POLICY ISSUE

(Information)

December 13, 1993 SECY-93-340

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: OLD VIC, INC., LICENSE TERMINATION AND REMOVAL FROM THE SITE DECOMMISSIONING MANAGEMENT PLAN

PURPOSE:

To inform the Commission that remedial action has been completed at the Old Vic, Inc., (formerly Victoreen) facility in Cleveland, Ohio, and that the staff plans to release the site for unrestricted use, terminate Nuclear Regulatory Commission Byproduct Materials License Number 31-26394-01, and remove the site from the Site Decommissioning Management Plan (SDMP).

SUMMARY:

In SECY-90-121, the original SDMP, and in subsequent revisions to the SDMP (SECY-91-096, SECY-92-200, and SECY-93-179), the staff identified approximately 50 sites where remedial action was warranted because of the presence of residual radioactive material in excess of NRC's current unrestricted use criteria. One of these sites is the Old Vic, Inc., facility in Cleveland, Ohio. Victoreen Incorporated (licensee) used radioactive materials for conducting research, instrument calibration, and manufacturing of electronic components, from 1965 until 1987, at its Woodland Avenue facility in Cleveland, Ohio. Victoreen began decommissioning the facility in October 1988 and performed a final radiological survey in August 1989. The licensee's survey indicated that the residual radioactive material contamination at the facility was less than NRC unrestricted use criteria.

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NOTE: TO BE MADE PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF THIS PAPER

Oak Ridge Associated Universities (ORAU) conducted a confirmatory survey in May 1990, which identified multiple locations with residual radioactive material contamination in excess of NRC unrestricted use criteria. To clarify ownership of the facility and the responsibility for decommissioning, on March 30, 1992, NRC issued a license to Old Vic, Inc., and terminated Victoreen's license. The licensee began characterization of the facility in July 1992 and completed remediation of the facility in January 1993. Based on the remedial actions taken by the licensee, the staff review of the licensee's termination surveys, and the results of NRC confirmatory surveys, staff concludes that decommissioning activities are complete and the site is suitable to be released for unrestricted use.

BACKGROUND:

The Victoreen Incorporated facility, at 10101 Woodland Avenue, Cleveland, Ohio, is a 5-story, 16,000-square-meter (3.9 acre) brick building with cement floors partially covered with tile or carpeting. The walls are brick, cinder block, or drywall. The grounds consist of a blacktopped parking area, a loading dock, and a railroad spur.

Victoreen's NRC byproduct materials license authorized the use of radioactive materials for the purposes of conducting research, instrument calibration, and manufacturing of electronic components, radiation detection instruments, and radioactive sealed or electroplated sources. The primary isotopes used by the licensee were nickel-63, chlorine-36, and radium-226. The licensee ceased operations at its Woodland Avenue facility in 1987, when it relocated its operations to a new facility in Solon, Ohio.

The licensee submitted a decommissioning plan, to the NRC, for review in March 1988, and submitted a revised plan, dated September 6, 1988. NRC authorized decommissioning of the facility in September 1988. In October 1988, the licensee's contractor, Applied Health Physics, began decommissioning the facility and performed a final radiological survey in August 1989. This survey indicated that the residual radioactive material at the facility was less than NRC unrestricted use criteria of 83 Becquerel (Bq) (5000 disintegrations per minute (dpm))/100 square centimeters (cm^2) (15.5 in^2) average ß activity; 250 Bq (15,000 dpm)/100 cm^2 (15.5 in^2) maximum ß activity; and 17 Bq (1000 dpm)/100 cm^2 (15.5 in^2) removable ß activity. These criteria are found in NRC's "Guidelines for Decontamination of Facilities and Equipment prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," August 1987. In May 1990, ORAU conducted a confirmatory survey, which identified multiple locations with residual radioactive material in excess of NRC unrestricted release criteria. Based on the ORAU survey, NRC informed Victoreen that the facility was not suitable for release in that condition and would require additional remediation.

