

U. S. ATOMIC ENERGY COMMISSION

DIRECTORATE OF REGULATORY OPERATIONS

REGION I

RO Inspection Report No.: 50-219/73-02 Docket No.: 50-219
Licensee: Jersey Central Power & Light Company License No.: DPR-16
Madison Avenue at Punch Bowl Road Priority: _____
Morristown, New Jersey Category: C

Location: Forked River, New Jersey

Type of Licensee: BWR, 1930 MWt

Type of Inspection: Special, Unannounced

Dates of Inspection: February 13-16, 1973

Dates of Previous Inspection: January 2, 5, & 6, 1973

Reporting Inspector: R. J. Meyer 4/2/73
R. J. Meyer, Radiation Specialist Date

Accompanying Inspectors: F. S. Cantrell 4/2/73
F. S. Cantrell, Reactor Inspector Date

J. P. Friess 4/2/73
J. P. Friess, Environmental Specialist Date

Other Accompanying Personnel: None _____
Date

Reviewed By: R. H. Smith 4/2/73
R. H. Smith, Acting Senior, Facility Radiological Protection Section Date

D. L. Caphton
D. L. Caphton, Senior Reactor Inspector, Facility Operations Branch

BP245

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

1. Excessive radiation levels in an unrestricted area. (Details, Paragraphs 2a, b, and c)
2. Failure to provide personnel monitoring equipment to an individual. (Details, Paragraph 3c)
3. Failure to instruct personnel. (Details, Paragraph 3d)
4. Failure to properly post and control access to high radiation areas. (Details, Paragraph 5)
5. Failure to properly post radiation areas. (Details, Paragraph 6)
6. Failure to properly label containers of radioactive materials. (Details, Paragraph 7)
7. Failure to properly post entrances to a building containing radioactive materials. (Details, Paragraph 8)
8. Failure to conduct required surveys. (Details, Paragraph 9)
9. Failure to properly store solid radioactive waste. (Details, Paragraphs 10a and b)
10. Failure to direct catch basin drains to the 1-9 radwaste sump. (Details, Paragraphs 11a and b)

B. Safety Items

1. Deficiencies in management control systems relative to the radiation protection program. (Details, Paragraphs 12a - i)
2. Deficiencies in the exposure control program. (Details, Paragraphs 13a - c)

Licensee Action on Previously Identified Enforcement Action

Not inspected.

Design Changes

Not inspected.

Unusual Occurrences

Exposures to excessive air concentrations described in licensee's letter to Director of Regulatory Operations, dated February 8, 1973. (Details, Paragraph 4a)

Other Significant Findings

A. Current Findings

Inspection findings showed that radiological conditions were not in accordance with 10 CFR Part 20 requirements, total annual exposures were increasing, solid radioactive waste handling, storage, and disposal problems existed, and management control systems were deficient.

B. Status of Previously Reported Unresolved Items

Not inspected.

Management Interview

The following individuals attended the management interview held at the conclusion of the inspection on February 16, 1973.

- T. McCluskey, Station Superintendent
- J. Sullivan, Technical Supervisor
- J. Carroll, Operations Supervisor
- D. Reeves, Technical Engineer
- D. Kaulbach, Radiation Protection Supervisor
- F. Walshe, Operating Foreman, Radwaste

The following subjects were discussed:

- A. Each of the items identified above in Summary of Findings - Enforcement Action, were described.
- B. The inspector stated that he had reviewed the licensee's investigation and evaluation of exposures to noble gases that had previously been reported. (Details, Paragraph 4a)

The following individuals attended a management meeting held at the Region I, Regulatory Operations Office on March 3, 1973:

Jersey Central Power and Light Company Representatives

- I. Finfrock, Vice President
- D. Ross, Manager, Nuclear Generating Stations
- T. McCluskey, Station Superintendent, Oyster Creek, Unit I
- J. Sullivan, Technical Supervisor, Oyster Creek, Unit I

Region I Representatives

- J. P. O'Reilly, Director
- R. Carlson, Chief, Facility Operations Branch
- R. Smith, Acting Senior, Facility Radiological Protection Section
- F. Cantrell, Reactor Inspector
- R. Meyer, Radiation Specialist

The following subjects were discussed:

