

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 030-32702/92002

Docket No. 030-32702

License No. 31-26394-01

Category E

Priority 3

Licensee: Old Vic, Inc.

Inspection Conducted: November 4-5, 1992

Inspection By:

Kenneth J. Lambert
Kenneth J. Lambert
Radiation Specialist

12/2/92
Date

Reviewed By:

Darrel G. Wiedeman
Darrel G. Wiedeman, Acting Chief
Fuel Facilities and Contaminated
Sites Section

12/2/92
Date

Inspection Summary

Inspection on November 4-5, 1992 (Report No. 030-32702/92002 (DRSS))

Areas Inspected: This was a routine announced inspection of the licensee's facility at 10101 Woodland Avenue, Cleveland, Ohio, including the status of remediation activities. The inspection included a review of the licensee's organization, facility, training, personnel exposures, waste disposal, posting, and independent measurements.

Results: The inspection did not identify any violations of NRC regulatory requirements. The licensee appears to be following the NRC approved remediation and health and safety plans for decontaminating the facility. The remediation of the facility is expected to be completed during the first week of December.

DETAILS

1. Persons Contacted

*W. Van Pelt, RSO
*J. Snellings, Project Manager, Chemical Waste Management (CWM)
*S. Wish, Project Radiological Control Supervisor, CWM
S. James, Ohio Department of Health, Radiological Health Division

* Indicates those individuals present at the exit meeting.

2. Facility History

The licensee used radioactive materials for the purposes of conducting research, calibrating instruments, and manufacturing electronic components until 1987 at its Woodland Avenue Facility. The contamination of the facility occurred primarily from the manufacturing of electronic tubes containing radium-226 and nickel-63. The licensee began decommissioning the facility in October, 1988 and performed a final survey in August, 1989, which indicated the facility was below NRC unrestricted use criteria. A confirmatory survey, conducted by Oak Ridge Associated Universities (ORAU), in May, 1990, identified multiple locations above NRC unrestricted use criteria. In 1992, a new license was issued, which clarified the owner of the facility. The licensee submitted a decommissioning plan to the NRC in May, 1992. The licensee was authorized to begin characterization of the facility on July 2, 1992. On September 18, 1992, the licensee's decommissioning plan was approved and authorization to begin remediation was given.

3. Organization

The licensee's authorized radiation safety officer reports to the Vice President and General Counsel of '21' International Holdings, Inc., the licensee's parent company. The licensee has contracted with Chemical Waste Management (CWM) to perform the remediation of the facility. CWM has an onsite project manager and radiological control supervisor who report to the licensee's radiation safety officer.

No violations of NRC requirements were identified.

4. Materials and Facility

The possession of numerous isotopes incident to research, instrument calibration and the manufacture of electronic components was authorized by NRC Byproduct Material License No. 34-00486-10, which was superseded by License No. 31-26394-01. The current license authorizes possession of radioactive materials incident to decontamination of the facility, a

five story brick building. Currently, the licensee possesses minimal amounts of radioactive materials in the form of contamination on building surfaces and equipment. In addition the license, through an amendment, authorizes the remediation of the facility.

The characterization of the building was completed in October, 1992 and a interim survey report on the characterization was submitted to the NRC on October 27, 1992. The remediation of the facility is proceeding as planned with 75 to 80 percent of the building remediated at the time of this inspection. The licensee is currently evaluating the extent of the contamination in the first floor drain system. The licensee expects the remediation to be completed during the first week in December, with submittal of the final survey report shortly thereafter.

In addition, the facility is used by a local plumbing contractor to store surplus equipment and supplies. The contractor's equipment and supplies are stored in an unrestricted area of the facility. The plumbing contractor must check in with security upon entering the building and has attended a one hour radiation safety training seminar. All other visitors must sign in with the security guard and are escorted while in the facility.

No violations of NRC requirements were identified.

5. Training

The licensee's training program consists of a one hour lecture on radiation safety for the security guards and any service contractors. At the conclusion of the lecture there is a question and answer period. Attendees are provide a certificate which state that radiation safety training has been completed. Training records were reviewed for May 5 and 19, 1992, with no problems identified.

The licensee's remediation plan requires that all remediation workers will have attended an Occupational Safety and Health Administration (OSHA) 40 hour hazardous training or the current eight hour refresher training and have been respirator fit tested. In addition, the workers must attend the onsite eight hour radiation safety training and have three days of on the job observation.

No violations of NRC requirements were identified.

6. Personnel Exposures

Licensee's contractor personnel who are involved with the remediation of the facility are provided TLD's for determining whole body exposures. TLD's are exchanged on a monthly frequency and are returned to the contractors main office for processing. A review of whole body exposure records from July 6, 1992 to September, 1992, indicated all exposures to be minimal.

five story brick building. Currently, the licensee possesses minimal amounts of radioactive materials in the form of contamination on building surfaces and equipment. In addition the license, through an amendment, authorizes the remediation of the facility.

