

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Report No. 070-00026/97-001

Docket No. 070-00026  
040-03558

License No. SNM-37 (Terminated)  
SUC-509 (Terminated)

Licensee: Westinghouse Electric Corporation  
P.O. Box 355  
Pittsburgh, Pennsylvania 15230

Inspection At: Specialty Metals Plant  
RD4, Box 333  
Blairsville, Pennsylvania 15717

Inspection Conducted: July 23-24 and December 15, 1997

Inspector: Mark C. Roberts 1-22-98  
Mark C. Roberts, CHP date  
Senior Health Physicist

Approved By: Ronald R. Bellamy January 22, 1998  
Ronald R. Bellamy, Ph. D., Chief date  
Decommissioning and Laboratory Branch  
Division of Nuclear Materials Safety

Inspection Summary: Announced safety inspection of exterior and interior remediation activities, conducted July 23 - 24 and December 15, 1997  
(Inspection Report No. 070-00026/97-001)

Areas Inspected: Project Management and Staffing; Characterization and Remediation of Exterior Areas; Remediation of Interior Areas; Waste Disposal and Storage.

Results: No violations were identified.

## DETAILS

### 1. Persons Contacted

- \*\* Irwin Dobrushin, Senior Industrial Hygienist, Westinghouse Electric Corporation  
(Westinghouse)
  - \* J. Wayne George, Environmental Health & Safety Manager, Westinghouse
  - \*\* Todd Brautigam, Health Physics Technician, Westinghouse
  - \*\* John Shoemaker, Health Physics Technician, Numanco
  - \*\*\* Joseph Nardi, Supervising Engineer, Westinghouse
  - \* Roy Woods, Health Physicist, Commonwealth of Pennsylvania
- \* Denotes those present at exit meeting on July 23, 1997  
\*\* Denotes those present at exit meeting on July 23 and December 15, 1997  
\*\*\* Denotes those present at exit meeting on December 15, 1997

### 2. Background

The Westinghouse Specialty Metals Plant in Blairsville, Pennsylvania (formerly the Blairsville Metals Plant) was licensed by the AEC under License Nos. SNM-37 and SUC-509 to conduct research and development using low-enriched and depleted uranium. These licenses expired on July 1, 1961 and December 31, 1964, respectively. The facility is currently involved in zircalloy tubing manufacturing operations; however, radioactive materials are no longer being used.

Under a program to review terminated licenses, an NRC contractor and Region I staff determined that further information on this site was necessary to conclude that the buildings and property meet the current criteria for release for unrestricted use. Westinghouse personnel performed radiological measurements in interior areas and identified non-removable surface contamination at levels exceeding current NRC guidelines for release for unrestricted use. Uranium contamination was also identified in two sumps and a number of drain lines beneath the concrete floor. Measurements outside the facility indicated soil contamination exceeding the criteria for release for unrestricted use in a construction material dump east of the Main Building. An evaluation of the site of a former waste processing building, approximately 200 meters south of the Main Building, should be completed later in 1998.

Since December 1994, Westinghouse has remediated contaminated surfaces and has removed the contaminated sumps and most of the contaminated interior drain lines. Remediation work was scheduled so that the activities did not interfere with the manufacturing operations. The last major interior contaminated area, a manufacturing area in the front (east side) of the Main Building, was recently completed. An approximately 20-foot section of drain, beneath a large machine, must still be evaluated. This area is scheduled to be addressed in 1998. Characterization and removal of contaminated soil was completed in the dump area in the fall of 1997.



Westinghouse is preparing documentation on the surveys performed both inside and outside the facility. Following completion of all remediation activities and surveys, Westinghouse will submit a comprehensive final survey report for the facility.

### 3. Project Management and Staffing

The characterization and remediation of the interior and exterior areas is coordinated by a Westinghouse engineer and his staff. This individual and the members of his staff have extensive remediation experience and are familiar with the site. Radiation survey activities are conducted by a Westinghouse health physics technician and contractor health physics technicians. These individuals perform both routine radiological surveys to assess remediation progress and also perform final radiological surveys once remediation has been completed in an area. Remediation work is performed by a contractor staff with extensive experience in this and other Westinghouse remediation projects. Turnover of both contractor staffs has been very low.

No safety concerns were identified.

### 4. Characterization and Remediation of Exterior Areas

Radiological contamination was identified in the fill material of a dump area, east of the main building. The dump was located in an area of flat, quarried bedrock. There was evidence of zirconium scrap burning in the dump area. Direct measurements in these burn areas did not identify any radiological contamination. The waste removed from the dump consisted of soil, concrete chunks, incineration wastes, and other miscellaneous debris, spread over an area of approximately 1000 m<sup>2</sup>. Three discrete areas of contamination were identified within the dump. The contamination identified in the dump area was primarily enriched uranium. Elevated concentrations (above natural background) of thorium-232 and thorium-228 were identified in selected samples, as well as trace amounts of cobalt-60 and cesium-137. The presence of contaminants other than uranium indicates that waste from other Westinghouse facilities may have been disposed in this area. The highest concentrations of uranium were found in isolated samples, indicating that pockets of contamination exist rather than widespread contamination of the dump.

The dump was remediated by removing the material from the floor of the excavation and hauling the material up to the primary grade level. Debris was removed and surveyed for surface contamination prior to disposal. Soil wastes were loaded into large canvas bags and representative composite samples were obtained for radiological analysis. The bags of soil were transported to the Westro Building on the site. The bags were then segregated by contamination level. Soil waste with uranium concentrations that did not exceed the criteria for classification as radioactive waste was disposed at a local landfill for construction debris. Records of the concentrations of the soil in each container are maintained

in a computer database. The rock floor of the dump area was vacuumed with a truck mounted system to ensure all loose material was removed. Chemical analyses performed on samples did not indicate any hazardous or mixed waste present in the dump.