- A. The intent of the meeting was described as being for the purpose of discussing with corporate management the current methods by which the Directorate of Regulatory Operations enforces federal regulations; the findings of our inspectors during the subject inspection; previous inspection history; the position of management with respect to the findings during the subject inspection; and management's plans to correct the violations and safety items.
- B. The violations and safety items were described in detail by Region I representatives. It was noted that the inspection findings indicated that the management control system was not responsive to providing a radiation protection program consistent with that required to assure compliance with AEC regulations and plant procedures. It was noted that assignment of responsibility and administrative accountability were not sufficient to measure, evaluate, and implement the program.
- C. The radwaste management program was described as being deficient, in particular, the large inventory of waste drums, some of which were stored outside a shielded structure. Licensee evaluations showed that the said inventory had resulted in excessive radiation levels in unrestricted areas, and was also contributing to personnel exposures. Region I representatives stated that radiological housekeeping practices were not in keeping with maintaining exposures to personnel as low as practicable.
- D. Region I representatives stated that the inspection had been limited in scope and that more detailed inspection would be conducted at later dates.

- E. The licensee stated that corrective action had been initiated, and described in general terms the overall plans to improve management control systems. The licensee was informed that the violations and safety items would be specifically documented in a letter to them which would require a written response describing their corrective actions.

- F. The Director stated that increased emphasis would be placed on the review of management control systems during future inspections.

DETAILS

1. Persons Contacted

T. McCluskey, Station Superintendent
J. Sullivan, Technical Supervisor
J. Carroll, Operations Supervisor
D. Reeves, Technical Engineer
D. Kaulbach, Radiation Protection Supervisor
B. Cooper, Shift Foreman
F. Walshe, Operating Foreman, Radwaste
R. Pelrina, Head Chemist
T. Raymond, Radiation Technician

2. Radiation Levels in Unrestricted Areas

- a. During a previous inspection* a review of survey records and actual measurements indicated a potential for excessive levels of radiation having occurred in an unrestricted area adjacent to the radwaste facility. A program to evaluate the radiation levels along the fence line was initiated by the licensee on November 20, 1972. The evaluation program consists of placing film dosimeters at seven locations along the north, south and east fence lines.
- b. A review of the dosimeter results showed that radiation levels existed at the east fence line for two seven day periods and at the south fence for one seven day period. The results of film dosimeters #3, #4, and #5 which were in place on the east fence line and #6 which was in place on the south fence line are shown below:

<u>Dates</u>	<u>#3</u> <u>mrem/wk</u>	<u>#4</u> <u>mrem/wk</u>	<u>#5</u> <u>mrem/wk</u>	<u>#6</u> <u>mrem/wk</u>
11/20 - 11/27/72	100	141	161	151
11/27 - 12/3/72	230	230	161	100

- c. Inspection findings indicated that the radiation levels resulted from the storage and handling of radioactive waste in and near the radwaste building. The inspector made radiation measurements** in the general area of the radwaste building on February 13, 1973.

*RO Inspection Report No. 50-219/72-05

**All measurements made by the inspector were made with an Eberline E-120-G, Geiger Counter survey instrument.

Radation levels of 100 millirem per hour existed outside the east door and 25 millirem per hour outside the south door of the radwaste building. Additionally, drums containing radioactive waste were stored north of the radwaste building. Measurements made by the inspector on the above date, at the restricted area fence line showed the maximum level to be 0.2 millirem per hour.

3. Personnel Monitoring (external)

- a. As evidenced by a review of exposure records and statements from licensee representatives, personnel monitoring is accomplished by the use of film badges, supplied by a film processing vendor. Badges are exchanged on a monthly frequency. Day to day exposure is controlled by the use of pocket dosimeters. As a result of exposures to personnel in excess of 3 rem during the third quarter of 1972*, administrative controls and limits were established. These limits and controls are defined in Radiation Protection Procedure 903.5.1. This procedure requires written authorization and approval by the plant superintendent for an individual to receive exposure over 1250 mrem and up to 2500 mrem in any one quarter. Exposure over 2500 mrem requires approval by the Manager, Nuclear Generating Stations. A review of first quarter 1973 records showed that written authorizations were in order for those individuals that were over 1250 millirem.
- b. A review of exposure records for 1973 through February 12, showed that 38 individuals have exposures in excess of 1250 millirem, the maximum being 2310 millirem. In general, personnel with the higher exposure accumulations are involved in maintenance work and radwaste processing and handling. According to licensee representatives, radwaste processing and handling was contributing to personnel exposures. The solid waste inventory contained in 55 gallon drums, was estimated to be about 600 drums on February 14, 1973, as estimated by a licensee representative, some of which was stored outside. Background radiation levels outside the radwaste building ranging from 25 millirem per hour to 100 millirem per hour were measured by the inspector on February 13, 1973. Levels to 10 millirem per hour existed at the edge of the outside drum storage area. Drums of high level waste were stored both outside the radwaste facility and within the reactor building, that were not appropriately posted or barricaded for access control purposes, thus contributing to personnel exposures.