In 1991, NRC Region III inspected the facility and renewed discussions with Victoreen regarding the need for additional remediation. To clarify ownership of the facility and the responsibility for decommissioning, on March 30, 1992, NRC issued a new license to Old Vic, Inc., and terminated Victoreen's license.

Representatives from Old Vic, Chemical Waste Management (Old Vic's decommissioning contractor) and NRC met in April 1992, to discuss the decommissioning process.

The licensee submitted a decommissioning plan to NRC in May 1992. This plan included both characterization and remediation plans. The decommissioning plan was also sent to the Ohio Department of Public Health (ODOH), Radiological Health Bureau, for its review. After satisfactorily responding to NRC and ODOH questions, the licensee was authorized to begin characterization of the facility on July 2, 1992. The decommissioning plan was approved on September 18, 1992, and Old Vic's byproduct material license was amended to include the approved plan. An interim characterization survey report was submitted to NRC in October 1992. This report confirmed the 1990 ORISE radiological survey, which indicated residual radioactive materials in excess of NRC unrestricted use criteria existed on building surfaces.

Remedial activities were conducted from September 1992 through January 1993. The licensee used a variety of methods to remove residual radioactive contamination, including scabbling of concrete surfaces; removal of portions of doors, walls or equipment; removal of floor tiles; and vacuuming and wiping surfaces. The remedial activities generated approximately 54 cubic meters (1900 cubic feet) of radioactive waste, which was disposed of at the low-level waste disposal site at Barnwell, South Carolina.

The licensee's final radiological survey report, dated February 5, 1993, indicated that building surfaces met NRC unrestricted use criteria. The licensee scanned 100 percent of the floor and wall grid blocks and 50 percent of the ceiling grid blocks, in affected areas. The licensee scanned 100 percent of the floor and wall grid blocks in unaffected areas. Affected and unaffected area radiological surveys consisted of over 11,500 grid blocks and over 50,000 individual measurements and included roof top and outdoor areas. The licensee also removed a portion of the tiles and carpeting to evaluate underlying surfaces. Average, maximum, and removable residual radioactive material values were tabulated for each survey grid block. Average total residual radioactive material activity values ranged from background to 48 Bq (2900 dpm)/100 cm^2 (15.5 in^2). Maximum residual radioactive material values ranged from background to 118 Bq (7088 dpm)/100 cm^2 (15.5 in^2). Removable radioactive material values ranged from background to 7 Bq (406 dpm)/100 cm^2 (15.5 in^2). Exposure rate measurements did not exceed 1.3 nanocoulombs per kilogram per hour ((nC/kg)/hr) [5 microroentgen/hour (μR/hr)] above background.

NRC contracted with Oak Ridge Institute for Science and Education (ORISE) to perform a confirmatory radiological survey of the facility. ORISE concluded that the licensee's final radiological survey failed to demonstrate that residual radioactive material on building surfaces was less than the NRC unrestricted use criteria. This conclusion was based on ORISE's identification of 23 locations with residual radioactive material in excess of NRC unrestricted use criteria, and the failure of the licensee to perform radiological surveys of the entire roof top, passenger elevator, and freight elevator. The staff review of ORISE's radiological survey report indicated

that residual radioactive material remaining in other areas of the facility surveyed was less than NRC unrestricted use criteria and compared favorably with the licensee's final survey report. The licensee subsequently performed radiological surveys of the entire roof top, passenger elevator, and freight elevator. The licensee's survey report, dated April 27, 1993, indicated that the residual radioactive material on the roof top, passenger elevator, and freight elevator was less than NRC unrestricted use criteria. The licensee's report also indicated that the locations identified by ORISE were remediated to levels less than NRC unrestricted use criteria.

