



*Vanasse Hangen Brustlin, Inc.*

101 Walnut Street  
P. O. Box 9151  
Watertown, MA 02471-9151  
617 924 1770  
FAX 617 924 2286

**Memorandum**

To: Ken Schwartz  
Scott Schilt

Date: January 8, 2003

Project No.: 08157

From: Frank Lilley, LSP  
Jessica Thomas

Re: Symmes Hospital Reuse Alternatives  
**Draft Hazardous Waste Impacts  
Assessment**

---

**I. INTRODUCTION**

Three redevelopment Alternatives have been selected for further analysis by the Symmes Advisory Committee for the former Symmes Hospital site in Arlington, Massachusetts. These redevelopment Alternatives are labeled as:

- Alternative 1 Mixed Income Housing
- Alternative 2 Commercial/Medical Development
- Alternative 3 Infrastructure Reuse

The purpose of this memo is to weigh the impacts of each redevelopment Alternative on the management of hazardous waste issues in the subsurface soils and within the existing buildings. Specifically, the intent of this analysis is to determine if a particular redevelopment alternative is more significantly impacted by the management of existing hazardous wastes on the site than the other alternatives, therefore making the selection of that Alternative less desirable. This memo is not intended to be a comprehensive analysis of hazardous waste issues at the site, which will need to be conducted once the final redevelopment plan begins to be designed.

**II. SUMMARY OF FINDINGS**

- In all of the Alternatives, demolition will include removal of asbestos, management of lead paint coated materials and other such issues that are typically associated with the demolition of large commercial structures. It is recommended that a predemolition hazardous materials survey be conducted of the existing buildings prior to demolition.
- Based on its upgradient location, uses located in "The Top" area are unlikely to be effected by impacted soil or groundwater associated with the prior petroleum release from the elevators or the former 10,000 gallon diesel underground storage tank (UST) which is located in "The Overlook" area.
- Demolition of the existing hospital buildings in each alternative will expose the soils under the Old Boiler Room and in the area of the former 10,000 gallon UST. By removing the

overlying building structures and foundations, contaminated soils may be exposed that will facilitate cleanup of the site by excavation of contaminated soils that would have been previously inaccessible.

- “The Ridge” and former Nurses Building is located directly downgradient of the release area for the previous petroleum release. Historical groundwater and soil data has indicated that this location has been impacted. Based on the crossgradient location of the proposed Wellness Center, contaminated soil/groundwater may not be encountered during construction, however limited data is available in this area.
- Construction of residential housing along Summer Street, which could include blasting of bedrock, may disturb contaminated groundwater and be an issue with respect to location of residential housing at this location. VHB does not believe, based on current data, that this is a likely scenario but it cannot be ruled out at this time.

### III. SITE DESCRIPTION

The site has certain commonalities that are inherent in any of the three proposed redevelopment Alternatives. The site is divided into four areas that are common to each redevelopment Alternative. These areas are described below.

**“The Top”**: The area at the top of the Symmes property furthest from Summer street, which is currently used for currently parking area or is undeveloped.

**“The Overlook”**: The area in the center of the Site that contains a majority of the existing hospital buildings. This area is currently the most developed part of the Site. Portions of this area have been impacted by previous releases of petroleum to subsurface groundwater and soil.

**“The Ridge”**: The area that contains the existing Nursing Building, adjacent parking areas and undeveloped woods. Portions of this area have been impacted by previous releases of petroleum to subsurface groundwater and soil from sources in “The Overlook” area.

**“Summer Street”**: This is an undeveloped wooded area that abuts Summer Street.

This memo will describe the impacts of hazardous waste issues on redevelopment for each alternative with respect to each of these four areas. The analysis also divides the waste management issues into issues associated within the building structures and issues on the outside in the soil and groundwater.

