

Executive Summary

Over the last decade, the community of Portsmouth, Virginia has struggled through profound economic and political difficulties, proactively looking for new options and new directions for the future use of the Abex Corporation Superfund site. This case study describes how multiple stakeholders have worked together to plan and build a thriving new community on the site, and the positive local impacts that have resulted from their efforts.



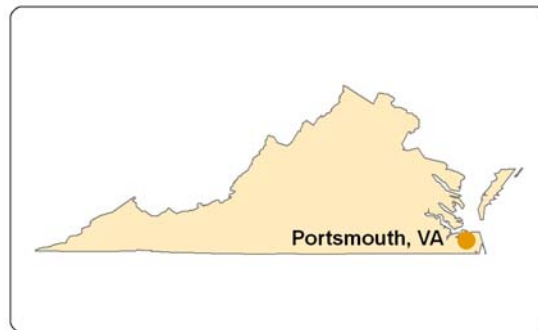
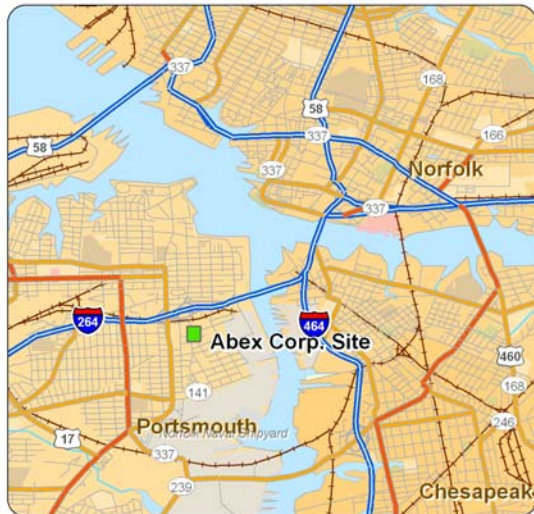
Figure 1: Portsmouth Fire, Rescue and Emergency Services, Station 1 on Effingham Street

Reuse Impacts

- Fire Station 1 employs an estimated 25 employees consisting of both firefighters and paramedics and contributes \$1,267,500 in annual employment income to the community.
- The professional center includes small retail enterprises, including a restaurant, barbershop, a community health center and a community dental clinic.
- A community health center provides free or low-cost health services to local residents. Part of the professional center at the site, the Hampton Roads Community Health Center and Healthy Smiles Dental Center served nearly 9,000 medical and dental patients with 29,586 medical and dental patient visits in 2009.
- The Charles A. Fisher Memorial Academy, a law enforcement training facility, employs 12 people and contributes \$472,486 in annual employment income to the community.
- A beverage distribution company has built a distribution warehouse at the site, providing 68 jobs in the area and contributing approximately \$3,025,308 in employment income to the community.
- Green space and a park have improved the aesthetic value of the site property.
- The Portsmouth Redevelopment and Housing Authority received over \$1.9 million in grants to assist with the demolition of on-site buildings and the relocation of Washington Park residents.

Introduction

Superfund site remediation at the Abex Corporation Superfund site in Portsmouth, Virginia restored value to the site and provided benefits to the surrounding community. These accomplishments are significant; the stigma associated with contaminated sites often results in decreased land values on and around a site. Returning a site to use revitalizes the local economy with jobs, businesses, tax revenues, local spending, and provides enhanced recreational and ecological benefits. Additionally, green space, walking paths, parks and playgrounds are often associated with Superfund sites after remediation, thereby adding value to communities.



The goal of this case study is to describe (quantitatively, qualitatively and, where possible, in dollar terms) the impact of the site's redevelopment for local communities and the environment.

Site History and Cleanup

The site is located in one of Portsmouth's oldest urban neighborhoods, less than one mile from the U.S. Navy's extensive shipyards. The Norfolk Naval Shipyard in Portsmouth, Virginia is one of the U.S. Navy's largest and oldest shipyards, specializing in repairing, overhauling and modernizing ships and submarines.

