

SAFETY EVALUATION REPORT
COMPLETION OF DECOMMISSIONING ACTIVITIES
WESTINGHOUSE SPECIALTY METALS PLANT, BLAIRSVILLE, PENNSYLVANIA
FORMER DOCKET NOS. 070-00026 AND 040-03558

1.0 INTRODUCTION

The Westinghouse Specialty Metals Plant was founded in 1955. The Atomic Energy Commission (AEC) issued License Nos. SUC-509 and SNM-37 to Westinghouse Electric Corporation (Westinghouse) authorizing the use of low enriched uranium, highly enriched uranium, and depleted uranium for conducting research and development, and for manufacturing activities related to the production of commercial and naval nuclear fuel. Westinghouse ceased licensed activities at the site in the early 1960s and moved production to other licensed facilities. Decontamination and radiological surveys were performed that were sufficient to allow termination of the licenses in 1961 and 1964, but radiological survey data in the files is limited. The site is currently being used for manufacturing operations that do not involve the use of licensed radioactive material.

In the early 1990s, the NRC and their contractor, the Oak Ridge National Laboratory (ORNL), conducted reviews of terminated licenses to determine if these licenses had been appropriately terminated and the licensed sites met the NRC criteria for release for unrestricted use. Based on these reviews, the site was identified as not having sufficient documentation to verify that it had been properly decontaminated prior to license termination. Westinghouse conducted detailed radiological surveys that identified interior and exterior areas where further remediation was needed to meet applicable radiological criteria for release for unrestricted use.

The site is situated on 485 acres and is located in a rural area with scattered residential and manufacturing properties within its vicinity. Radioactive contamination exceeding the NRC criteria for release for unrestricted use was identified in one of the four major buildings and two exterior areas at the site. Two of the major buildings were constructed after uranium operations ceased. Within the buildings, use of licensed materials was primarily confined to the southeast quarter of the 205,000 ft² main building, although material was used in other isolated areas of the building. Radioactive waste material was processed in a waste building south of the main building and contaminated zircalloy metal was burned in the vicinity of that building. The waste building was subsequently used for activities that did not involve the use of radioactive material and the building was later razed in approximately 1990. Some of the waste radioactive material had also been dumped in a quarried area on the east side of the site.

Because no NRC license pertains to the site, remediation and radiological survey activities were conducted without a Decommissioning Plan. At the request of NRC Region I staff, Westinghouse did provide a Health and Safety Plan for the work activities with the commitment that activities with radioactive material be conducted in accordance with 10 CFR Part 20, Standards for Protection Against Radiation. Because radioactive contamination at the site was identified at approximately the same time that the site Decommissioning Management Plan (SDMP) was initiated, Westinghouse, at the start of its remediation activities in the early 1990s, agreed to utilize relevant release criteria identified in the SDMP Action Plan. The relevant criteria used by Westinghouse were Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors," June 1974, for residual surface contamination, and Option 1 of the Branch Technical Position, "Disposal or Onsite Storage of Thorium or Uranium Wastes from

Past Operations” (46 FR 52601; October 23, 1981), for soil and demolition debris. The Westinghouse Blairsville, PA site was not listed on the SDMP list, but in order to track the progress of remediation activities, in 2004, the site was added to the NRC list of Complex sites under the NRC’s comprehensive decommissioning program.

In an attachment to a February 15, 2006, letter, Westinghouse provided Final Status Survey (FSS) reports that documented the results of radiological surveys of the site; summary reports describing remediation activities conducted; radioactive waste disposal documentation; and the results of computer dose calculations. In the February 15, 2006, letter, Westinghouse requested that the NRC concur that adequate information (i.e. radiological survey data and computer dose calculations) has been provided to demonstrate that the site meets the NRC requirements for release for unrestricted use. In this letter, Westinghouse also requested that the site be removed from the NRC list of Complex sites. The February 15, 2006, letter and accompanying documents are publicly available in the NRC’s Agencywide Documents Access and Management System (ADAMS) (document package ML003741979).

2.0 EVALUATION

In accordance with 10 CFR Parts 70.38(k) and 40.42(k), the Commission will terminate special nuclear or source material licenses when it determines that: (1) special nuclear and/or source material have been properly disposed; (2) reasonable effort has been made to eliminate residual radioactive contamination; (3) radiological surveys, dose calculations, and other associated documentation show that the site is suitable for release in accordance with the criteria for decommissioning as stipulated in 10 CFR Part 20, Subpart E; and (4) required records have been received. Although this site is no longer licensed, staff has applied these above criteria in its review of the documentation accompanying the February 15, 2006, Westinghouse letter. The following is the staff’s evaluation of this information.

2.1 Disposal of Special Nuclear and Source Material

Westinghouse provided a detailed accounting of the waste shipments made to Envirocare of Utah, Inc., in Appendix B of the Decommissioning Summary report. A completed NRC Form 314 - Certificate of Disposition of Materials is included as part of the documentation package.

The staff has reviewed the licensee’s Certificate of Disposition of Materials and determined that the licensee has properly disposed of its special nuclear and source material at a licensed disposal facility.

