

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

ELIMINATION REPORT

FOR

OCCIDENTAL CHEMICAL CORPORATION
(FORMER HOOKER ELECTROCHEMICAL COMPANY)
NIAGARA FALLS, NEW YORK

SEP 30 1985

Department of Energy
Office of Nuclear Energy
Office of Remedial Action and Waste Technology
Division of Facility and Site Decommissioning Projects

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INTRODUCTION

The Department of Energy (DOE), Office of Nuclear Energy, Office of Remedial Action and Waste Technology, Division of Facility and Site Decommissioning Projects (and/or the predecessor agencies, offices, and divisions), has reviewed the past activities of the Manhattan Engineer District (MED) and the Atomic Energy Commission (MED/AEC) at the former Hooker Electrochemical Company facility in Niagara Falls, New York, and completed a radiological survey of the site. DOE has determined that conditions at this site are in compliance with current DOE radiological guidelines and standards and that no potential for radiological exposure exists beyond that resulting from natural background. Therefore, this site requires no remedial action and will not be included in the Formerly Utilized Sites Remedial Action Program (FUSRAP).

This report presents information supporting the determination that the radiological conditions at the former Hooker Electrochemical Company site are in compliance with current DOE radiological guidelines and standards¹ and provides assurance that use of this site will not result in any measurable radiological hazard to site occupants or the general public.

¹ U.S. Department of Energy Guidelines for Residual Radioactivity at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites (Rev. 1, July 1985).

This elimination report will be archived by DOE through the Assistant Secretary for Management and Administration. A copy of this package will be available for public review between 8:00 a.m. and 4:00 p.m., Monday through Friday (except Federal holidays), at the DOE Public Document Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, SW., Washington, D.C.

BACKGROUND

Site Function

In January 1943, Hooker Electrochemical Company began work under MED contract W-7405-Eng-28² to manufacture xylene hexafluoride (P-45), xylene hexachloride, and Miller's fluorolubricant. The P-45 Program produced large amounts of hydrochloric acid. This byproduct was initially neutralized and discarded. A supplement (No. 3) was added to the contract that provided for use of the acid in the chemical processing (concentration) of uranium-bearing slag as a precursor to uranium recovery. The material to be processed included furnace liners from the nearby Electromet operation that were thought to contain enough uranium to warrant recovery. Wooden barrels carrying the material arrived by rail and were deposited on a concrete pad. The material was then transported by bucket conveyor to an area where it was screened. The large material was drummed and shipped without further processing, while the fines were treated with the acid to remove carbonates and oxides. After agitation the residues were filtered in a press to collect concentrated slag. The filtrate was disposed of in the sewer. The residues were then transferred into wooden barrels and shipped out by rail. This work continued until shortly after World War II.

² Hooker conducted work under other federal government contracts, beginning in September 1942. However, this work involved non-radioactive chemicals and/or was conducted at other locations.

Site Description

The site is owned by Occidental Chemical Corporation, a subsidiary of Occidental Petroleum Corporation, and was known as Hooker Electrochemical Company at the time of the MED contract.

The site is located in an industrial area on the north bank of the Niagara River, approximately 2 miles east of Niagara Falls (Figure 1). All uranium operations were confined to the "D" area, 5.5 acres adjacent to the New York Central Railroad. Five buildings (D-5, 6, 7, 8, and 9) were used in the MED program. However, except for the laboratory in building D-6 that was used for uranium analysis, all of the uranium handling was done largely outdoors in an area adjacent to the railroad siding location north of the MED buildings. A cinder block structure was constructed to house the major process equipment, which included four wood tanks with agitation equipment, a filter press, and a bucket elevator and conveying system. When the P-45 Program ended, the five buildings were outfitted for new processes. The structure and equipment used for the uranium operations (including the concrete pad) was removed (disposition unknown) to make room for process expansion. Building 5 was destroyed by a process explosion during the late 1950s. The other four buildings were still in use at the time of the 1976 survey, but all have since been razed except for a small portion of building 6, which is being used as a storage shed.

Radiological History and Status

Oak Ridge National Laboratory personnel conducted a comprehensive radiological survey of all involved areas of the Hooker plant in October 1976. The survey included measurements of direct gamma, alpha, and beta-gamma radiation levels in the outdoor areas, fixed and transferrable alpha and beta-gamma contamination levels on surfaces inside the four remaining buildings, radon and radon daughter concentrations in the buildings, and radioactivity in surface soil samples.

