

FORMERLY UTILIZED SITES  
REMEDIAL ACTION PROGRAM

ELIMINATION REPORT  
FORMER REVERE COPPER AND BRASS CORPORATION  
5851 WEST JEFFERSON STREET  
DETROIT, MICHIGAN

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U.S. Department of Energy  
Office of Environmental Restoration and Waste Management  
Office of Environmental Restoration  
Decontamination and Decommissioning Division

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INTRODUCTION

The Department of Energy (DOE), Office of Environmental Restoration and Waste Management, Office of Environmental Restoration, Decontamination and Decommissioning Division has reviewed the past activities of the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) at the former Revere Copper & Brass Corporation in Detroit, Michigan. The DOE has determined that the conditions at this site have little to no potential for contamination. Therefore, this site requires no remedial action and is no longer under consideration for inclusion in the Formerly Utilized Sites Remedial Action Program (FUSRAP).

The material in this report consists of historical information from documents supporting the determination that the potential for contamination at the former Revere Copper and Brass site is very low and that use of this site will not result in any measurable radiological hazard to site occupants or to the general public.

BACKGROUND

Site Function

Revere Copper and Brass supported the MED through a contract for extrusion of approximately 1220 tons of uranium in 1943 and 1944. This figure of 1220 tons is derived from records of purchase orders placed with Revere during the first contract. A separate contract with the AEC was active from mid-1949 through mid-1954 for the purpose of extruding uranium and thorium for research activities. The amount of radioactive material handled in the second contract is unknown.

Site Description

The former Revere Copper and Brass site is located at 5851 W. Jefferson Street in Detroit, Michigan. According to historical documents, the plant consisted of four main buildings including the foundry building, the physical lab building, the "Extrusion Area" building and a smaller building which may have been used for offices. All of these structures have been demolished. Those portions of the site which were of particular interest in terms of potential radiological contamination were two extrusion presses and a furnace, all housed in the "Extrusion Area" building, as well as the highbay area of the Extrusion Area building, which would have been susceptible to accumulation of airborne radioactively contaminated dust. The extrusion presses and the furnace were all stolen from the site at the time of the plant closing around 1984 to 1985. The two presses mentioned (a 1650 ton and a 2400 ton press) were not in use prior to April of 1949. Up until that time, a smaller (2000 ton) press was in use for MED work. This smaller press was sold in 1949, and no records of this sale are available. Also, the furnace stolen at the time of plant closing was not the original furnace used prior to 1948. The fate of the original furnace is unknown.

## Radiological History and Status

Historical records indicate that periodic surveys of airborne and surface radioactivity were performed during the performance of the MED contract. Survey results were reported in terms of concentrations of airborne "metal" and direct readings of work surfaces and floors with a Geiger-Muller type counter. At the time of the MED surveys, the allowable concentration of airborne "metal" dust was 0.15 milligrams per cubic meter ( $m^3$ ). Available records indicate that the Revere Copper and Brass operation had some difficulty in maintaining acceptable levels of airborne "metal". Then-unacceptable levels of airborne uranium dust persisted throughout the MED work period, ending around November 1944.

A preliminary (screening) radiological survey was performed at the site on April 22, 1981 by a team from the Argonne National Laboratory Radiological Survey Group. Areas surveyed included the Extrusion Area, the Physical Lab and the power back saw area (also in the Physical Lab Building). Direct readings taken in the Extrusion Area and the Physical Lab indicated background activity levels at most locations. One reading in each of these two areas indicated higher than background activity, but much lower than the allowable level of 20 uR/hour above background stipulated in the FUSRAP release criteria guidelines (Ref. 1). Smear samples taken in the Physical Lab, the Extrusion Area and the power backsaw area indicated background levels of activity.

The report of the preliminary survey (Ref. 2) included a recommendation for a complete radiological assessment, primarily owing to the potential for the accumulation of contaminated dust on the overhead structural members. On September 13, 1989, a DOE official and representatives visited the site and observed that it had been demolished. A cursory radiological survey at that time revealed no areas with direct radiation levels above background. Preliminary survey results of a facility in the Detroit area used for similar purposes, whose structures were intact, did not identify any areas of residual contamination.

## ELIMINATION ANALYSIS

Based on the information presented above, the DOE has determined that there is little to no potential for radiological exposure beyond that associated with natural background radiation, and therefore no additional investigations are necessary. The former Revere Copper and Brass Corporation site is therefore eliminated from the list of considered sites under FUSRAP.

## REFERENCES

1. U.S. DEPARTMENT OF ENERGY, 1987, "Guidelines for Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites"
2. ARGONNE NATIONAL LAB, 1981 (?), "NOTES and COMMENTS" on preliminary screening survey of Revere Copper and Brass Facility, 5851 W. Jefferson St., Detroit, Michigan
3. U.S. ATOMIC ENERGY COMMISSION, var. dates, Historical files containing correspondence related to AEC contract work at Revere
4. U.S. CORPS OF ENGINEERS, various dates, Historical files containing correspondence related to MED contract work at Revere