A Westinghouse contractor is examining data on the former waste disposal area south of the main building. The contractor will determine if additional samples are needed to characterize contamination in the area, and will determine if remediation will be required in the area. The contractor will prepare a report that should be available in the spring or early summer of 1998. Westinghouse personnel also indicated that a section of clay pipe, located west of the former waste building and running toward the southwest may require removal. Isolated sludge samples from the pipe found contamination in excess of background. Historical information concerning the pipe was unavailable.

No safety concerns were identified.

#### 5. Remediation of Interior Areas

Interior remediation at the Blairsville facility has included removal of two sump pits, removal of contaminated piping connected to the sumps, removal of contamination in concrete joints and floor anchor bolts, and scabbling surface contamination on concrete. The last major interior remediation project to be completed was the removal of a 100-foot section of a contaminated waste line that was located under production equipment in the eastern portion of the main building. Westinghouse initiated removal of the contaminated pipe after the equipment and sections of the concrete floor were removed. Enriched uranium sludge was found in the pipe that was removed. A 20-foot adjacent section of the pipe must still be evaluated. The concrete floor above the pipe was surveyed and found to be free of contamination. Isolated spots of contamination were found in soil surrounding the pipe and was removed. The concrete chunks and clean soil were disposed in a local landfill. Contaminated soil and debris were also stored in the Westro Building.

No safety concerns were identified.

#### 6. Waste Disposal and Storage

Waste from the remediation projects is stored in the Westro Building. Waste soil and debris from the remediation projects falls into four general categories; hazardous waste (the concentrations of chemical contaminants exceed EPA or Pennsylvania limits for unrestricted release); radiological waste (the total uranium concentration exceeds 30 pCi/g); mixed waste (the total uranium concentration exceeds 30 pCi/g and there is hazardous waste present above EPA or Pennsylvania limits); and non-radiological, non-hazardous waste (total uranium concentration is less than 30 pCi/g and hazardous material concentration guidelines are not exceeded). Approximately 750 drums and bags of waste



(mostly soil) were generated from the remediation projects. Each drum or bag of remediation waste stored in the building is assigned a unique, sequential container number. The records for each container include information on the date collected, a description of the contents, a description of the area where the material was excavated or removed, container weights, and radiation exposure rates from the containers. Samples were collected from each container (or a sample was composited from a group of containers from the same source) and submitted for analysis. Radiological analyses are performed in the laboratory at the Westinghouse Waltz Mill facility.

Since October 1997, Westinghouse has disposed of approximately 9500 ft<sup>3</sup> of radioactive waste (contaminated soil) in 21 shipments. Waste has been disposed at the Envirocare facility in Utah. Shipments were made as either Limited Quantity of Radioactive Material or as Low Specific Activity (LSA). The inspector examined the records of the first ten shipments (Identification #'s 0674-04-01 through 0674-04-10). Each set of paperwork included the acknowledgment copy of the Radioactive Waste Shipment and Disposal Form that had been returned to Westinghouse following acceptance and disposal of the waste shipment in Utah. All material was shipped via truck. Waste sent to the site remains in the possession of the driver/carrier until the shipment is accepted by Envirocare. Waste is then disposed directly into disposal cells. Waste is not allowed to accumulate as inventory to ensure compliance with Envirocare's SNM (Special Nuclear Material) license limits.

Envirocare inspectors rejected one of the more recent shipments and returned it to Westinghouse because of apparent concerns for odor. Westinghouse staff reconfirmed that the analytical results for hazardous material were acceptable and then re-sent the sample to Envirocare for disposal. No further problems with this shipment were noted.

Waste remaining in the Westro Building following disposal of the uranium contaminated soil includes approximately 500 ft<sup>3</sup> of uranium contaminated pipe and ducts, twenty-one drums (as over-packed 7.5 ft<sup>3</sup> drums) containing mixed waste (uranium and TCE (trichloroethane)), and five additional over-packed drums of mixed waste containing uranium, TCE, cadmium, lead, and mercury. The uranium contaminated pipe and ducts were being repackaged into 100 ft<sup>3</sup> B-25 containers for shipment and disposal at the Envirocare facility. The 26 drums of mixed waste are being held until the Pennsylvania Department of Environmental Protection authorizes a permit to allow the drums to be stored at Westinghouse's mixed waste storage facility at their Waltz Mill site. The capability for storage of mixed waste at the Waltz Mills facility was examined in July. The Waltz Mills facility appeared to be appropriately designed to handle wastes of this type. Following removal of all wastes from the Westro Building, Westinghouse intends to perform a final survey of the building to ensure that no residual contamination remains in the Westro Building.

No safety concerns were identified.

7. Review of Commonwealth of Pennsylvania Inspection Report

Representatives from the Commonwealth of Pennsylvania, Department of Environmental Protection (DEP) performed a radiation and contamination survey on June 20 and 27, 1997 in the fill area east of the plant and in an adjoining property owned by the US Army Corps of Engineers. Results of the inspection were documented in a report dated July 2, 1997 (Attachment 1). No contamination above background was detected on the Corps of Engineers' property. Two isolated contaminated areas were found on the Westinghouse property. Each location indicated approximately twice the background count rate as measured with a 2" x 2" NaI detector and rate meter. The Westinghouse decommissioning staff was able to remediate one of the areas by removing a small amount of soil. The second area was not able to be remediated; however, the DEP inspector indicated that the contamination was limited to isolated spots, which when averaged over a one square meter area, was considered insignificant.

No safety concerns were identified.

8. Exit Meetings

The results of the inspection were discussed with the individuals identified in Section 1.