

## EXECUTIVE SUMMARY

PROPERTY NAME: **Former Charles A Cannon, Jr.  
Memorial Hospital**

LOCATION: **805 Tynecastle Highway  
Banner Elk, North Carolina**

This executive summary is provided for convenience only and should not substitute for review of the complete report, including all attachments. MACTEC performed a Phase I Environmental Site Assessment of the property in general accordance with the scope and limitations of ASTM 1527-05. Any exceptions to or deletions from this practice are described in the appropriate sections of this report.

### ON-SITE OBSERVATIONS

The site is located at 805 Tynecastle Highway (NC Highway 184) in Banner Elk, North Carolina. Presently, the site is developed as a hospital facility. The hospital includes patient rooms, administrative offices, an emergency room, operating rooms, medical support areas, maintenance areas, a laundry building, a warehouse, a chapel, a boiler room and a generator room connected to the rear of the main hospital building. Remaining portions of the site are asphalt-paved or landscaped. The site was not identified on the regulatory databases searched for this assessment. Historically, the site has been developed as a hospital facility since at least 1960.

During our site reconnaissance, MACTEC observed several 55-gallon drums and oil-stained soils at the rear of the hospital. We also observed two large diesel ASTs which are used to fuel the boiler and the emergency generator for the hospital. The tanks are located within a secondary containment structure that was filled with water at the time of our site visit. MACTEC observed a potential vent pipe to a UST. A former maintenance supervisor for the hospital indicated that there is an approximate 1,000-gallon diesel UST buried near the generator room. Throughout the interior of the hospital we noted various waste containers (biohazardous and chemotherapy wastes), large amounts of broken glass, stained ceilings and floor tiles, various pharmacy drugs and supplies, office trash, and damaged windows and doors. MACTEC did not observe evidence of other recognized environmental conditions on the property.

### OFF-SITE OBSERVATIONS

The surrounding area is a mixture of residential development, farmland and wooded areas. The western portion of the site is bound by wooded land and Tynecastle Highway. Portions of Lees-McRae College are located to the west of Tynecastle Highway. None of the properties identified on the regulatory databases within the ASTM search radii are considered to be a recognized environmental condition that could potentially impact the subject property at this time.

### RECOMMENDATIONS

Based on our observations, interviews, and review of historical and regulatory information, MACTEC recommends the proper removal and disposal of the storage tanks (ASTs and UST), hospital wastes, and drums. Based on the amount of observed staining in the vicinity of the 55-gallon drums and the proximity of the staining to a sewer manhole, MACTEC recommends the

excavation of the petroleum-impacted soils and collection of soil samples to confirm the effective removal of the stained soils. MACTEC recommends that asbestos abatement activities and a lead-based paint survey be performed at the hospital prior to renovation or demolition activities.

## **1. INTRODUCTION**

Future Forward Economic Alliance c/o Western Piedmont Council of Governments engaged MACTEC Engineering and Consulting, Inc. (MACTEC) to provide environmental consulting services at the subject property. MACTEC has completed a Phase I Environmental Site Assessment of the subject property (Figures 1 and 2).

The purpose of our services was to identify recognized environmental conditions and obvious potential recognized environmental conditions in connection with the property, based on readily available information and site observations.

### **1.1 BACKGROUND**

Information relating to the site was provided by Ms. Susan Berley of the Western Piedmont Council of Governments. It is our understanding that the subject property is involved in a potential real estate transaction.

### **1.2 PROCEDURES**

The Phase I Environmental Site Assessment was performed using procedures as documented by American Society for Testing and Materials (ASTM) specification ASTM E 1527-05. Phase I assessments are performed in general accordance with industry standards or regulatory guidelines except as noted in the appropriate sections. The following services were provided for the assessment:

- A review of reasonably ascertainable history of ownership and uses and land usage records, including aerial photographs, city directories, Sanborn maps, and other sources to identify uses back to its first development or 1940, whichever is earlier. MACTEC also conducted interviews with property owners and other knowledgeable persons, if possible, to evaluate present and past land uses.
- A review of available environmental lists published by state and federal agencies in general accordance with ASTM standards to determine if the site or near properties within a half-mile radius (or other ASTM specified radius) are listed as having a present or past environmental problem, are under investigation, or are regulated by state or federal environmental



regulatory agencies. These lists include NPL, CERCLIS, ERNS, RCRIS (TSD, Non-TSD), landfills, UST, and LUST.