*RO Inspection Report No. 50-291/72-05

- c. On February 19, 1973, while the inspector was making an inspection in the reactor building, and approached the area where new reactor fuel was being unloaded, the inspector noted that the reading on his survey meter increased. The inspector identified the source of radiation as being a 55 gallon drum located adjacent to the rear to the fuel truck. Radiation levels to 1000 millirem per hour at about 6 inches from the barrel and 200 millirem per hour at about 18 inches were measured by the inspector. The drum was not posted or barricaded to inform personnel of existing radiation levels. One individual near the rear of the truck was identified by a licensee representative as the driver of the truck and not a licensee employee. It was later determined by a review of the dosimeter records that the licensee had not issued a badge or pocket dosimeter to the truck driver. In the instant case the driver had uncontrolled access to an area in which existed radiation levels to 200 millirem per hour. The individual could have received a limiting dose (~ 312 mrem) in approximately 95 minutes. According to licensee representatives the driver may have been in the area up to six hours.
- d. The inspector observed licensee employees in the same area who were involved in unloading the new fuel and others observing the unloading operation. The inspector questioned one individual as to his knowledge of the presence of the subject drum and the existing background radiation levels in the general work area. The individual stated that he was not aware of either. He further stated that he guessed he should be aware of them. The inspector requested the employee to take the inspector's survey instrument to the center of the work area and read the dial. The employee stated that it was reading 20 (20 millirem per hour) and that he was not aware of the existing levels. In the instant case the employee had not been informed by survey results, verbally, or by benefit of posting, labeling, or barricading.
- e. With respect to personnel exposure history at the plant the inspector reviewed the yearly totals for 1970 through 1972 and the current year through February 12, 1973. Totals are as shown below:

<u>Year</u>	<u>2 to 5 rem</u>	<u>5 to 7 rem</u>	<u>7 to 9 rem</u>	<u>9 to 10 rem</u>
1970	4	0	0	0
1971	29	0	0	0
1972	31	22	14	8
1973	1	0	0	0

NOTE: 38 employees had exposures in excess of 1250 mrem through February 12, 1973.

4. Exposures to Concentration of Airborne Radioactivity

- a. As evidenced by records and licensee statements exposure to airborne concentrations of radioactivity are controlled by an established air sampling program. It was noted that procedures require that investigation or resampling be accomplished when air concentrations exceed 3×10^{-10} uCi/cc which includes a spectrum analysis for isotope identification. Exposure times are then calculated on the basis of the mixture MPC. A review of records showed that in those cases where air concentrations were in excess of the applicable values defined in Appendix B, Table 1, 10 CFR Part 20, exposure times were calculated and documented. Additionally, respiratory protection is used in the event of needing extended exposure times. A review of records showed one case in which three employees were exposed to excessive concentrations of noble gases. The exposures had been reported* by the licensee. The inspector reviewed the exposure evaluation data and the corrective action and found both to be as reported.
- b. Results of air samples taken in the radwaste building were reviewed in detail. Typically air concentrations were less than Appendix B, Table I limits for the identified isotopes. Typical isotopes identified were cobalt-58, cobalt-60, cesium-134, cesium-137, and manganese-54. Three air samples were taken in the radwaste building on February 16, 1973. It was noted that solid waste was being processed at the time. A review of the results showed that concentrations in the three locations were less than the applicable limits for the identified isotopes.
- c. Inspection findings showed that a whole body counting program is employed to back up the effectiveness of the air sampling program.

*Letter, Donald A. Ross to F. E. Kruesi, DRO, dated February 8, 1973

Personnel are counted on a routine basis (normally after refueling outages) and on an as needed basis in the event of a suspected exposure. Approximately 120 individuals were counted during 1972. Results of whole body counts were not indicative of any exposures to excessive air concentrations.

