

**ASBESTOS ABATEMENT AND DEMOLITION
AND
EMERGENCY REMOVAL AND DISPOSAL OF POLE
MOUNTED TRANSFORMERS AND CONTAMINATED SOIL**

USCG OLD BASE ST. LOUIS, MO

May 2003

**ASBESTOS ABATEMENT AND DEMOLITION
AND
EMERGENCY REMOVAL AND DISPOSAL OF PCB POLE
MOUNTED TRANSFORMERS AND CONTAMINATED SOIL
UNITED STATES COAST GUARD
OLD BASE
ST. LOUIS, MISSOURI**

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Prepared for:

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LIST OF ACRONYMS

ACM	Asbestos Containing Material
AHERA	Asbestos Hazardous Emergency Response Act
AST	Aboveground Storage Tank
CEU	Civil Engineering Unit
ISC	Integrated Support Command
MSL	Mean Sea Level
MWH	MWH Americas, Inc.
NAFA	Non-Appropriated Fund Activities
NIOSH	National Institute of Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PCM	Point Count Method
%	Percent
PEL	Permissible Exposure Level
PID	Photoionization Detector
PLM	Polarizing Light Microscopy
PPM	Parts Per Million
Sq. ft	Square Feet
TSCA	Toxic Substance Control Act
USCG	United States Coast Guard

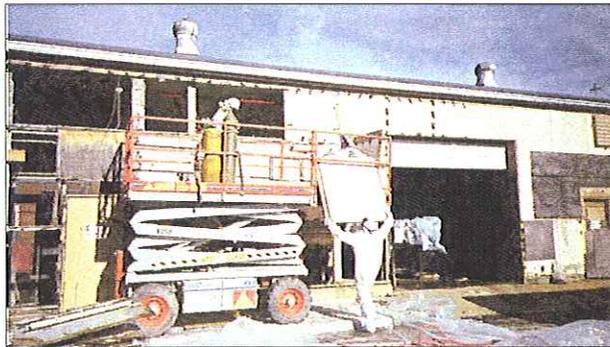
1.0 INTRODUCTION

MWH Americas, Inc. (MWH) was retained by the United States Coast Guard (USCG), Civil Engineering Unit (CEU) Miami to perform an Asbestos Abatement and Demolition Project at the USCG facility, Old Base, St. Louis, Missouri. The project was subsequently expanded due to suspected vandalism of the pad-mounted transformer and release of polychlorinated biphenyl (PCB) dielectric fluid occurred from a pad-mounted transformer adjacent to the industrial building requiring emergency removal and disposal. In addition, three pole-mounted transformers, reportedly owned by USCG, were sampled, removed from the poles, and transported to a disposal facility.

1.1 Project Overview

Project activities were performed from November 2002 to April 2003 and included the following tasks:

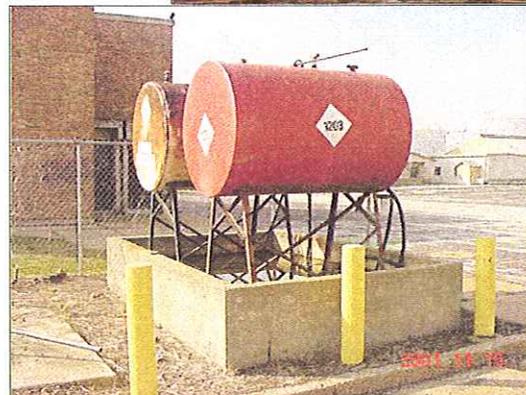
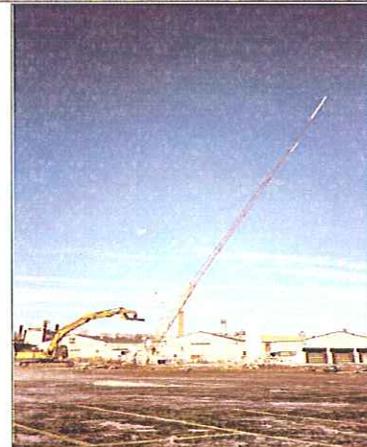
Asbestos Abatement - The asbestos abatement was performed between November 2002 and February 2003 and focused on three building at Old Base St. Louis, the Industrial Building, Service Building, and Non-Appropriated Fund Activities (NAFA) Building. The locations and quantity of asbestos containing material (ACM) were documented in a separate report prepared by MWH entitled *Asbestos Survey Report, USCG Old Base St. Louis, March 2002* (MWH, 2002).