### IV. BUILDING DEMOLITION ISSUES

In all three alternatives the existing building structures will be demolished with the exception of the current Nursing Building, and the North Wing of the hospital in Alternative 3. Therefore, all alternatives will for the most part be equally impacted with respect to management of asbestos, lead paint or management of hazardous materials that may remain inside the buildings. Demolition will include removal of asbestos, management of lead paint coated materials and other such issues that are typically associated with the demolition of large commercial structures. As indicated in a previous memo VHB, it is recommended that a predemolition hazardous materials survey be conducted of the existing buildings prior to demolition.

With respect to these Building Demolition issues VHB does not find any of the proposed alternatives to be significantly more or less favorable than the others.

## **V. IMPACTED SOIL / GROUNDWATER**

### **“The Top”**

Based on its upgradient location from documented releases on the site activities conducted in this area under Alternative 1, 2, or 3 are unlikely to be effected by impacted soil or groundwater associated with the release from the elevators or the former 10,000 gallon diesel underground storage tank (UST) which is located in “The Overlook” area. Therefore, in “The Top” area none of the proposed alternatives is more or less favorable than the others with respect to the subsurface hazardous waste issues.

### **“The Overlook”**

Demolition of the existing buildings at this location in each alternative will expose the soils under the Old Boiler Room and in the area of the former 10,000 gallon UST. These are areas that have been identified as source areas with respect to hazardous waste releases as regulated by the Massachusetts Contingency Plan (310 CMR 40.0000). By removing the overlying building structures and foundations contaminated soils may be exposed that will facilitate cleanup of the site by excavation of contaminated soils that would have been previously inaccessible. With respect to these contamination issues none of the Alternatives presents an advantage over the others.

The existing USTs located to the north of the western wing of the hospital will be removed regardless of the alternative chosen and if contamination is found to be present the foundation that will remain in Alternative 3 may restrict the amount of excavation that may be conducted thus making it a less desirable alternative. However, because we do not know whether there is contamination present in this location we do not consider this issue to be overly significant. If contamination was found and the foundation was to remain we believe the issue can be successfully managed, however the remediation costs may be higher.

For “The Overlook” area Alternative 3 presents a slight disadvantage over the others. If this issue were to be a deciding factor in the selection of the alternatives it should be investigated by conducting soil borings in the area of existing USTs to determine if there has been a release.

### **“The Ridge”**

The Ridge and former Nurses Building is located directly downgradient of the release area for the previous petroleum release. Historical groundwater and soil data has indicated that this location has been impacted. Oil has been observed seeping from the bedrock in this area since May 8, 1994. At the present an oil/water separator is in place to collect oil in this location. Further delineation of this area will be required to evaluate the level of impact. Based on the crossgradient location of the proposed Wellness Center contaminated soil/groundwater may not be encountered during construction, however limited data is available in this area of The Ridge.

Based on the similar nature of the construction activities in this area there is no environmental advantage/disadvantage to any of the Alternatives.

### **Summer Street**

Construction activities proposed in Alternative 3 may require further environmental investigations in this area based on its downgradient location from a known area (parts of the Nurses Building) that has been impacted by a release of petroleum compounds. Groundwater data collected at the site shows decreasing petroleum concentrations to the south (downgradient) and may indicate that

impacted groundwater will not be detected at this Summer Street location. However, if it was present, the construction of the proposed residential housing, which could include blasting of bedrock, may disturb contaminated groundwater and be an issue with respect to location of residential housing at this location. VHB does not believe, based on current data, that this is a likely scenario but it cannot be ruled out at this time.

Based on the analysis of the alternatives, Alternative 3 is at a slight disadvantage with respect to the other alternatives from a hazardous materials perspective. Groundwater quality should be assessed in the area of the proposed residential buildings in the Summer Street Area prior to construction.

## **VI. CONCLUSION**

With respect to inside Building Demolition issues none of the Alternatives presents a significant advantage over the others.

For subsurface contamination issues Alternative 3 presents a slight disadvantage with respect to the Alternative 1 and Alternative 2 due to differences in the proposed development within "The Overlook" area and the Summer Street area. The information this opinion is based on is preliminary in nature. If these factors were to be determined to be a critical determinant in the selection process, VHB recommends subsurface investigations be conducted so that the decision could be made based on actual data.