5. Posting and Control of Access to High Radiation Areas

- a. The inspector observed areas and buildings in which high radiation levels existed, as determined by measurements, that were not appropriately posted, barricaded, or the access controlled by a locked door, as required by the licensee's Technical Specifications. The subject areas are as follows:
- (1) The outside door at the east end of the radwaste building was not posted as a high radiation area. Radiation levels to 1500 milliroentgen per hour existed within the building on February 13, 1973.
 - (2) The large pump room in the radwaste building was not posted as a high radiation area on February 13, 1973. Radiation levels to 300 milliroentgen per hour existed as general background levels.
 - (3) The area adjacent to a drum containing radioactive materials, located at the 23 foot elevation in the reactor building near the new fuel truck unloading station was not posted as a high radiation area. Additionally, access to the barrel was not controlled by a barricade. Radiation levels to 200 milliroentgen per hour at 18 inches from the barrel existed on February 14, 1973.
 - (4) The area adjacent to a drum containing radioactive material, located at the 75 foot elevation in the reactor building was not posted as a high radiation area. Additionally, access to the area was not controlled by a barricade. Radiation levels to 200 milliroentgen per hour at 18 inches from the barrel existed on February 14, 1973. It was noted by the inspector that the subject drum had been moved to inside storage prior to completion of the inspection.
 - (5) The area outside the northeast corner of the radwaste building, adjacent to a drum containing radioactive materials was not posted as a high radiation area. Additionally, access to the drum was not controlled by a locked door. Radiation levels

to 1050 milliroentgen per hour at 18 inches from the barrel existed on February 13, 1973.

- (6) The outside drum storage area north of the radwaste building, was not posted as a high radiation area. Additionally, access to the area was not controlled by a locked door. Radiation levels to 1500 milliroentgen per hour existed adjacent to the drums on February 13, 1973.
- (7) The door to the drum storage room inside the radwaste building was not posted as a high radiation area. Additionally, the door was not locked on February 13, 1973. Background radiation levels to 1500 milliroentgen per hour existed in the center of the room on the above date.

6. Posting of Radiation Areas

a. The inspectors observations and radiation measurements showed that the following radiation areas were not appropriately posted.

- (1) The area around a drum containing radioactive materials which was located at the northeast corner outside the radwaste building. Radiation levels to 10 millirems per hour at approximately 15 feet existed on February 13, 1973.
- (2) The area outside a door at the east end of the radwaste building. Radiation levels to 100 millirems at approximately 18 inches existed on February 13, 1973.
- (3) The area around a drum containing radioactive materials located on the south side of the radwaste building. Radiation levels to 10 millirems per hour at approximately 18 inches existed on February 13, 1973. The inspector noted that the subject drum had been moved to inside the storage prior to the completion of the inspection.
- (4) The area outside a door on the south side of the radwaste building where radiation levels to 25 millirems per hour at approximately 18 inches existed on February 13, 1973.
- (5) The area around the drums containing radioactive materials which were stored north of the radwaste building. Radiation levels to 10 millirems per hour at approximately 20 feet existed on February 13, 1973.
- (6) The north side of the area around the outside waste storage tanks in which radiation levels to 10 millirems per hour on the walkway existed on February 13, 1973.

- (7) The RB Tip Drive area in the reactor building where radiation levels to 15 millirems per hour existed on February 14, 1973.
- (8) The area adjacent to a drum containing radioactive material which was being used as a stanchion to define a barricaded radiation area on the operating floor of the reactor building. Radiation levels to 10 millirems per hour, in the walkway, along the barricaded area, existed on February 14, 1973.
- (9) The area around the emergency condensers at the 95 foot elevation in the reactor building. General background radiation levels to 15 millirems existed in the area on February 14, 1973.
- (10) The liquid poison storage area at the 75 foot elevation in the reactor building. Radiation levels to 10 millirems per hour existed inside the area on February 14, 1973.

7. Labeling of Containers

The inspector's observations and radiation measurements showed that the containers described in paragraph 6, identified as a1, a3, a5, a8, and the fiberglass storage tanks containing chromated water were not appropriately labeled.

8. Posting of Areas

The inspector observed that the doors on the south and east sides of the radwaste building were not appropriately posted. Waste inventory and disposal records showed multicuries of licensed material had been and was in storage within the building.

9. Radiation Survey Program

A review of the survey program showed that a routine survey schedule had been established; however, it was not currently being implemented up to the schedule requirements. A licensee representative stated that the survey program was outdated and that they could not meet the commitment in light of the work load caused by increased maintenance work, and the problems associated with radioactive waste handling and storage. The inspector questioned licensee representatives about their knowledge of radiological conditions that were observed by the inspector. They stated that they were not specifically aware of those described conditions. The inspector's review of survey records and the health physics log showed that the conditions as observed were not identified. The inspector also noted that the extended radiation work permits, posted at various locations, did reflect the existing conditions.

