

CASE STUDY / **CANNON STREET STATION ABATEMENT AND RECONSTRUCTION**

## SAFETY CONCERNS DRIVE CLEANUP APPROACH

A century-old power plant building had been abandoned for more than two decades.

Before the owner of the historical landmark could conduct environmental activities at the site, significant preparatory work was needed to make the dilapidated facility safe for workers.



# SIGNIFICANT PREPARATIONS PRECEDE ENVIRONMENTAL ABATEMENT WORK

Structural problems and the presence of hazardous materials needed to be addressed to complete remediation efforts.

**PROJECT STATS**

**CLIENT**  
Sprague Massachusetts Properties LLC

**LOCATION**  
New Bedford, Massachusetts

**TOTAL PROJECT COST**  
\$5.75 million

**COMPLETION DATE**  
November 2017

## CHALLENGE

Sprague Massachusetts Properties LLC purchased an abandoned power plant building along the waterfront in New Bedford, Massachusetts. The 100-year-old historical landmark had sat vacant for more than 20 years and contained significant hazardous materials that needed to be mitigated as part of the purchase agreement.

A portion of the roof on the five-story facility had collapsed, allowing outside elements to enter the building. Some flights of stairs were not sound. The building contained peeling lead-based paint, exposed asbestos insulation and roofing materials, and active bird and animal life.

In order to perform hazardous materials abatement, a lot of work would be needed to render the building safe for cleanup workers

## SOLUTION

Sprague selected Environmental Specialty Solutions Inc. (ESS), a Burns & McDonnell company, to provide engineer-procure-construct (EPC) project delivery for the \$6 million abatement, demolition and reconstruction program at the site.

With a condensed time frame and pressing safety concerns, the EPC contract provided single-source accountability to support Sprague's commitments on time and within budget.

The team developed a comprehensive, site-specific health and safety plan covering all phases of work and all personnel. The team conducted a detailed site evaluation to identify remaining and residual hazardous and regulated materials, as well as site conditions posing a safety risk to personnel. Baseline air monitoring and analysis confirmed the potential for contact with airborne contaminants, necessitating the use of personal protective equipment.

The inspection, sampling and analysis program found a wide range of contaminants, including asbestos, PCBs, lead-based paint, animal waste, mercury, mold, oils, lab waste materials and chemical residuals. The combination of contamination by regulated materials with structurally unsound portions of the building necessitated a "make safe" program to prepare the facility for abatement work. Falling debris, unsafe stairways, floor penetrations, unsafe handrails and other hazards required resolution.

Engineering and design was completed for the demolition and reconstruction of a collapsed portion of the building's roof, missing stairways and structurally unsound mezzanines, as well as for asbestos removal and remediation of the regulated materials throughout the structure. We also performed structural analysis of the work areas to confirm their integrity and to restrict access to some areas as needed.

**\$250K**

SAVINGS FROM INITIAL PROJECT BUDGET



**1.4M**

POUNDS OF ASBESTOS-CONTAINING MATERIALS REMOVED



**17K**

MAN-HOURS WORKED WITH ZERO SAFETY RECORDABLES





Due to the presence of asbestos in the roofing materials, the team completed demolition of the failed roofing structure in accordance with a Massachusetts Department of Environmental Protection-approved Non-Traditional Work Plan for asbestos abatement. Those areas were reconstructed, covered, patched and/or resealed to protect the structure's interior. Given hurricane conditions during part of the project, we monitored wind conditions and did not perform any exterior roof work during periods of high wind.

Managing the permitting process with city and state agencies was essential for aspects involving historical preservation, construction, occupancy, the planning commission, asbestos abatement and insurance requirements.

## RESULTS

Drawing on deep experience across environmental abatement, historical preservation and structural engineering, the team successfully rendered the former power plant building safe to enter. Addressing a

range of structural challenges and environmental hazards, we helped Sprague meet its mitigation obligations while completing work a month ahead of schedule and \$250,000 under the initial budget.

The extensive asbestos removal process was carefully managed, using a negative air-controlled system for loading asbestos-containing materials (ACMs) and transporting them from the building. Workers entered and departed the asbestos abatement work zones via decontamination chambers installed for that purpose. In total, licensed asbestos abatement professionals sealed and double-bagged approximately 1.4 million pounds of ACMs and placed them in secure containers for removal and off-site disposal.

The facility, formerly called the Cannon Street Power Station, is listed on the National Register of Historic Places, so extra effort was necessary to preserve the exterior appearance and avoid impacting its architectural character. We took care to avoid disturbing

the exterior facia, securing and matching to preserve and protect the appearance of the historical landmark.

The City of New Bedford is in the midst of a 20-year waterfront redevelopment plan, and this property is within the redevelopment zone. The abatement program restored the building to the condition needed for eventual sale and redevelopment, significantly enhancing the building's marketability for Sprague.

## SPECIALIZED SERVICES

- Air monitoring and analysis
- Construction management
- Design
- Environmental health and safety plan
- Permitting
- Procurement
- Scheduling
- Site evaluation



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