After review of the licensee's final radiological survey and supplemental survey reports, and ORISE's confirmatory survey report, the staff determined that additional surveys were warranted. The licensee agreed to perform the additional radiological surveys requested by NRC. NRC Region III performed a confirmatory survey, concurrent with the licensee's survey, on October 11 to 14, 1993, to facilitate timely resolution of survey issues. The licensee's radiological survey report identified eight locations with measurements in excess of background measurements. These locations were isolated areas ranging in size from 3 cm^2 (0.5 in^2) to 35 cm^2 (5.4 in^2). The residual radioactive material activity was averaged over 100 cm^2 (15.5 in^2) and ranged from 10 Bq (591 dpm) to 224 Bq (13,468 dpm)/100 cm^2 (15.5 in^2). Region III confirmatory survey results ranged from 37 Bq (2,200 dpm)/100 cm^2 (15.5 in^2) to 183 Bq (11,000 dpm)/100 cm^2 (15.5 in^2) and compared favorably with the licensee's radiological survey results. The measurements exceeding 83 Bq (5000 dpm)/100 cm^2 (15.5 in^2) all had averages less than 83 Bq (5000 dpm)/100 cm^2 (15.5 in^2) when averaged over 1 square meter (11 ft^2). Therefore, in accordance with the guidance in draft NUREG/CR-5849, Manual for Conducting Radiological Surveys in Support of License Termination, these areas are acceptable, and no additional remediation was required. Two of the locations, however, were measured at levels that exceeded 250 Bq (15,000 dpm). These locations were small spots that were 35 cm^2 (5.4 in^2) and 2.41 cm^2 (0.37 in^2) in area. On November 30, 1993, a contractor to Old Vic remediated these small areas and transferred the contaminated materials to Victoreen, an NRC licensee, in Solon, Ohio. Following the remediation, the two areas were at background radiation levels of about 2.3 Bq (140 dpm) to 4.3 Bq (260 dpm). Therefore, based on both the licensee's and NRC's radiological survey reports, NRC staff concludes that the radioactive contamination, at the Woodland Avenue facility, has been remediated to levels that are less than NRC unrestricted use criteria.

Region III reviewed Victoreen's license for the Woodland Avenue facility. The staff conducted this review to determine if there is any historical information regarding release of materials or onsite disposal of radioactive materials. Based on this review, the staff concludes that licensed materials were properly disposed of and the decommissioning activities and radiological surveys conducted by the licensee's contractor addressed all appropriate areas of the facility.

CONCLUSIONS:

Based on the licensee's remedial actions, the staff review of the licensee's radiological survey reports, and results of NRC confirmatory surveys, the staff concludes that decommissioning has been satisfactorily completed. The staff intends to formally notify the licensee that no further action is planned. Old Vic's license will be terminated as requested in its letter dated February 5, 1993. A draft of the letter to be sent to the licensee stating that License Number 31-26394-01 will be terminated, is enclosed (Enclosure 1). A draft letter to be sent to the U.S. Environmental Protection Agency informing them of NRC's intent to terminate Old Vic's license, is also enclosed (Enclosure 2).

Region III transmitted a copy of its confirmatory survey, ORISE's confirmatory survey, and the licensee's final survey report to the ODOH. Based on the licensee's radiological survey reports, and NRC and ORISE confirmatory surveys, ODOH representatives indicated to the staff that ODOH will be sending Old Vic a letter terminating Old Vic's Ohio radioactive materials registration.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.

Hugh L. Thompson, Jr.
James M. Taylor
Executive Director
for Operations

Enclosures:
1. Draft ltr to Old Vic, Inc.
2. Draft ltr to U.S. EPA, Reg. V

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Old Vic, Inc.
c/o NEAC, Inc., and '21'
International Holdings, Inc.
ATTN: Phil Smith, Vice President
and General Counsel
153 East 53rd Street, Suite 5900
New York, NY 10022

License No. 31-26394-01
Docket No. 030-32702

Dear Mr. Smith:

This refers to your Final Radiological Status Report, dated February 5, 1993, regarding the Old Vic, Inc., facility at 10101 Woodland Avenue, Cleveland, Ohio; your "Supplemental Survey Data and Commentary on ORISE Confirmatory Survey," dated April 27, 1993; your "Report of Supplemental Radiation Survey," dated October 20, 1993; and two letter reports of minor remediation from Dr. W. Van Pelt dated November 30, 1993, and December 1, 1993. The results of the radiological surveys and analyses performed indicate that residual radioactive material on building surfaces at the facility is less than the criteria found in U.S. Nuclear Regulatory Commission's "Guidelines for Decontamination of Facilities and Equipment prior to Release for Unrestricted Use or Termination for Byproduct, Source, or Special Nuclear Material," August 1987. Based on the above radiological survey reports, we understand that Old Vic, Inc., considers that the facility has been adequately remediated to allow unrestricted use.