The Abex Corporation/Railroad Products Group operated a brass and bronze foundry in Portsmouth, Virginia from 1928 to 1978. The legacy of 50 years of foundry operations and the associated disposal of some 3,500 cubic yards of lead-laden furnace sands in a one-acre parcel adjacent to the site resulted in surface and subsurface soil contamination with lead, other metals and volatile organic compounds. Much of this contaminated sand was inappropriately used as fill material for residential and commercial development near the foundry.

The disposal of foundry waste sands and emissions from the smelting furnaces contaminated on-site soil, residential yards, a small playground and a rehabilitation center. Lead was the principal contaminant of concern at the site due to its known health effects and its widespread presence in surface and subsurface soil in the residential areas, as well as the foundry properties.¹ Following a series of site investigations, in 1990 EPA added the site to its list of hazardous waste sites needing cleanup.

¹ 1992 EPA Record of Decision, page 20. <http://www.epa.gov/superfund/sites/rods/fulltext/r0392159.pdf>.

Property Cleanup and Transformation

In 1996, an agreement was reached among the U.S. Environmental Protection Agency (EPA), Abex Corporation, the City of Portsmouth and the Portsmouth Redevelopment and Housing Authority to design and conduct cleanup and reuse activities at the site. The remedy chosen for the site included soil excavation, treatment and off-site disposal. Waste materials were also removed and excavated areas were backfilled with clean fill. Several private homes around the foundry property, as well as several foundry structures, were demolished in 1998. Contaminated soils at the Washington Park Public Housing Complex (WPH) were scheduled to be cleaned to residential standards. However, a legal issue postponed the completion of remediation activities.

The legal issue was a 1999 civil rights lawsuit filed against the City of Portsmouth, the Portsmouth Redevelopment and Housing Authority, Abex Corporation, the U.S. Department of Housing and Urban Development (HUD), and EPA, alleging that WPH was knowingly built on contaminated property. A settlement was reached in 2000 whereby HUD and the Portsmouth Redevelopment and Housing Authority agreed to permanently relocate all WPH residents. After relocation, WPH buildings were demolished by November 2003 and soil remediation was subsequently completed.

Community members were able to provide input throughout the decision-making process for the site's cleanup and redevelopment. The site's comprehensive cleanup minimized potential liability concerns, making the site property more suitable for redevelopment at a critical time when developable land was in high demand in the area. A cooperative effort by EPA, the state, the local community and the private sector has brought positive, lasting results to the local economy, the environment and area residents.

Local Impacts

The site's cleanup proved to have a significant impact on both the environment and the local economy. In addition to three public service facilities (Fire Station 1, the Community Health Center and the Charles A. Fisher Memorial Academy), a park, a beverage distribution facility and a shopping center are also located on the site.

Fire Station 1

Fire Station 1 is centrally located on the site and serves the communities of Brighton, Truxton, Prentis Park, Olde Towne and Portsmouth. The surrounding area is currently home to the Ntelos Amphitheater, Ocean Marine Yacht Center and many other businesses. Station 1's location in the community has improved response time for fire and medical emergencies, which is an added attraction for new businesses. In addition to the engine truck, the Ladder 1 truck and Medic Battalions, the Station also houses a Hazardous Materials

The Portsmouth Redevelopment and Housing Authority received over \$1.9 million in grants to assist with the demolition of on-site buildings and the relocation of Washington Park residents, including:

- A HOPE VI Demolition Grant in the amount of \$1,588,700 for Washington Park.
- A 2005 Resident Opportunities for Self Sufficiency Grant for \$350,000 to help ensure the self-sufficiency of 100 residents living in low-income public housing developments.
- A \$47,000 Public Housing Coordinator Grant and a \$41,000 Housing Choice Voucher Coordinator Grant to provide continued case management services to public housing and Section 8 housing choice voucher participants.

