August 13, 1998

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: REMOVAL OF CLEVITE CORPORATION SITE FROM THE SITE DECOMMISSIONING MANAGEMENT PLAN

PURPOSE:

To inform the Commission that remedial action has been completed at the former Clevite Corporation (hereafter Clevite) site located in Cleveland, Ohio, and that the staff plans to release the site for unrestricted use and remove the site from the Site Decommissioning Management Plan (SDMP).

BACKGROUND:

In SECY-90-121, the original SDMP, and subsequent revisions, the staff identified approximately 50 problematic sites where remedial action was warranted because of the presence of residual radioactive material in excess of the U.S. Nuclear Regulatory Commission's (NRC's) unrestricted use criteria. One of these sites is the Clevite site.

Clevite manufactured nuclear fuel for the Atomic Energy Commission (AEC), including high-enriched uranium fuel for the U.S. Navy and AEC research reactors, as well as thorium products. Clevite conducted licensed operations under five licenses from 1956 to 1963. Special Nuclear Material (SNM) License No. SNM-00183, issued to Clevite in March 1958, authorized the use and possession of enriched uranium at the East 105th Street facility.

CONTACT: John T. Buckley, NMSS/DWM
(301) 415-6607

Licensed activities included processing enriched uranium powder and ceramic materials for the production of fuel elements for nuclear reactors. License file records indicate that fuel fabrication activities were conducted in a limited area on the first floor of the facility.

Clevite was also licensed, under Source Material License Nos. C-3790 and C-3692, to use and possess natural uranium and thorium for research purposes. These two licenses expired in 1959 and 1962, and the file records do not indicate where the research activities were conducted in the building. In addition, Clevite was also licensed to possess: (1) millicurie amounts of phosphorus-32, sodium-24, potassium-42, and chlorine-36, under Byproduct Material License 34-00653-01, for use in irradiation and research on crystalline compounds; and (2) sealed sources of cobalt-60, for use in irradiation and radiography, under Byproduct Material License 34-00653-02. File records indicate that work under the byproduct material licenses was conducted on the second floor of the building. One of these licenses expired in 1958, and the other was terminated in 1963.

In 1962, Clevite elected not to renew its SNM license and decontaminated and decommissioned the site. Clevite submitted its final radiation survey results to NRC in August 1962, and the SNM license expired at that time. The survey results indicate an average radiation level of 7.74 nano Coulomb/kilogram x hour (nC/kg hr) (30 micro roentgen/hour (uR/hr)) at 1 centimeter (cm) (0.394 inches) from the surface, and a maximum radiation level of 37.12 nC/kg hr (140 uR/hr) at 1 cm (0.394 inches) from the surface. The AEC conducted a confirmatory survey in August 1962. License file records indicate that the AEC inspectors took nine smear samples, but did not conduct any direct radiation measurements. The docket files do not contain closeout surveys nor AEC confirmatory surveys for the other four licenses.

After 1962, the Clevite building went through several ownership changes, and is currently owned and operated by Shorebank Enterprise Group. Gould Electronics, Inc., a successor to Clevite, accepted responsibility for the remediation of this site and contracted with Sevenson Environmental Services, Inc. (Sevenson) to perform decontamination and remediation activities at the facility.

Clevite was added to the SDMP as a result of Oak Ridge National Laboratory's (ORNL's) review of terminated license files, under NRC contract. ORNL concluded that the survey records for the Clevite site were inadequate, and the site had the potential for residual radioactive contamination.

DISCUSSION:

On May 27, 1993, an NRC Region III inspector conducted a special inspection to assess possible contamination levels at the Clevite facility. The inspector identified low levels of fixed uranium on the floor in a small area of the former licensee's first floor manufacturing area. No radiation levels above natural background were identified outside the building. Based on the inspection findings, the inspector concluded that the facility was not successfully decontaminated to levels below the criteria in the "Action Plan to Ensure Timely Cleanup of Site Decommissioning Management Plan Sites," (SDMP Action Plan) April 16, 1992.