2.2 Elimination of Residual Radioactive Contamination

From late 1994 through 2001, Westinghouse staff and contractors performed remediation activities and conducted FSSs. Remediation and radiological survey activities were conducted in stages so that ongoing non-licensed operations would not be affected. Interior remediation activities consisted primarily of removing superficial concrete and paint on floor and wall surfaces, removing contaminated concrete around floor penetrations (e.g. equipment anchor bolts), excavating contaminated drain lines and sumps, and removing contaminated soil under contaminated drain lines that had leaked. Approximately 27,000 ft² of the main building required remediation. Exterior remediation activities included removing ash and debris from a

quarry area and removal of drain lines, contaminated soil, and building rubble from the vicinity of a former waste treatment and packaging building.

The decommissioning criteria used by Westinghouse at the Blairsville Specialty Metals Plant were the relevant release criteria identified in the SDMP Action Plan. Final Status Surveys demonstrated that the relevant criteria for the site were met. Further, dose calculations demonstrate that the dose is less than the 25 mrem (millirem)/year (yr) unrestricted release criterion of 10 CFR Part 20, Subpart E. Therefore, the staff concludes that a reasonable effort has been made by Westinghouse to eliminate residual radioactive contamination at the Blairsville Specialty Metals Plant.

2.3 Final Status Surveys

The FSS is the radiation survey performed after an area has been fully characterized, remediation has been completed, and the area is believed to be ready to be released for unrestricted use. The purpose of the FSS is to demonstrate that the area meets the radiological criteria.

Details of the FSS results were submitted to the NRC in attachments to the February 15, 2006 letter from Westinghouse. These surveys were conducted in the interior of both the affected and non-affected buildings, in excavated trenches and sumps in the affected interior areas, on building roofs, and in affected and non-affected exterior areas. In their investigation of outside areas, Westinghouse identified areas requiring remediation, but also identified a few areas of elevated background radiation where further evaluations were conducted. Further investigation of the elevated background areas did not confirm the presence of previously licensed material. NRC staff reviewed FSS records and determined that the criteria from the SDMP Action Plan were met and the interior and exterior remediated areas meet the criteria for release for unrestricted use. Westinghouse also identified and documented a few locations of anomalous elevated background radiation readings, but these areas did not require remediation.

3.0 DOSE ASSESSMENT

Although not required for this site, Westinghouse also elected to demonstrate compliance with the radiological criteria for unrestricted release as specified in 10 CFR 20.1402 by performing dose calculations using the RESRAD and RESRAD BUILD computer codes. Site-specific parameters were used in the calculations. The Westinghouse dose calculations show the potential dose from residual radioactive material is less than one millirem per year using resident gardener and industrial use scenarios and thus satisfies the NRC requirements for unrestricted release in Subpart E, Radiological Criteria for License Termination, of 10 CFR Part 20.

The NRC staff performed independent analyses to verify that the expected post-decommissioning annual dose meets the unrestricted release requirements of 10 CFR Part 20, Subpart E. The staff identified several weaknesses in the Westinghouse calculations and assumptions. Justification for land use and groundwater use assumptions were lacking, adequate justification for several sensitive default parameters was not provided, justification for not calculating the resident farmer scenario was weak, and not all parameters in the industrial use scenario were fully justified. Calculations by the staff showed slightly higher doses using more conservative assumptions for land and water use and other default parameters; however,

despite the weaknesses, the staff agrees with the Westinghouse's conclusion that the residual radioactivity will result in doses less than one mrem per year to a future user of the site.

4.0 STATE CONSULTATION

This Safety Evaluation Report (SER) was prepared by the NRC staff without input from the Commonwealth of Pennsylvania. However, the Commonwealth is on distribution for correspondence between NRC and Westinghouse for this site and thus has been informed of NRC's intention to consider decommissioning activities at the site complete. Representatives from the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection have periodically accompanied NRC inspectors to the site during inspections and, in addition, have agreed with the NRC conclusion in the Environmental Assessment (EA) for this site that there is no significant impact from the decommissioning activities conducted.

5.0 ENVIRONMENTAL CONSIDERATIONS

Pursuant to 10 CFR Part 51, an EA was prepared and a finding of no significant impact (FONSI) was published in the *Federal Register* on September 22, 2006 (71FR 55515) for approval of the completion of decommissioning actions at the Westinghouse, Blairsville, PA site.

6.0 CONCLUSION

The staff concludes, based on the considerations discussed above, that decommissioning activities have been properly and safely conducted at the Westinghouse Blairsville Specialty Metals Plant. Review of FSS reports indicates that residual concentrations and contamination levels of radioactive material on demolished structures, intact building surfaces, and in surrounding soil have been reduced to levels below the relevant clean-up criteria identified in the SDMP Action Plan. Computer dose calculations by Westinghouse and independent calculations by NRC staff show annual doses from residual radioactivity to be less than one millirem. Appropriate records have been provided to the NRC to document the status of the site. In accordance with the request from Westinghouse, NRC concurs that decommissioning activities can be considered to be completed and the site meets NRC criteria for unrestricted use. Staff will update the NRC listing of Complex sites under the NRC's comprehensive decommissioning program to reflect the completion of decommissioning activities.

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