- A site and adjacent property reconnaissance by our professionals specializing in environmental projects for obvious indications of present or past activities which have or could have contaminated the site.
- A qualitative hydrogeologic evaluation of the site and vicinity using published geologic maps and hydrogeologic literature, topographic maps and area observations to characterize the area drainage.
- An on-site limited polychlorinated biphenyl (PCB) survey consisting of a visual reconnaissance for fluid-containing major electrical devices (transformers and capacitor banks), excluding fluorescent light ballasts. The PCB status of these devices was determined by the presence or absence of labeling. The general condition of these devices was noted, especially evidence of leakage. The limited PCB survey did not include sampling or testing of dielectric fluids.
- Preparation of this report presenting our findings and conclusions.

### 1.3 QUALIFICATIONS

ASTM E 1527-05 defines a "recognized environmental condition" as: "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

### 1.4 SIGNIFICANT ASSUMPTIONS

MACTEC made no significant assumptions during the site "walk-over."

### 1.5 LIMITATIONS AND EXCEPTIONS

Our findings and opinions are relative to the dates of our site work and should not be relied on to represent conditions on other dates. These opinions are based on information obtained during the

study and our experience. If additional information becomes available which might change our conclusions, we request the opportunity to review the information, reassess the potential concerns, and modify our opinions, if warranted.

Although this assessment has attempted to identify the potential for environmental impacts to the subject site, potential sources of contamination may have escaped detection due to (1) the limited scope of this assessment, (2) the inaccuracy of public records, (3) the presence of undetected or unreported environmental incidents, (4) inaccessible areas, and/or (5) deliberate concealment of detrimental information. It was not the purpose of this study to determine the actual presence, degree or extent of contamination, if any, at the site. This could require additional exploratory work, including sampling and laboratory analysis.

The site was accessible on foot. No limitations were encountered at the time of the site visit other than a locked door on both the boiler room and generator room located at the rear of the main building.

## **1.6 SPECIAL TERMS AND CONDITIONS**

This assessment was performed substantially as outlined in our proposal Prop04chlt778, dated November 22, 2004. Written authorization was received on December 16, 2004 from Mr. R. Douglas Taylor of the Western Piedmont Council of Governments. Verbal authorization to proceed was given April 12, 2006.

## **1.7 USER RELIANCE**

This report is intended for the sole use of Future Forward Economic Alliance and the Western Piedmont Council of Governments. The contents should not be relied upon by other parties without the expressed, written consent of MACTEC.



## 2. SITE SETTING

Understanding of a site's physical setting is important to the recognition of environmental impacts to the property.

### 2.1 GENERAL DESCRIPTION

The Cannon Hospital property is comprised of approximately 10.37 acres located at 805 Tynecastle Highway in Banner Elk, North Carolina. Presently, the site is developed as a vacant, multi-story hospital facility that was constructed in 1960. Remaining portions of the site are asphalt-paved or landscaped areas. The hospital has reportedly been vacant since 2000. A site location and an aerial photograph are included in Appendix A. Photographs of the site are included in Appendix B.

### 2.2 HYDROGEOLOGY

A consideration of surface and subsurface drainage and geology are of interest since they provide an indication of the direction that contamination, if present on the property or nearby properties, could be transported. It was not the purpose of this study to evaluate the geotechnical conditions of the site or to assess engineering/geological concerns such as foundation conditions, faulting, or subsidence. MACTEC reviewed the following information with regard to the development of the presumed local and regional geology and hydrogeology of the site and surrounding area.