10. Radioactive Waste Storage

- a. As evidenced by records there were approximately 600 drums (55 gallon) of solid waste in inventory at the time of the inspection. As observed by the inspector about 25 drums were stored in an outside area north of the radwaste building. As evidenced by survey records and licensee statements, the subject area had been used to store drums for a period in excess of one year. A survey record dated January 11, 1972 showed that drums were in storage at the subject location on the subject date.
- b. Technical Specification 6.2.C requires that plant procedures will be followed. Radiation Protection Procedure 907.4.1 states that drummed radioactive waste will be stored in the radwaste facility. The above identified outside storage was not in accordance with procedural requirements. It was noted by the inspector that the subject drum storage area had been discontinued prior to completion of the inspection.

11. Liquid Waste Storage Tanks (outside)

- a. The subject tanks are located adjacent to the west side of the radwaste building. A concrete catch basin is provided for the tanks. Section IX, Subsection 3, Item 3.1.1 of the FDSAR states that leakage and spills from tanks containing potentially radioactive wastes will be collected and returned to the waste system for processing. Additionally, in a letter to the Directorate of Licensing dated December 19, 1972, the licensee stated that the drains from the subject catch basin will be directed to the 1-9 radwaste sump. This was reported as corrective action to prevent a recurrence of an uncontrolled release to the discharge canal that had occurred on December 6, 1972.
- b. On February 13, 1973, the inspector noted that water (identified as rainwater by the licensee) which had collected in the catch basin was frozen solid. It was further determined that plugs had been inserted in the catch basin drain to keep the water from draining to the 1-9 sump. The drain plugs effectively blocked drainage from the catch basin and defeated the intent of catch basin. Additionally, the ice in the catch basin prevented access to the plugs for removal.

12. Management Control Systems

- a. Inspection findings showed that procedures, rules and individual responsibilities relative to radiation safety are defined in Section 900 of the Oyster Creek Nuclear Electric Generating Station - Unit I, Procedures Manual. Radiation Protection Procedure (RPP) requires that all personnel shall know the concepts of radiological safety and are required to be familiar with and follow the philosophy, standards, and safety procedures as outlined in the RPP's. The procedure further requires that individuals must demonstrate a working knowledge of application and implementation of said procedures before receiving authorization for unrestricted access to radioactive materials area. In general, all permanently assigned personnel have this authorization and are classified "unrestricted personnel".
- b. Inspection findings indicated that individuals, had not demonstrated familiarity with procedural requirements and 10 CFR Part 20 requirements as referenced in the procedures. This was evidenced by the violations previously identified in this report, discussions with licensee representatives in which they stated that they were not aware of the violations identified by the inspector, and discussions with licensee personnel in which they stated that they did not know the existing radiation levels at their work location. It was noted that plant procedures specifically identified individual responsibilities in these areas.
- c. It was further determined that there were no formal requirements for first line supervision to audit individual performance relative to radiological practices. There were no formal reporting requirements for line organization supervisors to define to higher management, program deficiencies, procedural violations, and problem areas. There was no retraining program established to instruct and inform personnel of requirements in the area of radiological practices. Specifically, no additional training has been given relative to the current existing radiological conditions and the high exposure use. The training provided to the radiation technicians does not include training relative to 10 CFR Part 20 requirements.
- d. It was noted that the General Office Review Board (GORB) consisting of individuals not stationed at the plant site had conducted in plant audits in the area of radiological protection and the rad-waste systems. The records showed that audits were performed as noted below:

July 2, 1969
February 17, 1970
January 12-13, 1971
April 12-13, 1971
November 19, 1971
February 10, 1972

