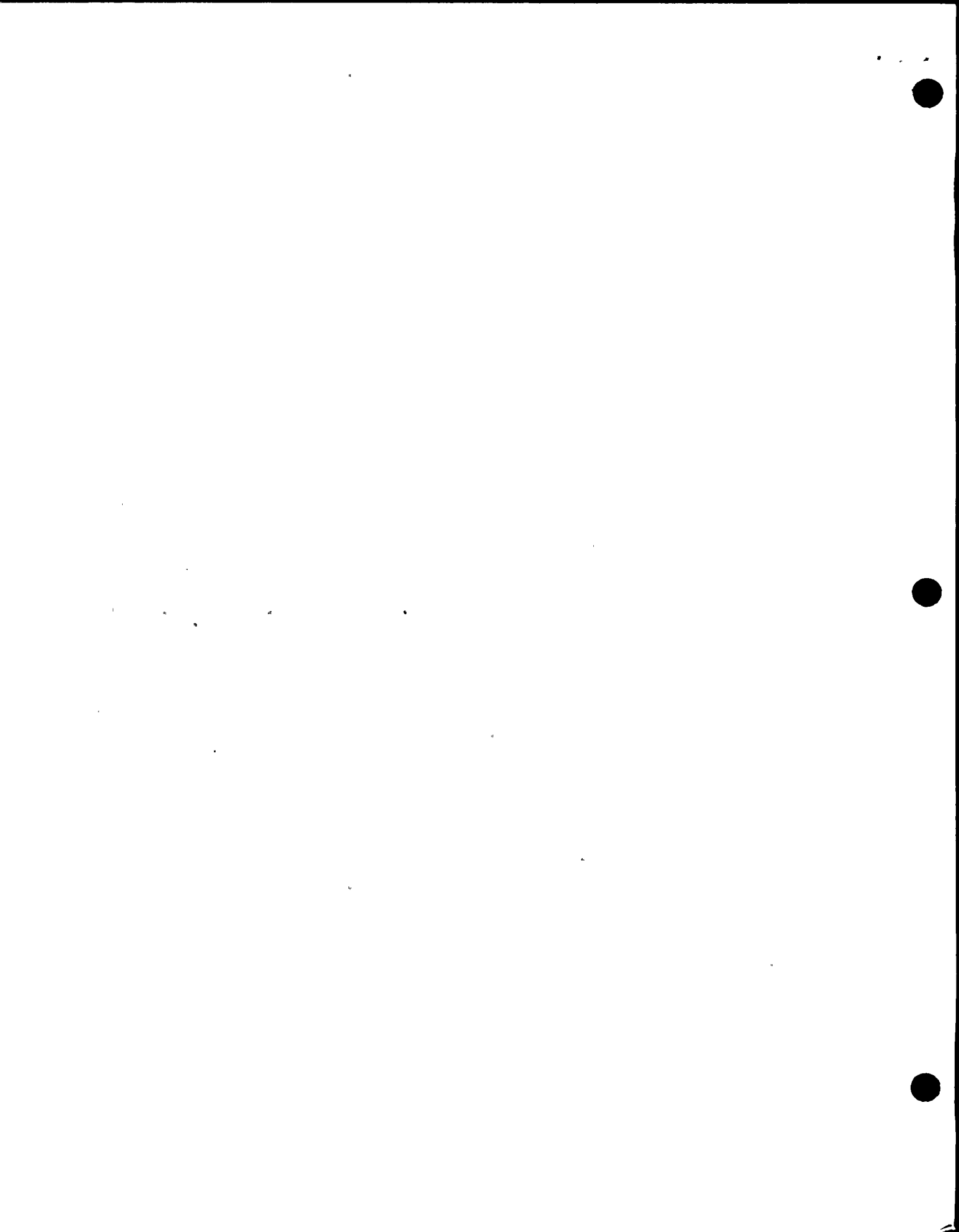
During tours of the facility the inspector checked for availability of instruments, protective clothing, and respiratory protection equipment necessary for radiological protection.

No shortage of supplies was identified.

c. Contamination Control

Tours of the facility identified problems in management of discarded protective equipment and in stepoff pad use, as described in paragraphs 2 and 3, which necessitated some clean-up. Routine decontamination work was observed.

No further problems in contamination control were identified.



d. Smear and Survey Records

Sampling of smear and survey records verified that routine and special smears and surveys were made which were consistent with measurements made by or for the inspector at various points about the facility.

No problems with smear and survey records or with quality of this work were found.

e. Personnel Traffic Control

Observation of access monitors indicated that they limited access to those men listed on the RWP's for each area.

No problems were identified.

6. ALAP Guidelines

The licensee reported by telephone (R. Burns to K. Plumlee on October 20, 1975) that the licensee now anticipates less man-Rem of exposure during this outage than was previously estimated (Inspection Report No. 50-220/75-17). The improvement was credited to strict monitoring and surveillance of work in progress and to some reductions in the amount of work scheduled. The reduction was estimated at 10% or more.