Region III inspectors conducted a follow-up special inspection at the Clevite facility on December 6 and 8, 1993, to review the former licensee's activities associated with decontamination and remediation of its manufacturing, processing, and research areas. They conducted radiologic surveys in the former manufacturing areas on the first floor, the basement, and the second floor research areas of the building, identifying several areas that exceeded NRC's release limit on the floor of the hallway and former manufacturing area of the building. The inspectors did not identify any significant radiation levels above natural background in the basement or former research areas on the second floor.

After being notified regarding the contamination remaining in the building, Gould Electronics, Inc., a successor to Clevite, accepted responsibility for

remediating the site, and retained Sevenson to perform these activities.

On July 2, 1997, Sevenson submitted the "Characterization Report for the Former Clevite Corporation Site." The characterization surveys indicated that large areas of the Southeast and West wings required remediation, as well as small areas on the second floor and roof. Sevenson completed remediation and submitted the final status survey to NRC in February 1998.

The staff conducted confirmatory surveys at the site on three separate occasions. On January 14-15, 1998, Region III conducted a special inspection to confirm Sevenson's final status survey results in the enclosed portion of the weld shop and to observe and evaluate in-process final survey activities being conducted in Room 16 of the West wing. The confirmatory survey consisted of performing a 100 percent scan survey, collecting direct measurements, and collecting wipe samples. Data from direct measurements indicated that radioactivity was within the NRC release guidelines and all survey measurements were consistent with background readings. Analyses of wipe samples showed no residual loose radioactive material was present and activity levels were consistent with background levels and thus well below NRC release guidelines for unrestricted use. Based on the results of Sevenson's final status survey and Region III's confirmatory survey, NRC approved the release of the weld shop for unrestricted use on January 23, 1998.

Region III conducted a second confirmatory survey on February 23-26, 1998. This survey was conducted to confirm the results of the final status survey for all affected areas of the facility with the exception of the weld shop (released for unrestricted use on January 23, 1998) and a portion of the West wing where the waste drums were being stored. Inspectors scan surveyed from 10 to 100 percent of the affected areas using both random and biased survey techniques. Inspectors conducted direct survey measurements, exposure rate measurements, and wipe samples from floors, walls, and overhead pipes and ducts. Data from the scans, direct measurements, and wipe samples indicated that radioactivity levels were below NRC release guidelines for unrestricted use. Based on the results of Sevenson's final status survey and Region III's confirmatory survey, NRC approved the release of the Southeast wing for unrestricted use on April 16, 1998.

On May 11, 1998, Sevenson loaded the waste drums onto trucks in preparation for shipment to a storage facility at Waste Control Specialists LLC (hereafter WCS) in Pasadena, Texas. A third confirmatory survey was conducted on May 14, 1998, in the West wing area where the waste drums had been stored. Inspectors scan surveyed 100 percent of the floors and walls in Rooms 1, 2, and 15 of the West wing. Inspectors also collected direct survey measurements, exposure rate measurements, and wipe samples from floors, walls, and overhead pipes and ducts. Data from the scans, direct measurements, and wipe samples indicated that radioactivity levels were consistent with background, and thus, below NRC release guidelines for unrestricted use.

The results of Sevenson's final status survey and NRC confirmatory surveys indicate that the residual contamination levels remaining at the site are consistent with background readings for the area. Therefore, since the potential doses, above backgound, to members of the public and occupants of the building, are essentially zero, no dose calculation is needed.

Sevenson transported the waste drums to WCS on June 10, 1998, for characterization and proper disposal. Copies of Region III's inspection reports and the waste shipping manifest have been sent to the Ohio Department of Health.

CONCLUSIONS:

Based on: (1) remedial actions conducted by Sevenson, (2) the results of Sevenson's final status survey, and (3) the results of Region III's confirmatory surveys, the staff concludes that decommissioning has been satisfactorily completed at the former Clevite site, and it should be removed from the SDMP list. The staff will inform the U.S. Environmental Protection Agency (EPA) of NRC's intent to release the Clevite site for unrestricted use. The staff will also notify Gould Electronics, Inc., that remediation of the site is complete and the site is suitable for unrestricted use. Draft letters to be sent to EPA and to Gould Electronics, Inc., are enclosed (see Attachments 1 and 2).

Staff requests action within 10 days. Action will not be taken until the Staff Requirements Memorandum is received. We consider this action to be within the delegated authority of the Director, Office of Nuclear Material Safety and Safeguards.