- Geologic Map of North Carolina, dated 1985, compiled by the North Carolina Geological Survey.
- Soil Survey of Avery County, published in 1955 by the USDA Natural Resources Conservation Service.
- USGS 7.5-Minute Topographic Map, Elk Park, North Carolina Quadrangle, dated 1960, photorevised 1978, published by the United States Geological Survey.
- USGS 7.5-Minute Topographic Map, Valle Crucis, North Carolina Quadrangle, dated 1960, photorevised 1978, published by the United States Geological Survey.

### **2.2.1 Geologic Setting**

The site is located within the Grandfather Mountain Window of the Blue Ridge Physiographic Province consisting of rounded hills and long rolling northeast to the southwest trending ridges with incised creek channels. Based on a review of the geologic map, the site is underlain by metamorphosed arkose and siltstones.

The Soil Survey of Avery County indicates that soils at the site are classified as Ramsey stony loam and Tate stony loam. Ramsey and Tate loams have a low water capacity and rapid permeability and are found on ridges in mountain (upland) areas.

### **2.2.2 Surface Drainage**

Surface drainage patterns within the Piedmont typically indicate the direction contaminants would be transported by surface water or groundwater. Based on our interpretation of the topographic maps and on-site observations, surface water on the site would be expected to flow to the southwest towards Elk River.

### **2.2.3 Groundwater**

The direction and movement of groundwater through soil is dependent on soil type and the presence of relict structures and textures of the underlying rock. Fractures, faults, folds and foliation planes affect the migration of groundwater in rock. It is reasonable to assume that the direction of near-surface groundwater flow under static conditions (no pumping interference) approximates the surface topography of the site. Groundwater is expected to flow generally to the southwest towards Elk River.

### 3. REGULATORY INFORMATION

MACTEC conducted a search for regulatory information provided by Environmental Data Resources, Inc. (EDR) as contained in Appendix C. This regulatory record search is based on information published by State and Federal regulatory agencies and is used to evaluate if the site or nearby properties are listed as having a past or present record of actual or potential environmental impact. Please note that regulatory listings include only those sites, which are known to the regulatory agencies at the time of publication to be 1) contaminated, 2) in the process of evaluation for potential contamination, or 3) regulated.

#### 3.1 EPA NATIONAL PRIORITIES LIST (NPL)

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) established the Environmental Protection Agency (EPA) National Priorities List (NPL) of federal "superfund" sites. These are the contaminated sites that have been assigned a high ranking, in terms of potential public health effects, by the EPA. The following information was found on the NPL, dated February 2006.

- The site did not appear on the NPL.
- None of the surrounding facilities within a one-mile radius from the site were identified on the NPL.

#### 3.2 EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS) LIST

The EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list identifies documented and suspected contamination sites throughout the nation that were not ranked high enough to be listed on the NPL. On the CERCLIS list, dated February 2006, the following information was found.

- The site did not appear on the CERCLIS list.
- No surrounding properties were identified on the CERCLIS list within a one-half mile radius from the site.



### **3.3 EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM NO FURTHER REMEDIAL ACTION PLANNED (CERCLIS-NFRAP) LIST**

The EPA Comprehensive Environmental Response, Compensation, and Liability Information System No Further Remedial Action Planned (CERCLIS-NFRAP) list identifies documented and suspected contamination sites throughout the nation, which have been removed from the CERCLIS list based on sites where following an investigation no contamination was found, contamination was removed quickly without the need to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. On the CERCLIS-NFRAP list, dated February 2006, the following information was found.

- The site was not identified on the CERCLIS-NFRAP list.
- None of the surrounding properties located within a one-half mile radius of the site were identified on the CERCLIS-NFRAP list.