Industrial Building Demolition – Demolition activities at the Industrial Building were performed between February 2003 and March 2003 and included the total removal of the Industrial Building, Guardhouse, and Communication Tower. The scope of work also included performance of the following activities:

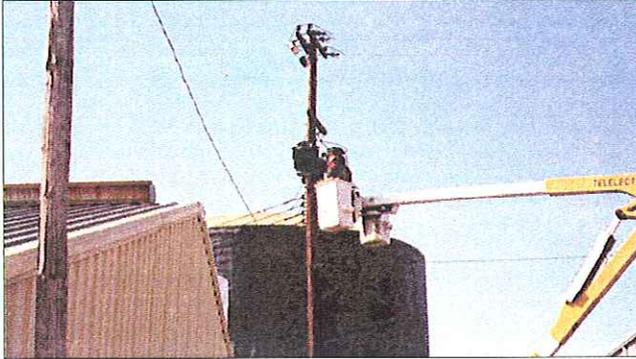


- Plug pipe and other conduits that are exposed during demolition.
- Remove and properly dispose of lighting ballast and bulbs in accordance with all applicable state and federal requirements.
- Remove all interior walls.
- Remove all foundation walls and footings to 2 feet below grade and removal of the concrete slab on grade.
- Removal and disposal of the facility pad-mounted transformer and liquid.
- Removal and disposal of two approximately 200 gallon above ground storage tanks (ASTs) located at the southeast corner of the Industrial Building and one approximately 50 gallon AST.
- Remove and dispose of the AST concrete secondary containment.
- Backfill and compact excavation area of former building and containment area footprints.

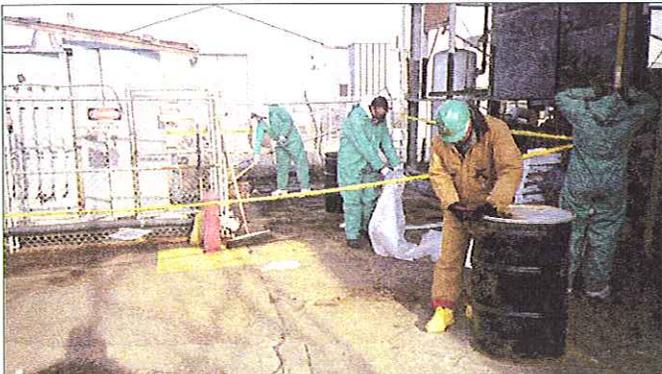


- Install a new fence along the property line vacated by the Industrial Building.

Pole Mounted Transformer Removal and Disposal – Three (3) pole mounted transformers, located at the southwest corner of the facility were noted by the City of St. Louis Power Authority to contain PCBs. It was later determined that these transformers were the property of the USCG. This task included the analytical testing of the dielectric fluid for PCB content, removal, and disposal.



Emergency Removal and Disposal of PCB Contaminated Soils – Vandalism at Old Base St. Louis occurred during execution of the demolition activities. The initial discovery occurred on December 10, 2002. As a result, the contents of the pad-mounted transformer (known to be PCB containing) were released to the environment. Emergency response actions were necessitated to contain the release



and included excavating transporting and disposal of contaminated soil, concrete, and asphalt that surround the pad-mounted transformer.

1.2 Report Layout

The information from the activities identified above are detailed in the following sections which have been broken out as follows:

Section 2 – Facility Location and Background

Section 3 – Asbestos Abatement

Section 4 – Industrial Building Demolition

Section 5 Emergency Response and Pole Mounted Transformer Removal

Section 6 – References

2.0 FACILITY LOCATION AND BACKGROUND

2.1 Site Location

The USCG Old Base St. Louis, Missouri is located at Mile 173.6 on the West Bank of the Upper Mississippi River in an urbanized, predominately industrial and commercial area south of Downtown St. Louis. Figure 2-1 shows the location of the base in relation to the surrounding area as depicted on USGS Quadrangle Map. The facility comprises an area of approximately 4.43 acres, measuring 345 feet along the western boundary, 600 feet on the southern boundary, and 457 feet along the northern side. The eastern boundary, measuring 372 feet long, parallels the Mississippi River. The riverbank, at 418 feet above mean sea level (MSL), is rip-rapped (EDP, 1991). The facility is bounded on the north by Alumax Foils Inc., on the west by railroad tracks and a Southern Metals Processing facility (scrap metal), and to the south by Brenntag, a specialty chemical manufacturer/distributor. Figure 2-2 depicts the layout of the USCG site and the surrounding property.