COORDINATION:

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

L. Joseph Callan
Executive Director for Operations

Attachments:
1. Draft letter to U.S. EPA
2. Draft letter to Gould Electronics, Inc.

ATTACHMENT 1

Mr. Stephen D. Luftig, Director
Office of Emergency and Remediation Response
U. S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Dear Mr. Luftig:

This letter is to inform the U.S. Environmental Protection Agency (EPA) that the U.S. Nuclear Regulatory Commission (NRC) is preparing to authorize release of land and buildings at the former Clevite Corporation site located at 540 East 105th Street, Cleveland, OH, for unrestricted use. The facility is currently owned by Shorebank Enterprise Group.

The NRC staff is providing this information to EPA in accordance with NRC policy contained in the "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.

Clevite Corporation possessed five radioactive material licenses, and manufactured nuclear fuel for the Atomic Energy Commission (AEC), including high-enriched uranium fuel for the U.S. Navy and AEC research reactors, as well as thorium products in the 1958-1963 timeframe.

On May 27, 1993, NRC performed a radiation survey at the site because Oak Ridge National Laboratory (ORNL) had identified it as potentially contaminated during a review of former AEC and NRC licenses. NRC's survey identified low-level radioactive contamination in a portion of the building originally used as a fuel manufacturing area and currently used as a machine shop. Subsequent surveys conducted by Sevenson Environmental Services, Inc. (Sevenson) identified low-level radioactive contamination in several rooms on the first floor of the facility and one room on the second floor. Sevenson completed remediation activities and submitted a Final Status Survey Report (FSSR) on November 24, 1997, with additions submitted on April 6, 1998, and July 22, 1998. Waste generated during remediation was placed in 55 gallon drums for shipping to Waste Control Specialists, LLC (WCS) in Pasadena, TX. Sevenson shipped all waste to WCS on June 10, 1998. Based on the results of Sevenson's final status survey and the results of confirmatory surveys conducted by NRC on January 14-15, 1998, February 23-26, 1998, and May 14, 1998, NRC concludes that the facility has been adequately remediated and now meets NRC criteria for unrestricted use.

The Project Manager for this site is Mr. John Buckley. If you have any questions on this matter, please contact Mr. Buckley at (301) 415-6607.

Carl J. Paperiello, Director
Office of Nuclear Material Safety and Safeguards

Docket No.: 070-00133 (terminated)

License No.: SNM-183, C-3692, C-3790
34-000653-01/02 (terminated)

cc: Clevite distribution list

ATTACHMENT 2

Mr. James F. Cronmiller
Gould Electronics, Inc.
Director, Corporate Environmental Affairs
34929 Curtis Boulevard
Eastlake, Ohio 44095-4001

SUBJECT: NRC RELEASE OF FORMER CLEVITE CORPORATION SITE

Dear Mr: Cronmiller:

On January 14-15, 1998, February 23-26, 1998, and May 14, 1998, the U.S. Nuclear Regulatory Commission (NRC) performed confirmatory surveys at the formerly licensed Clevite Corporation site located at 540 East 105th Street, Cleveland, OH, to support NRC's decision to allow release of the facility for unrestricted use. Based on the final survey data presented in the Final Status Survey Report (FSR) and the results of NRC's confirmatory surveys, NRC has determined that the residual radioactive material remaining on site is less than the criteria found in NRC'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. Therefore, NRC concludes that remedial action is complete, and the former Clevite Corporation site is now suitable for unrestricted use.

As noted in Action Plan (57 FR 13389), this is the final action regarding the former Clevite Corporation site. NRC will not require any additional decommissioning, in response to future NRC criteria or standards, unless additional contamination or noncompliance with remediation commitments are found, indicating a significant threat to public health and safety.

If you have any questions regarding this letter, please contact John T. Buckley, of my staff, at (301) 415-6607.

Sincerely,
John W. N. Hickey, Chief
Low-Level Waste and Decommissioning Projects Branch

Division of Waste Management
Office of Nuclear Material Safety and Safeguards

Docket No.070-00133 (terminated)

License No. SNM-183, C-3692, C-3790
34-000653-01/02 (terminated)

cc: Clevite distribution list