Team. The Team serves as the lead Hazardous Materials Team for the entire Southside region.² Station 1 firefighters respond to an average of 315 emergency calls each month and medics respond to an average of 320 calls per month.³ It is estimated that Fire Station 1 employs an average of 25 employees, consisting of both firefighters and paramedics, and contributes \$1,267,500 in annual employment income to the community.⁴

Hampton Roads Community Health and Dental Center



Figure 2: Portsmouth Community Health Center

The new Hampton Roads Community Health Center (formally Portsmouth Community Health Center) located in the professional center provides primary care, laboratory services, pharmaceutical services, and behavioral health and preventive health services to the local community. The Health Center is private-not-for-profit and funded through federal, state and local grants. Healthy Smiles Dental Center provides much needed dental services to the community. The health and dental centers also provide community

outreach through community health fairs and other off-site activities. At community health fairs, Center staff conduct dental, diabetic, blood pressure, cholesterol and other screenings at no cost to local residents. In 2009, the Center served over 8,900 medical and dental patients with 29,586 medical and dental patient visits.

Massimo Zanetti

Massimo Zanetti, an Italy-based coffee distribution company, has built a beverage distribution warehouse and transportation and parking facilities on site, on areas formerly occupied by the WPH. The availability of industrial property near the company's headquarters was the impetus for building the facilities. The distribution center has provided 68 permanent and 7 temporary jobs in the area and contributes \$3,025,308 in annual employment income to the community.

Charles A. Fisher Memorial Academy

The Charles A. Fisher Memorial Academy, which is part of the Portsmouth Sheriff's Office, is certified to teach entry level, continuing education and mandated in-service training for law enforcement and jailor curricula. The Academy employs 12 people and contributes \$472,368 in annual employment income to

² City of Portsmouth Fire Station 1 Website. <http://www.portsmouthva.gov/fire/Station%201.aspx>

³ Portsmouth Sheriff's Office 2009 Annual Report.

⁴ The City of Portsmouth has a total of eight fire stations, which employ a total of 206 employees. The average pay scale for firefighters in Virginia is \$44,086.90 - \$57,313.10 / Year Permanent Full Time. For the purposes of the case study the midpoint was estimated as the average salary, \$50,700.

the community. In 2009, the Academy provided training to 15 federal, state and local agencies in the southeastern portion of the state. During 2009, Academy staff provided over 4,000 training hours.⁵

The City of Portsmouth's Mounted Police Horse Stables are also located adjacent to the Academy. The Mounted Police Unit regularly patrols the streets of Portsmouth.



Figure 3: Mounted Police Horse Stables

station, law enforcement training and community health clinic services that have improved local quality of life for Portsmouth citizens.

Conclusion

Portsmouth has become a model for successful urban revitalization and the Abex Corporation Superfund site has played a significant part in the city's efforts. The site's cleanup protected human health and the environment, improved the aesthetic value of the local landscape, attracted new businesses and will help spur additional redevelopment in the area in the future. Site reuses provide needed community services and strengthen area infrastructure, providing a fire

⁵ Portsmouth Sheriff's Office 2009 Annual Report.



www.epa.gov

Reuse and Benefits to the Community Abex Corporation Site

Technical Appendix

Positive Impacts: Employment Information for On-Site Jobs

Each on-site business was researched in the Dun & Bradstreet (D&B) database, from which the number of employees and sales volume information was gathered. D&B is a company that provides information on businesses and corporations. It maintains a database of over 179 million companies globally and over 53 million professional contact names using a variety of sources including public records, trade references, telecommunication providers, newspapers and publications, telephone interviews and various other sources (<http://www.dnb.com/>). Most of the businesses located on the Abex Corporation Superfund site were not in the D&B database. When businesses were not found in the D&B database, alternative methods were employed (e.g., annual reports, company websites, etc.) to obtain information on the number of employees and sales volume.

The Data Universal Numbering System (DUNS) number is a unique nine-digit identification number assigned by D&B to each business and its location within the D&B database for the purpose of identifying each business.¹

Businesses featured in the “Reuse and the Benefit to Community: Abex Corporation” case study that did not report to D&B include Fire station 1, Community Health Center and Charles A. Fisher Memorial Academy. Alternative methods for determining employment and sales for these businesses are listed below.