2.2 Land Usage

2.2.1 Current Land Usage

Old Base St. Louis is an inactive facility, aside from the occasional inspection, grounds maintenance, and nightly patrols by a security service. Utilities, including natural gas, water, and electricity have been taken out of service. The Base was closed in 1993 as a result of severe flooding of the Mississippi River. The buildings that currently exist at the site consist of the Industrial Building on the north side of the property, a Barracks facility to the east, and a Boat Storage shed, Exchange Club, and NAFA Building to the south (see Figure 2-2).

2.2.2 Future Land Use

The USCG is attempting to excess the Old Base St. Louis property. Future uses of the property are unknown at this time, but are likely to remain industrial.

2.3 Facilities

The Industrial Building was constructed in 1953. It is approximately 22,500 square feet (sq. ft) and was used to house the public works, electronics, shops, base office, shipping and receiving, clothing lockers, and storage space. Demolition of this building was completed in support of the excess property initiative of the USCG. The asbestos abatement and demolition project focused on the Industrial Building. The NAFA Building was constructed in 1943. It is approximately 2,500 sq. ft. In December 1963, the Barracks Building was destroyed by fire and was replaced in 1965 by a 3,600 sq. ft, 50-man barracks-subsistence building. The boat shed is a galvanized steel prefabricated building built in 1951. The Service Club was constructed in 1970 and is also a metal prefabricated building. In 1978, the base operations and security building was constructed.

During the summer of 1993, the Old Base St. Louis was flooded by the Mississippi River and was submerged under four feet of water. Due to the damage caused by the flood, a decision was made to close the Base in late 1993. The Base has been inactive since its closure.

3.0 ASBESTOS ABATEMENT

In February and March of 2002 MWH completed the asbestos survey of the Industrial Building, NAFA Building and Service Club Building. Included was the sampling and analysis of dielectric fluids associated with a pad-mounted transformer located north of the guardhouse and west of the industrial building. The results of the survey were document in a report entitled *Asbestos Survey Report, USCG Old Base St. Louis, March 2002* (MWH, 2002). MWH was then contracted to complete an asbestos abatement of the Industrial, NAFA, and Service Buildings. The services also required MWH to provide demolition of the Industrial Building, guardhouse, and antenna, and removal and proper disposal of a pad-mounted transformer and three (3) ASTs.

3.1 Asbestos Abatement

Prior to the abatement, an asbestos notification form was submitted to the city of St. Louis, Department of Public Safety along with the appropriate fee (Appendix A). Once the approvals were received from the City of St. Louis, MWH and subcontractors mobilized to the site. A kickoff meeting was held at Old Base St Louis on November 12, 2002. In attendance were representatives from the USCG Civil Engineering Unit Miami, USCG Integrated Support Command (ISC) St. Louis, MWH, Envirotech Inc., and Ecosafe Inc.

3.1.1 Interior ACM Abatement

In general, the project consisted of the



removal of approximately 800 linear feet of ACM pipe insulation and 20 sq. ft of duct wrap from the Industrial Building.

The glovebag/wrap & cut method was utilized for the removal of the pipe insulation and ductwork.



In addition, non-friable floor tile and VAT/mastic were removed from various locations within the Industrial Building (approximately 1,700 sq. ft) and Service Building (64 sq. ft). In addition, more than 10,000 sq. ft of interior transite wall-board was removed from the Industrial Building and 120 sq. ft NAFA Building utilizing the



dismantling method.

Material from the interior ACM removal was placed into lined roll-off dumpsters staged on site. Once the dumpsters were filled, the liner was secured over the material for transportation to the landfill. The ACM wastes were transported to D&L Landfill located in Greenville, Illinois. Transportation and disposal manifests are provided Appendix B.