### **3.4 EPA RESOURCE CONSERVATION & RECOVERY INFORMATION SYSTEM (RCRA INFO) LIST**

RCRA Info is the EPA database of facilities that generate, transport, treat, store, or dispose of hazardous wastes. Generators and transporters are found on the RCRA list of Notifiers. Treatment, Storage, and Disposal facilities are found on the RCRA TSD list, and TSD facilities requiring corrective actions are found on the CORRACTS list. The following information was found on the RCRA List of Notifiers, dated February 2006.

- The site did not appear on the RCRA Small Quantity Generators (SQG) list.
- None of the adjacent properties were identified on the RCRA Small Quantity Generators (SQG) list.

The following information was found on the non-CORRACTS TSD list, dated February 2006.

- The site did not appear on the non-CORRACTS TSD list.
- No facilities were identified on the non-CORRACTS TSD list within a one-half mile radius of the site.

The following information was found on the CORRACTS TSD list dated March 2006.

- The site did not appear on the CORRACTS TSD list.
- None of the surrounding facilities were identified on the CORRACTS TSD list within a one-mile radius from the site.

### 3.5 EPA EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) LIST

The EPA Emergency Response Notification System (ERNS) list is a list of hazardous material and petroleum spills reported to various State agencies. The following information was found on the ERNS list, dated December 2005.

- The site did not appear on the ERNS list.

### 3.6 STATE LANDFILL LIST

Lists of active and inactive landfills, artificial fills, and disposal sites are maintained by the North Carolina Department of Environment and Natural Resources. The landfill listings include known unpermitted landfills or dumps. The following information was found on the Landfill lists, dated January 2006.

- The site did not appear on the landfill lists.
- None of the surrounding properties are identified on the State Landfill lists within a one-half mile radius from the site.

### 3.7 STATE LEAKING UNDERGROUND STORAGE TANK (LUST) LIST

The State Leaking Underground Storage Tank (LUST) list is a listing of UST systems within the state of North Carolina which have reported releases of UST contents. This list is maintained by the North Carolina Department of Environment and Natural Resources. The following information was found on the LUST list, dated March 2006.

- The site was not identified on the LUST list.
- Three surrounding properties, Scotchman #89 (3045 Tynecastle Highway), Pantry #250 (379 Shawneehaw Avenue), and Scotchman #100 (4530 Tynecastle Highway) were identified on the LUST list located within a one-half mile radius from the site. The documented release incident at the Pantry is reportedly from a supply line leak that has impacted the soils only. Based on distance and topography, the



incident at the Pantry would not be expected to adversely impact the hospital property. The two Scotchman listings are misplotted in the EDR report. These facilities are located at least three miles to the south of the site near the intersection of Tynecastle Highway (NC Highway 184) and NC Highway 105. Based on distance from site, the Scotchman incidents would not be expected to impact the site.

### **3.8 STATE UNDERGROUND STORAGE TANK (UST) LIST**

The State Underground Storage Tank (UST) list is a listing of petroleum storage tank systems that are registered with the North Carolina Department of Environment and Natural Resources. The following information was found on the UST list, dated January 2006.

- The site did not appear on the UST list.
- The orphan summary lists Lees McRae College as operating a UST on the campus property. The portion of Lees McRae College that is adjacent to the site contains soccer fields. The presence of a UST would not be expected to be located near the soccer fields which are downgradient from the hospital property. None of the other adjacent properties were identified on the UST list.

### **3.9 OTHER LISTS**

#### **3.9.1 Hazardous Substance Disposal Sites (HSDS) List**

The HSDS is maintained by the North Carolina Department of Environment and Natural Resources. On the HSDS List dated June, 1995, the following information was found.

- The site did not appear on the HSDS list.
- None of the surrounding properties located within a one-mile radius from the site were identified on the HSDS list.

#### **3.9.2 State Hazardous Waste Sites (SHWS) List**

The SHWS List is maintained by the North Carolina Department of Environment and Natural Resources. The following information was found on the State Hazardous Waste sites list, dated January 2006.



- The site did not appear on the SHWS list.
- None of the surrounding properties located within a one-half mile radius from the site were identified on the SHWS list.