Fire Station 1: 25 employees

The number of employees was estimated based on the City of Portsmouth’s eight fire stations, which employ a total of 206 employees. The average pay scale for firefighters in Virginia is \$44,086.90 - \$57,313.10 / Year Permanent Full Time. For the purposes of the case study, the midpoint was estimated as the average salary, \$50,700.

Portsmouth Sheriff’s Office 2009 Annual Report

<http://www.portsmouthva.gov/fire/Station%201.aspx>

<http://www.virginiafirefighters.com/jobs.htm>

Hampton Roads Health Center: unknown number of employees

For security reasons, the health center will not release employee numbers and there is not enough available information for an accurate estimate.

<http://www.portshealth.org/>

Charles A. Fisher Memorial Academy: 12 employees

Interview with Captain Roberts, 9/1/2010

Portsmouth Sheriff’s Office 2009 Annual Report

<http://www.portsmouthva.gov/psso/pdfs/CA/2010SeptComAdvisor.pdf>

Massimo Zanetti Beverage Distribution Center: 68 permanent employees and seven temporary

E-mail from Human Resource Manager Martie King, 5/16/2011

¹ D&B updates its company reports on an annual basis. Data from D&B used for this analysis were collected in May 2011.

Positive Impacts: Wage and Income Information for On-Site Jobs

Wage and income information was gathered using the Bureau of Labor Statistics (BLS) data. The BLS is a governmental statistical agency that collects, processes, analyzes and disseminates essential statistical data to the American public, the U.S. Congress and other federal agencies in the broad field of labor economics and statistics. The data provided by the BLS have high standards of accuracy and consistently high statistical quality and impartiality in both subject matter and presentation.

Average weekly wage data for each of the businesses located at the former Abex Corporation property were collected from the BLS Quarterly Census of Employment and Wages database. Average weekly wage data were identified by matching the six-digit North American Industry Classification System (NAICS) codes corresponding with each type of business with weekly wage data for corresponding businesses in Portsmouth County; if wage information was not found at the county level, then wage information was sought by state or national level, respectively.² To determine the annual wages (mean annual) earned from jobs generated by each of the business located at the former Abex Corporation property, the average weekly wage figure was multiplied by the number of weeks in a year (52) and by the number of jobs (employees) for each of the businesses.

Table 1: Abex Corporation Businesses: NAICS Code and Title, Average Weekly Wage and Annual Wage per Employee

On-site Business	NAICS Code ^a	NAICS Title	Average Weekly Wage (2009)	Annual Wage (Mean Annual) per Employee (2009)
Fire and Rescue	922160	Fire Protection	\$975.00	\$50,700.00
Massimo Zanetti	4349311	Warehousing	\$775.72	\$40,337.44
Charles A. Fischer Academy	611513	Education and Health Services	\$757.19	\$39,373.88

Average Weekly Wage data source: BLS Quarterly Census of Employment and Wages (2009) Portsmouth/Norfolk County <http://www.bls.gov/cew/> or BLS Current Employment and Statistics (National) <http://www.bls.gov/ces/data.htm>. Annual wage (mean annual) per employee is based upon BLS Average Weekly Wage data.
^aNAICS code provided in D&B unless otherwise noted.

Table 2: Abex Corporation Property Businesses: Employees, Wages and Total Annual Wages

On-site Business	Employees ^a	Annual Wage (Mean Annual) per Employee	Total Annual Wages ^b
Fire and Rescue	25	\$50,700	\$1,267,500
Massimo Zanetti	75	\$40,337.44	\$3,025,308
Charles A. Fischer Academy	12	\$39,373.88	\$472,486.56

^aEmployee data are from D&B, except where employee data are estimated using methods described previously in the appendix.
^bTotal annual wage figures were derived by multiplying "Employees" by "Annual Wage (Mean Annual) per Employee."

² D&B uses six-digit NAICS codes to classify businesses reporting to D&B. For businesses not reporting to D&B, assumptions were made about the most appropriate NAICS code for those particular businesses.

Abex 2007 Five Year Review: <http://www.epa.gov/superfund/sites/fiveyear/f2007030001694.pdf>

Portsmouth Redevelopment and Housing Authority: <http://www.prha.org/index.html>