- e. A review of the audit results showed that at least one violation or poor practice was identified in each of the audits. Typically these were identified as problems only and not identified specifically as violations of procedures or AEC regulations. In each of the audits housekeeping was spoken to in terms of fair, improved, very dirty, and poor. In one audit (January 12-13, 1971) the committee noted that they were unable to determine responsibility for clean up of contaminated areas. In all but one of the audits the committee commented on various problems associated with the radwaste facility. There was no evidence in the audit reports that their findings were indicative of program deficiencies. It was noted that findings as reported were subsequently corrected; however, audits at later dates identified some as being recurring problems.
- f. Inspection findings showed that the Plant Operations Review Committee (PORC) consisting of onsite personnel, had meetings on a routine frequency. A review of PORC meeting minutes did not reflect a knowledge of existing radiological conditions as noted by the inspector during the inspection; neither did it reflect any cognizance of program deficiencies. It did reflect that problems with the radwaste facility existed. It was noted that a special committee had been appointed to investigate and recommend a program to resolve the problems. In addition to this, a licensee representative stated that a consultant had been retained to provide input to the program and that an architectural firm had been retained to provide design for proposed modifications to the radwaste systems. Progress reports from the special committee were not documented.
- g. Inspection findings showed that approximately 85,000 gallons of water containing chromate concentrations of approximately 800 ppm and radioactivity concentrations to 2.6×10^{-4} uCi/cc were currently stored at the plant site. It was noted that 30,000 gallons were stored in permanent fiberglass storage tanks. These tanks also contain the water of highest radioactivity concentrations. The remaining water is stored in temporary mobile tanks and a rubber tank in a lower level of the reactor building. The inspector observed that some of the water from two of the temporary tanks may have leaked to the ground. It was noted that the subject tanks were leaking at the time of the inspection; however, catch pans were in place to collect the water.

- h. Relative to the above storage, the following deficiencies were noted as determined from procedure reviews and licensee statements:
- (1) An evaluation of a gross tank failure had not been made.
 - (2) Written operating and emergency procedures had not been established.
 - (3) A program to prevent overflow or provide routine leak repair had not been initiated.
 - (4) A catch basin at the fiberglass storage tank had not been provided. The licensee stated that a dike installation was in the planning stages.
- i. Radiation Protection Procedure (RPP) 903.7, in part, requires that Radioactive Work Permits will provide a general description of the hazards involved for the work being performed. RPP 903.7.4 allows for issuance of an extended radiation work permit for those areas in which routine and repetitive work is performed. It further requires that revisions will be made to the permit as necessary, or at frequencies of no greater than monthly. It was noted by the inspector that the extended permits at various locations in the reactor building, dated January 10, 1973, did not reflect the current (February 14, 1973) radiological conditions as observed and as measured by the inspector. Radiation and high radiation areas existed that were not properly posted to inform individuals of radiation levels up to 200 mrem hour. Contaminated equipment, tools, and drums containing radioactive materials were accessible to personnel without benefit of labeling or other information relative to contamination or radiation levels.

13. Exposure Use

- a. On February 14, 1973 during discussions with licensee representatives it was determined that drums containing concentrated radioactive waste from the liquid waste processing system, were being manually capped without the benefit of a survey to establish exposure rates prior to capping. As described, the exposure to the individual performing the work is determined after the fact by reading a pocket dosimeter. The inspector had observed (February 13, 1973) waste drums that were in storage with posted radiation levels of up to 20 roentgen per hour. Reportedly, the drums were being manually capped because the drum capping machine was out of service; an intermittently recurring problem.

- b. The inspector identified numerous containers and areas (described in preceding paragraphs) that were contributing to background radiation levels in general. The inspector also observed individuals working in some of the areas and receiving exposure without knowledge of the existing conditions at their work locations. Specific to this, the individuals unloading the fuel truck (paragraph 3d) received exposures up to 20 millirem for the subject day as determined from the pocket dosimeter records. According to licensee representatives the subject area is normally a low background area and should contribute little to personnel exposure. The large pump room in the radwaste building had been identified by GORB audits and by the PORC on numerous occasions, to be a continuing problem relative to contamination on the floor, from recurring floor drain stoppages. This problem was further identified in survey records. The inspector measured radiation levels to 300 millirems per hour in the room on February 13, 1973. Contamination on the bottom of the inspector's rubbers, after exit from the area was 60 millirems per hour.
- c. Inspection findings showed that the solid waste inventory was further contributing to personnel exposures. At the time of the inspection the inventory of waste drums totaled about 600. This was down from an inventory of about 800 drums that had been on site in late 1972. It was noted that drums were stored in the open, outside a shielded structure, at a planned location, and unplanned (previously described) locations. The licensee had not established a formal plan or program that maintained control of, or provided for, disposal of solid waste that was consistent with the shielded storage capacity at the site, or consistent with maintaining radiation levels in unrestricted areas (paragraph 2a, b, and c) within the applicable 10 CFR Part 20 limits. Additionally, the inspector measured radiation levels to 100 millirem per hour outside the east door of the radwaste building on February 13, 1973.