The characterization of the building was completed in October, 1992 and a interim survey report on the characterization was submitted to the NRC on October 27, 1992. The remediation of the facility is proceeding as planned with 75 to 80 percent of the building remediated at the time of this inspection. The licensee is currently evaluating the extent of the contamination in the first floor drain system. The licensee expects the remediation to be completed during the first week in December, with submittal of the final survey report shortly thereafter.

In addition, the facility is used by a local plumbing contractor to store surplus equipment and supplies. The contractor's equipment and supplies are stored in an unrestricted area of the facility. The plumbing contractor must check in with security upon entering the building and has attended a one hour radiation safety training seminar. All other visitors must sign in with the security guard and are escorted while in the facility.

No violations of NRC requirements were identified.

5. Training

The licensee's training program consists of a one hour lecture on radiation safety for the security guards and any service contractors. At the conclusion of the lecture there is a question and answer period. Attendees are provide a certificate which state that radiation safety training has been completed. Training records were reviewed for May 5 and 19, 1992, with no problems identified.

The licensee's remediation plan requires that all remediation workers will have attended an Occupational Safety and Health Administration (OSHA) 40 hour hazardous training or the current eight hour refresher training and have been respirator fit tested. In addition, the workers must attend the onsite eight hour radiation safety training and have three days of on the job observation.

No violations of NRC requirements were identified.

6. Personnel Exposures

Licensee's contractor personnel who are involved with the remediation of the facility are provided TLD's for determining whole body exposures. TLD's are exchanged on a monthly frequency and are returned to the contractor's main office for processing. A review of whole body exposure records from July 6, 1992 to September, 1992, indicated all exposures to be minimal.

The licensee's air sampling program employs working level, work area, and lapel air sampling to determine individuals internal exposure to radioactive materials. If the air sample concentration is greater than 25 percent of the maximum permissible concentration (MPC) for alpha (radon and thorium) or beta (nickel-63) emitters, the licensee's contractor is required to evaluate and make a determination if respiratory protection or additional engineering controls are warranted. Records of exposure to airborne radioactivity, as determined by personnel and work area air sampling were reviewed for the period of July to November 2, 1992. All records indicate that concentrations are below 25 percent of the applicable MPC. Working level air samples collected in the penthouse of the facility indicated levels of radon 50 to 75 percent of the MPC for radon.

The licensee's contractor conducts routine entrance and exit bioassay sample analysis on all employees. In addition the licensee would collect bioassay samples after an incident involving radioactive material or if air sampling data indicates air concentrations greater than 25 percent of the applicable MPC. Bioassay reports indicated that all entrance results were less than the detection limits for chlorine-36 and radium-226. As of November 5, 1992 the licensee has the results of one exit bioassay sample analysis. The reported results are less than five picocuries per liter for chlorine-36 and less than one picocurie per liter for radium-226. The licensee has recently added nickel-63 as a routine radionuclide for bioassay analysis.

No violations of NRC requirements were identified.

7. Area Surveys

The licensee performs a wipe survey and direct measurements for alpha, beta and gamma activity at the control line to the restricted area on a daily frequency. A wipe survey and direct measurements for alpha, beta, and gamma activity are conducted weekly of the unrestricted areas, break room, and counting lab. The licensee has set the action level at 50 percent of the NRC unrestricted release level, for requiring decontamination of the effected area. Weekly survey reports for September 26, 1992 and November 3, 1992 were reviewed and did not identify any areas with contamination above the action level.

No violations of NRC requirements were identified.

8. Waste Disposal

As of November 6, 1992, the licensee has not made any shipments of radioactive waste, but expects to in the near future. However, the licensee has four B-25 boxes (95 cubic feet in each box) filled with radioactive contaminated material waiting to be shipped. The licensee has estimated that these B-25 boxes have a total of 260 microcuries of nickel-63 and 6 microcuries of radium-226. In addition, the licensee has seventy-five 52 and 55 gallon drums filled with radioactive contaminated material. These drums contain an estimated total of 150

microcuries of nickel-63, 14 microcuries of radium-226, and 25 microcuries of chlorine-36. The licensee is consolidating its storage of waste drums and boxes to a single area on the second floor of the facility.

No violations of NRC requirements were identified.

9. Posting and Labeling

The licensee has posted at the visitor and employee sign in area, near the guard station, a Form NRC-3, and a notice stating that 10 CFR Parts 17 and 20, and the license may be review by contacting the RSO. In addition, a tour of the facility revealed that the waste drum storage area is posted and the drums are appropriately labeled. All restricted areas are roped off and posted as "Caution Radioactive Materials". A personnel frisking station is set up at the entrance point to the restricted area.