### **3.9.3 Incident Management Database (IMD)**

The State Incident Management Database (IMD) is maintained by the North Carolina Department of Environment and Natural Resources and identifies locations of environmental incidents. On the IMD, dated January 2006, the following information was found.

- The site was not identified on the State Incident Management Database.

### **3.9.4 US EPA Engineering Controls (EC) List**

The Engineering Controls Sites List (EC) is maintained by the US EPA and identifies sites with in-place engineering controls including various forms of caps, building foundations, liners and treatment methods that eliminate or inhibit potential pathways which may allow regulated substances to migrate from a source area or affect human health. The search radius is limited to the target property. On the EC List, dated August 2005, the following information was found.

- The site was not identified on the Engineering Controls Sites list.

### **3.9.5 US EPA Institutional Controls (IC) List**

The Institutional Controls Sites (IC) List is maintained by the EPA and identifies sites with in-place institutional controls whereby administrative measures such as groundwater use restrictions, construction restrictions, property use restrictions, and post-remediation monitoring requirements are intended to prevent exposure to contaminants that remain on the site. Land use deed restrictions are generally considered to be an institutional control. The search radius is one-half mile. On the IC List, dated January 2005, the following information was found.

- The site was not identified on the Institutional Controls Sites list.

- None of the surrounding properties located within a one-half mile radius from the site were identified on the Institutional Controls Sites list.

### **3.9.6 Indian Reservations List**

The Indian Reservations List is a map layer that is maintained by US Department of the Interior and identifies Indian administered lands US that comprise an area equal or greater than 640 acres. The search radius is one mile. On the Indian Reservations List, dated December 2004, the following information was found.

- The site was not identified on the Indian Reservations list.
- None of the surrounding properties located within a one mile radius from the site were identified on the Indian Reservations List.

### **3.9.7 Indian Leaking Underground Storage Tank (Indian LUST) List**

The Indian Leaking Underground Storage Tank List is maintained by the EPA and identifies documented releases from leaking underground storage tanks that are located on Indian administered lands in the states of Minnesota, Mississippi, Florida, and North Carolina. The search radius is one-half mile. On the Indian LUST List, dated January 2006, the following information was found.

- The site was not identified on the Indian LUST list.
- None of the surrounding properties located within a one-half mile radius from the site were identified on the Indian LUST list.

### **3.9.8 Indian Underground Storage Tank (Indian UST) List**

The Indian Underground Storage Tank List is maintained by the EPA and identifies registered underground storage tanks that are located on Indian administered lands of the United States. The search radius is one-quarter mile. On the Indian UST List, dated January 2006, the following information was found.

- The site was not identified on the Indian UST list.

- None of the surrounding properties located within a one-quarter mile radius from the site were identified on the Indian UST list.

### **3.9.9 Federal and State Brownfields Lists**

The Brownfields lists are maintained by both the North Carolina Department of Environment and Natural Resources and the US EPA and provide a listing of addresses of brownfield sites and acts as a component of the Voluntary Cleanup Program that allows a non responsible party to acquire a contaminated property with State Superfund liability protection for existing contamination by agreeing to perform an environmental assessment and/or remediation. The following information was found on the Federal Brownfields list, dated November 2005, and the State Brownfields list, dated September 2005.

- The site is not identified on the Federal or State Brownfields list.
- None of the surrounding properties located within a one-half mile radius of the site were identified on the Federal or State Brownfields list.



#### 4. SITE INFORMATION AND USE

MACTEC performed a site and vicinity reconnaissance, conducted interviews with knowledgeable parties and reviewed selected historical information to evaluate the current and historical uses of the site and surrounding properties and to evaluate past or present activities of potential environmental conditions. The ASTM E 1527-05 standard lists the mandatory physical setting sources and specifies that the historical review should be conducted using as many sources as are practically reviewable from the initial development of the subject property or back to 1940, whichever is earlier. To comply with the ASTM standard, a reasonable attempt was made to obtain historical data from as many physical setting sources and to review historical records as far in the past as practical. The reference materials listed below are the physical setting and historical sources that were publicly available, obtainable within reasonable time and cost restraints, and practically reviewable as defined in the ASTM standard.