3.1.1.1 Interior Bulbs and Ballast Removal

The Industrial Building contained a number of fluorescent lights throughout. In conjunction with the asbestos removal, bulbs and ballasts were removed, packaged and disposed of in accordance with applicable state and federal requirements.



3.1.2 Exterior ACM Abatement

Exterior ACM abatement activities began on the exterior portion of the Industrial Building on November 20, 2002. The exterior portion of the Industrial Building was constructed of gray cement board panels bolted to a steel frame. More than 10,000 sq. ft of exterior siding was removed during the ACM abatement.



Initially, work began with the removal of transite panels from the east-side of the building and progressed in a clockwise fashion around the perimeter. The transite panels were removed by cutting the heads of the metal bolts that secured



the panels to the steel frame. A lift, equipped with an acetylene tank and torch, was used to burn the bolt heads off each panel. As sections of panels were cut, a plastic liner was placed along the removal area to capture falling debris as the panels were removed. The panels were subsequently wetted and removed in tact to the extent possible. The transite panels were then placed in lined roll-off dumpsters.

The northern side of the Industrial Building is immediately adjacent to property line which is shared with Alumax. The Alumax side is used extensively as a truck drive, loading/unloading, and parking area.



Removal of the transite panels from the north side of the Industrial Building was not feasible through the interior or from the USCG side alone. It was therefore necessary to establish an agreement with Alumax that would allow the asbestos abatement crew access onto their property. Several meetings between MWH and Alumax were held to establish the terms of the access agreement. Attempts to establish an agreement between Alumax and USCG were unsuccessful. However, MWH was able to facilitate an agreement between Alumax and the asbestos abatement subcontractor, Envirotech. Since truck travel through this area is heavy throughout the work week, it was agreed upon to complete the abatement of the north side of the Industrial Building between Friday December 6, 2002 and Saturday December 7, 2002.



The effort was further complicated when it was noted that window caulking throughout the exterior of the Industrial Building was potentially asbestos containing. Samples were collected on December 9, 2002 by Ecosafe, the MWH Asbestos Hazardous

Emergency Response Act (AHERA) inspector. The sample collected tested positive for asbestos with 3 percent (%) chrysotile. The material was subsequently confirmed as positive by the polarizing light microscopy (PLM) point count method (PCM) with 3.25 % chrysotile (Appendix C). The City of St. Louis classifies this material as Category I non-friable. As such, it was disposed of as construction and demolition debris during building demolition. In order to insure that the window caulking is not rendered friable, the window panels were removed in tact and placed in a lined roll-off container.

Exterior ACM was placed in lined roll-off containers and transported to D&L Landfill in Greenville, Illinois. Copies of the transportation and disposal manifests are provided in Appendix B.



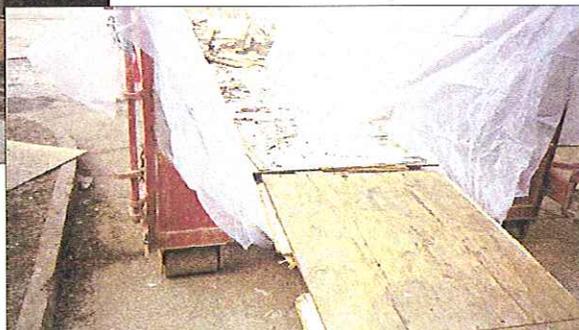
3.1.3 Third Party Monitoring

MWH subcontracted Ecosafe Incorporated to complete independent third party monitoring of the abatement project. Ecosafe performed perimeter



and barrier air monitoring throughout the course of the

abatement project. In addition, Ecosafe completed a negative exposure assessment of Envirotech personnel



from November 12 to November 19, 2002.

During the course of the asbestos abatement Ecosafe collected 52 samples from both inside and outside the work area. In general the results of the samples were all ten times below the Occupational Safety and Health Administration (OSHA) permissible exposure levels (PEL) of 0.1 fibers per cubic centimeter. Final Air clearance samples were analyzed utilizing the PCM National Institute of Occupational Safety and Health (NIOSH) 7400 method by an AIHERA rated analyst. Copies of the results are provided in Appendix D.

The asbestos abatement effort was completed December 7, 2002.