After reviewing your reports and surveys of this facility, the NRC Form 314, and Oak Ridge Institute for Science and Education's (ORISE's) radiological survey, and after conducting our own confirmatory surveys, we conclude that further remedial action is not required, and that the facility located at Cleveland, Ohio, is suitable for unrestricted use. Therefore, NRC no longer has any regulatory interest with regard to this facility, and License No. 31-26394-01 is hereby terminated.

As noted in the Action Plan (57 FR 13389), this is the final action of the Commission on the referenced license. NRC will not require any additional decommissioning in response to future NRC criteria or standards, except in the event that additional contamination, or noncompliance with the Decontamination and Decommissioning Plan approved by NRC in September 1992, is found indicating a significant threat to public health and safety. Noncompliance would occur when a licensee does not comply with the approved decommissioning plan, or provides false information.

If you have any questions, please contact me at (708) 790-5785.

Sincerely,

Gary L. Shear, Chief
Fuel Facilities and Decommissioning
Branch

CC: W. Van Pelt, RSO
B. Jones, Esq.
S. James, ODOH

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Docket No. 030-32702
License No. 31-26394-01

Mr. Henry L. Longest, II, Director
Office of Emergency and Remediation Response
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Mr. Longest:

This letter is to inform the U.S. Environmental Protection Agency (EPA) that the U.S. Nuclear Regulatory Commission is preparing to terminate the license issued to Old Vic, Inc., for its site on Woodland Avenue, in Cleveland, Ohio, and to release the site for unrestricted use.

NRC staff is providing this information to EPA in accordance with NRC policy published in its "Action Plan to Ensure Timely Cleanup of Site Decommissioning Management Plan Sites" (57 FR 13389), which states that NRC will inform EPA about specific decommissioning actions at Site Decommissioning Management Plan sites.

The Old Vic site was formerly used by Victoreen, Inc., from 1965 to 1987. Victoreen used radioactive materials, under an NRC license, for conducting research, instrument calibration, and manufacturing of electronic components. The primary isotopes used by the licensee were nickel-63, chlorine-36, and radium-226. The licensee ceased operations at its Woodland Avenue facility in 1987, when it relocated its operations to a new facility in Solon, Ohio.

Victoreen began decommissioning the facility in October 1988 and performed a final radiological survey in August 1989. The licensee's survey indicated that the residual radioactive material contamination at the facility was less than NRC unrestricted use criteria. Oak Ridge Associated Universities conducted a confirmatory survey in May 1990, which identified multiple locations with residual radioactive material contamination in excess of NRC unrestricted use criteria.

To clarify ownership of the facility and the responsibility for decommissioning, on March 30, 1992, NRC issued a license to Old Vic, Inc., and terminated Victoreen's license. Old Vic began characterization of the facility in July 1992 and completed remediation of the facility in November 1993. Based on the remedial actions taken by the licensee, the staff review of the licensee's termination surveys, and the results of NRC confirmatory surveys, staff concluded that decommissioning activities are complete and the site is suitable to be released for unrestricted use.

NRC staff transmitted a copy of its confirmatory surveys and the licensee's final survey report to the Ohio Department of Public Health (ODOH). Based on the licensee's radiological survey reports and NRC confirmatory surveys, ODOH

representatives indicated to the staff that ODOH will be sending Old Vic a letter terminating Old Vic's Ohio radioactive materials registration.

The NRC project manager for this site is Mr. Ken Lambert, in our Region III office in Glen Ellyn, Illinois.

If you have any questions or comments on this matter, please contact Mr. Lambert at 708-790-5292.

Sincerely,

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

cc: Mr. Valdas Adamkus
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