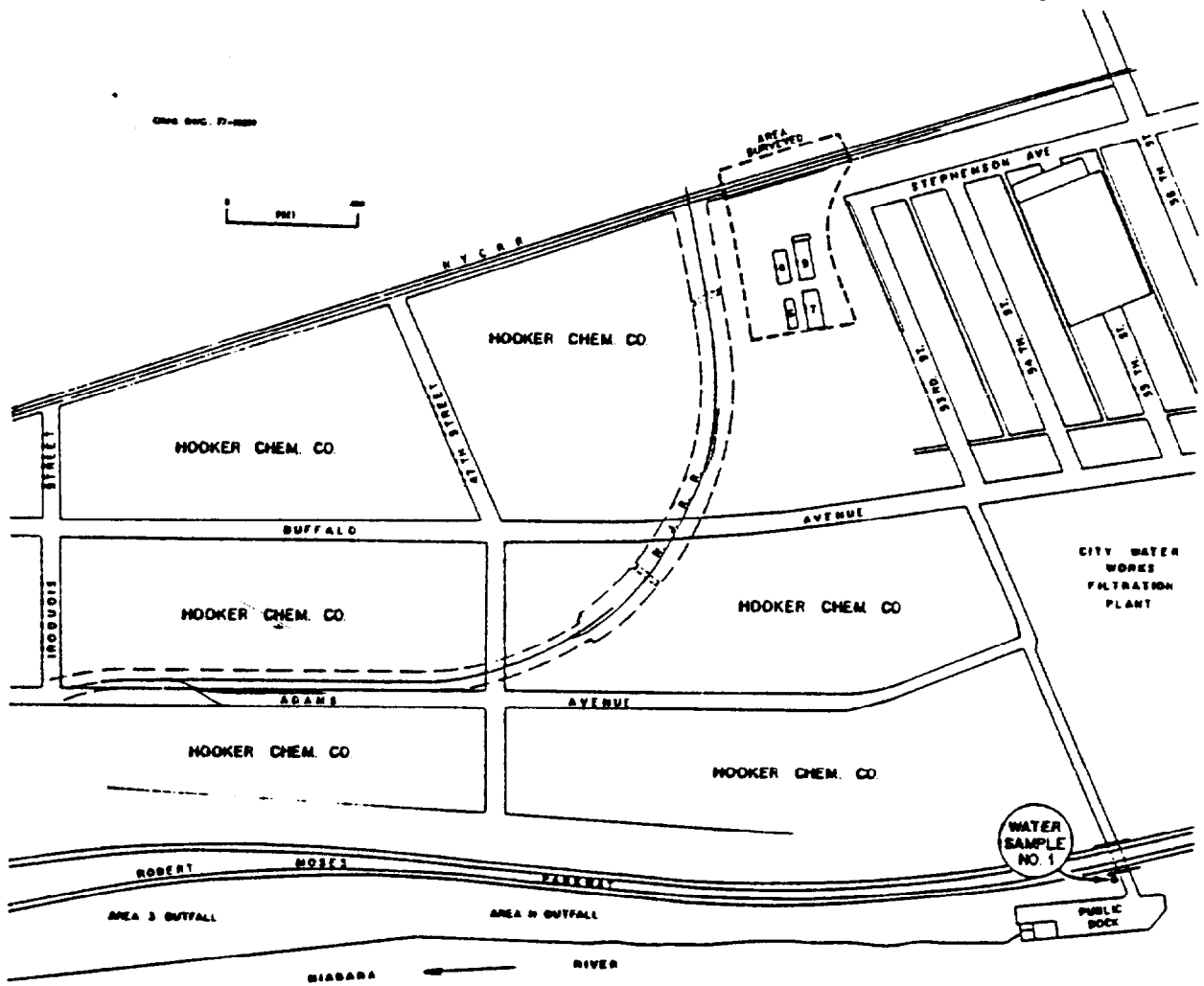


Figure 1. Map of Hooker Chemical Company

The residual radioactivity levels documented in the final survey report are within current radiological guidelines for unrestricted use of facilities. The site was cleared for unrestricted use on September 22, 1977, by letter from Mr. R.J. Hart (Energy Research and Development Administration) to Mr. James Gallery (Vice President and General Manager of Hooker Specialty Chemical's Division).

ELIMINATION ANALYSIS

Survey data indicate that the buildings and grounds used for MED/AEC operations do not contain any radioactive contamination exceeding applicable standards. In most areas of the site, radiation levels are typical of natural background levels for the area. On the basis of the information summarized in this report, DOE's Division of Facility and Site Decommissioning Projects has determined that no remedial action is necessary at this site and has eliminated the former Hooker Electrochemical Company from further consideration under the Formerly Utilized Sites Remedial Action Program.

REFERENCES

- o U.S. Corps of Engineers, Manhattan District, Completion Report-Construction of Hooker Electrochemical Company P-45 Plant, (undated report with attachment).
- o U.S. Department of Energy, "Formerly Utilized MED/AEC Sites Remedial Action Program, Radiological Survey of the Hooker Chemical Company, Niagara Falls, New York, Final Report," DOE/EV-0005/2, January 1977.
- o Hollister, Hal (Energy Research and Development Administration), to W.H. Travis (Energy Research and Development Administration), "Hooker Report," August 29, 1977.

- o Hart, R.J. (Energy Research and Development Administration), to James Gallery (Hooker Chemicals and Plastic Corporation), "Radiological Clearance: Hooker Facilities Operated Under Former AEC/MED Contracts," September 22, 1977.
- o Mott, William E. (Department of Energy), to James Gallery (Hooker Chemicals and Plastics Corporation), "Radiological Survey of the Hooker Chemical Company Plant," April 4, 1978.
- o Oltko, F.T. (Hooker Chemicals and Plastics Corporation), to W.E. Mott (Department of Energy), letter of April 18, 1979.
- o U.S. Department of Energy, "Summary Report--Aerial Radiological Survey, Niagara Falls Area, Niagara Falls, New York," WAMD 010, November 30, 1979.