No violations of NRC requirements were identified.

10. Independent Measurements

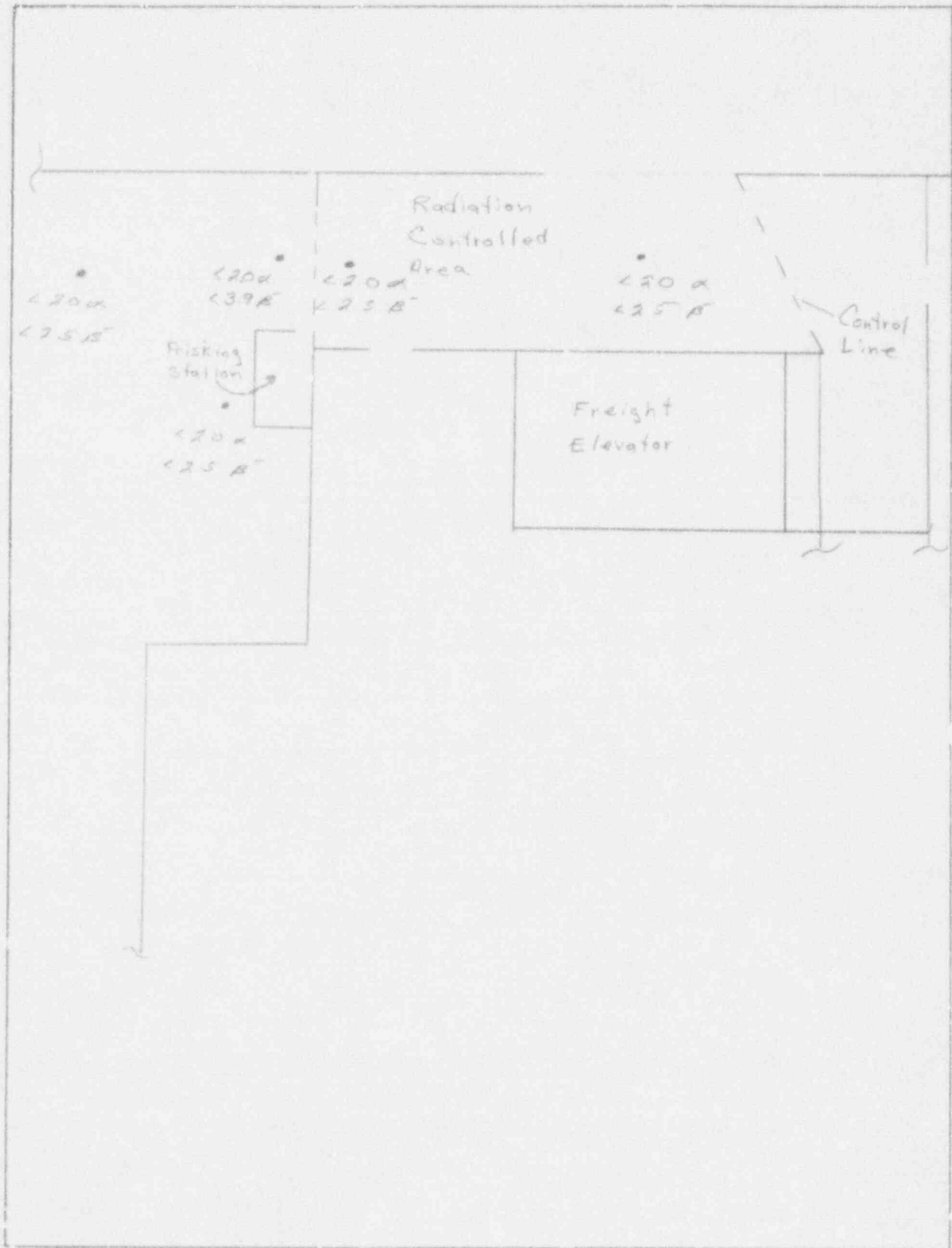
Five wipes, approximately 100 square centimeters each, were taken to determine removable activity in the vicinity of the restricted area access point, as indicated in the attached diagram (Attachment A). The wipes were analyzed for gross alpha and beta activity. The detected levels of removable activity were <2 disintegrations per minute (dpm) alpha and <3.9 dpm beta for each of the five wipes.

11. Exit Meeting

An exit meeting was held with licensee representatives on November 5, 1992. Attendance at the meeting is indicated in the Persons Contacted Section of this report. The preliminary results of the inspection were discussed with the licensee as well as the steps the licensee will be taking to determine the extent of contamination in the first floor drain system. In addition, it appears that the licensee's contractor is following the approved Decommissioning Plan.

Attachment: Attachment A

ATTACHMENT A



Res. 75 in dpr/10 cm²