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PRELIMINARY SURVEY OF AL-TECH SPECIALTY STEEL CORPORATION WATERVLIET, NEW YORK

Work performed
by the
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AL-TECH SPECIALTY STEEL CORPORATION
WATERVLIET, NEW YORK

At the request of the Department of Energy (DOE, then ERDA), a preliminary survey was performed at the Al-Tech Specialty Steel Corporation plant in Watervliet, New York (see Fig. 1), on August 19, 1976, to assess the radiological status of those facilities utilized in Atomic Energy Commission (AEC) contract activities during 1950 through 1951. D. C. McCarter, Works Manager, provided information about the project and identified plant areas involved in the project. Ted Owens, who was familiar with the contract work, also provided information and assisted in identifying involved plant areas. Contract work with the company, known as Allegheny-Ludlum at the time, involved the development of a process to convert rolled uranium billets into solid rods. The contract specified that all uranium-bearing material and any scrap generated in the operation be returned to the AEC. All work performed at this site was limited to a 36-cm rolling mill and an annealing furnace and was performed only on weekends. McCarter reported that AEC personnel were on hand during the rolling operations and that they carefully vacuumed areas surrounding the rolling mill and made radiation measurements.

Present Use of Facilities

The 36-cm rolling mill was removed to a Dunkirk, New York, plant in 1960. The area where the mill was located is presently used for metal and roller storage. Any of the four existing electric annealing furnaces could have been the one used in the process. However, furnace liner bricks have been replaced in each furnace several times since the project terminated. It was believed that old furance liner bricks may have been buried in the company disposal yard. For about three years prior to this preliminary survey, the disposal yard had been mined to reclaim various types of metal which had been placed in the landfill. It was assumed that this operation was to continue indefinitely.

Results of Preliminary Survey

The preliminary survey was conducted by F. F. Haywood of the Oak Ridge National Laboratory and W. T. Thornton of the DOE/Oak Ridge

Operations Office. A survey was conducted of the area where the 36-cm rolling mill had been located, the annealing furnaces, and the company disposal yard. The survey consisted of direct measurements of alpha activity and beta-gamma dose-rate measurements (open- and closed-window Geiger-Mueller survey meter) made at 1 cm from surfaces. The direct alpha measurements were made in contact with the surfaces surveyed. Special attention was given to furnace liner bricks which had been uncovered in the company disposal yard. All measurements taken at the Al-Tech Specialty Steel Corporation were within typical background levels for the state of New York.

It was concluded that no present or potential radiation-related health hazard exists due to post-MED/AEC operations, and that no further DOE survey is required at the Al-Tech Specialty Steel Corporation in Watervliet, New York. Measurements at other rolling mill facilities have revealed beta-gamma radiation levels up to 42 mrad/hr. Therefore, it is recommended that an effort be made to locate the machinery used by Al-Tech so that a survey of that equipment can be performed.

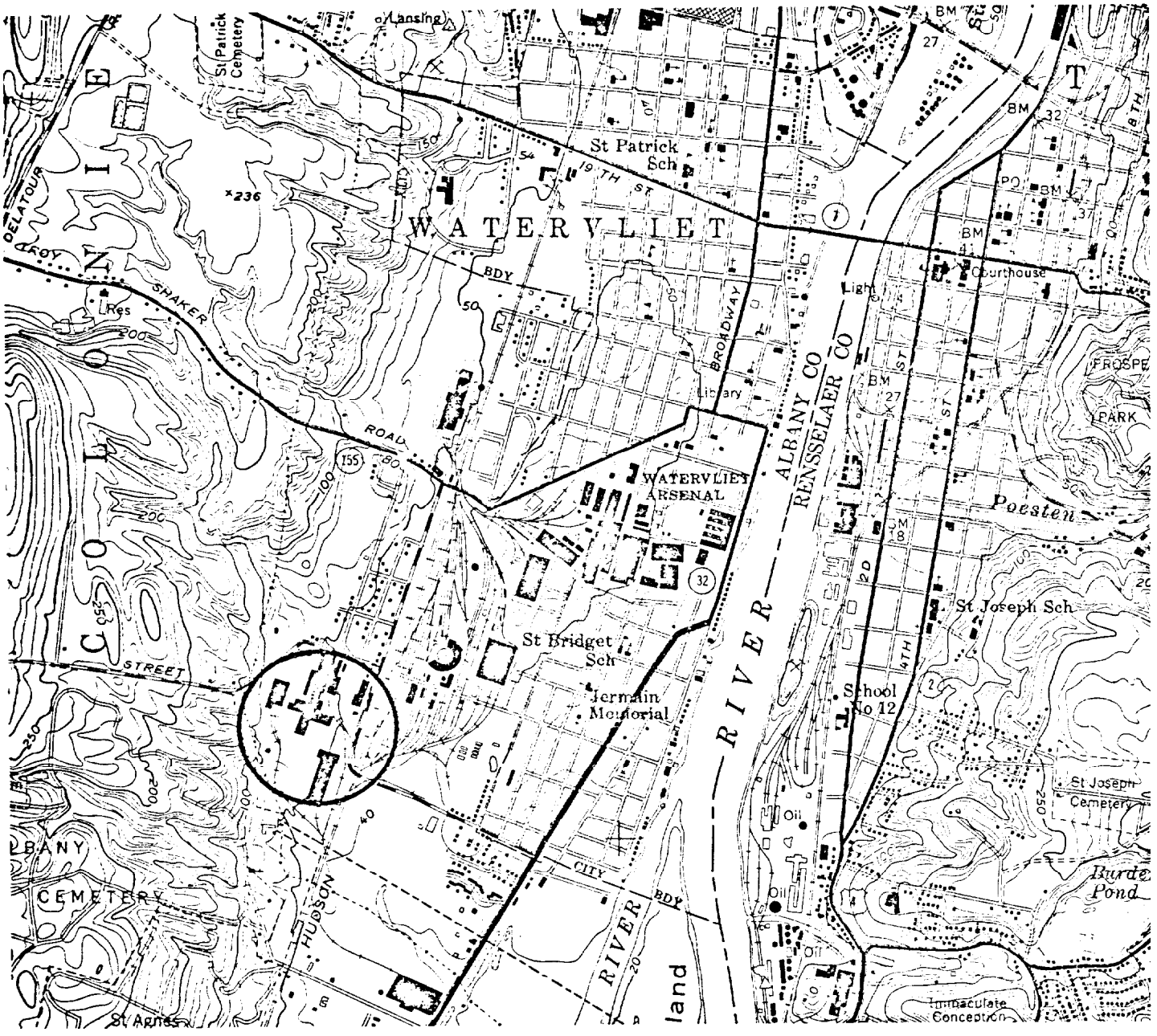

Fig. 1. Location of the Al-Tech Specialty Steel Corporation in Watervliet, New York.