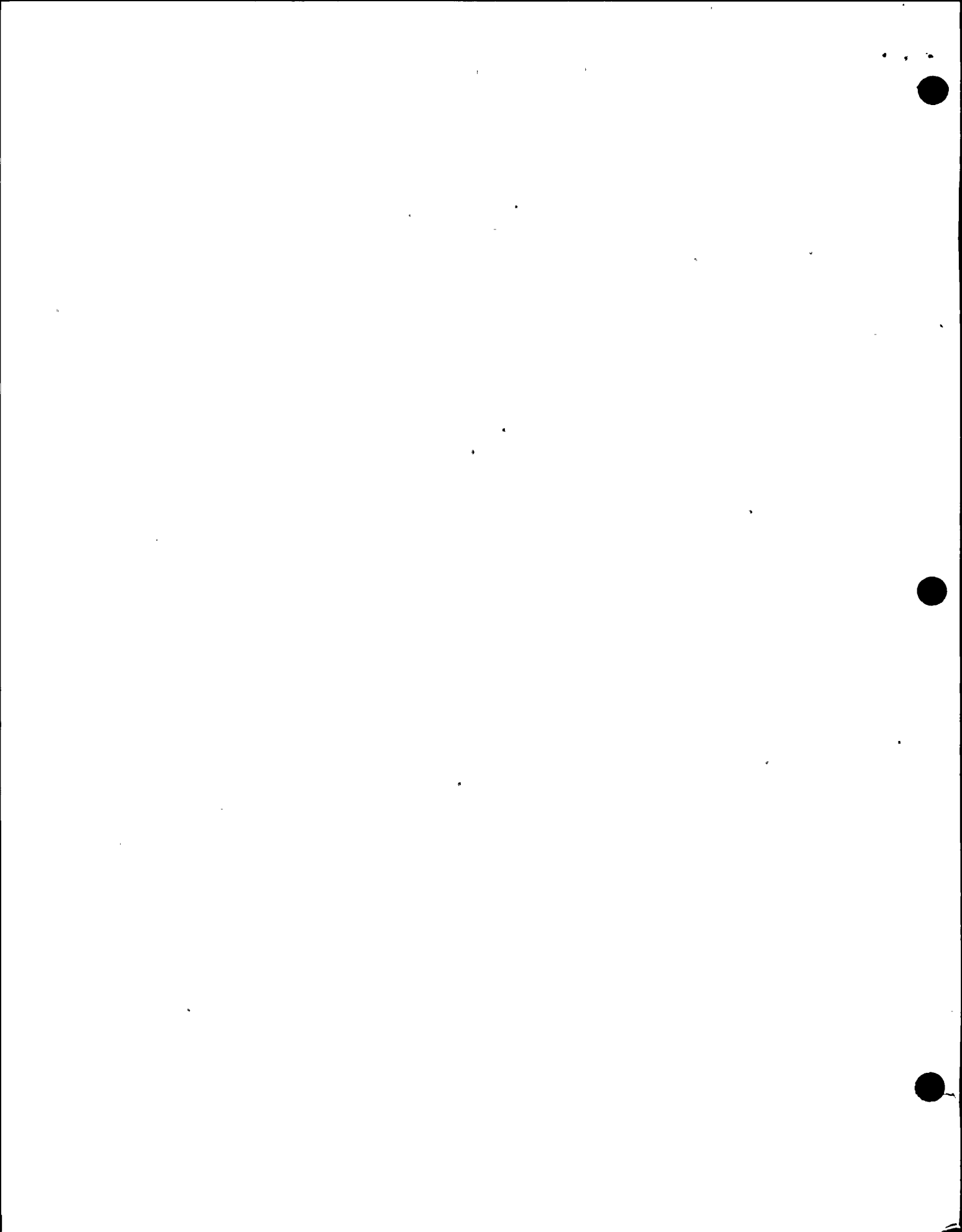
The licensee's computerization of exposure information is incomplete, however, up-to-date totals on each major job are now being provided.

The licensee's ALAP guidelines remain an unresolved item.

7. Dewatered Solid Radwaste

a. Ventilation in Work Space

On Inspection No. 50-220/75-17 the inspector observed indications of dust in the area occupied by personnel while filling radwaste drums for shipment. The licensee stated the material was microcell. Followup on this inspection included smoke-tracing of ventilation flow which showed that, contrary to accepted practice, air was flowing through the viewing ports toward the operator. No dust or contamination was found in the viewing ports. The licensee's survey and smear records for the occupied area appeared to be acceptable.



The licensee determined that the differential pressure drop (ΔP) across the ventilation filters was high. Subsequently the filters were changed and the ventilation flow was stated to be corrected. The licensee is considering a remote ΔP indicator or trouble indicator for these filters.

The inspector retraced the ventilation flow following the management interview and acknowledged the improvement reported by the licensee. No remaining problem was identified.

b. Observation of Filling Operation

Observation of the filling of a dewatered radwaste drum revealed that a small (apparently sealed) bag of dry waste had been placed in the drum before it reached the hopper where damp filter cake is fed into the drum. The inspector noticed that the presence of such items might effect compaction.

No liquid was observed in the drum.

Dewatering of solid radwaste remains an unresolved item.

8. Liquid Radwaste Concentrator

Discussion and observation of conditions indicated that the new waste concentrator occasionally burbled sufficiently that the condensate required further treatment. The cause of the problem was stated to be presence of trisodium phosphate (detergent) in laundry water. Antifoaming agents were being used.

The observable result was overflow evident in water flowing to floor drains enroute to the floor drain tanks. The licensee stated that no adequate piped connection other than the floor drains was available.

This item is unresolved.