- Aerial Photographs, dated 1964 and 1986, reviewed at the Avery County NRCS office in Newland, North Carolina.
- Aerial Photograph, dated 1998 obtained from the Avery County GIS system, online services.
- Sanborn Fire Insurance maps were not available for the site.
- USGS 7.5-Minute Topographic Map, Elk Park, North Carolina Quadrangle, dated 1960, photorevised 1978, published by the United States Geological Survey.
- USGS 7.5-Minute Topographic Map, Valle Crucis, North Carolina Quadrangle, dated 1960, photorevised 1978, published by the United States Geological Survey.

Mr. Matthew Miller, a MACTEC professional experienced in performing Phase I ESA's, conducted site and area visits on April 20, 2006. The site reconnaissance was performed on foot. The area reconnaissance was a driving tour on public access routes.

#### **4.1 CURRENT SITE USE AND ASSESSED CONDITIONS**

The subject property is currently developed as a hospital facility that was reportedly constructed in 1960. The building operated as a hospital from 1960 to about 2000. Since the closing of the hospital, the facility has been vacant. A site location and an aerial photograph are included in Appendix A. Photographs of the site are included in Appendix B.

The following conditions were specifically assessed for their potential to create recognized environmental conditions.

##### **4.1.1 Storage Tanks**

MACTEC observed two 20,000-gallon diesel ASTs which were reportedly used to fuel the boiler for the hospital. The tanks are located within a secondary containment structure that was filled with water at the time of our site visit. MACTEC observed evidence (fill pipe) of a potential UST located near the generator room. Mr. Haskell Ruppard, a former maintenance technician at the hospital, stated that an approximate 1,000 gallon UST that formerly contained diesel fuel is buried at the property. It is not uncommon to encounter buried storage tanks on properties that have been historically developed. MACTEC did not gain access to the boiler room or the small building that reportedly contains the generator.

##### **4.1.2 Hazardous and Petroleum Products Containers/Drums/Storage**

MACTEC observed several partially-filled (oil/petroleum fluid) 55-gallon drums with heavily oil-stained soils at the rear of the hospital, near the boiler room (Photograph 6).

##### **4.1.3 Heating and Cooling**

The building utilized an electrical compressor system for cooling and heat was supplied by an oil-fired boiler located at the rear of the hospital along the eastern side of the facility. The chapel building is heated by an electric heat pump.

##### **4.1.4 Solid Waste**

Throughout the interior of the hospital, we noted various waste containers (biohazardous and chemotherapy wastes), large amounts of broken glass, stained ceilings and floor tiles, various pharmacy drugs and supplies, office trash, and damaged windows and doors.

#### **4.1.5 Sewage Disposal/Septic Tanks**

Sanitary sewer services are provided to the site area by the Town of Banner Elk.

#### **4.1.6 Hydraulic Equipment**

Two elevators were observed in the building. No evidence of staining was noted near the elevators that would indicate a release of hydraulic oil. No other hydraulic equipment was observed on the site.

#### **4.1.7 Contracted Maintenance Services**

No contracted maintenance services are presently performed at the site.

#### **4.1.8 Electrical Transformers**

Electrical transformers are a potential source of environmental concern due to the potential presence of polychlorinated biphenyls (PCB) in dielectric fluids used in some older units. Several pole-mounted transformers were observed at the rear of the hospital. The transformers appeared to be intact and no staining was observed near the transformers.

#### **4.1.9 Water Supply and Wells**

The site area is provided potable water from the Town of Banner Elk. No water-supply wells were noted at the site.

#### **4.1.10 Drains and Sumps**

Floor drains were observed at various locations in the facility. Stormwater intakes were noted outside the facility in the parking areas. The drains reportedly discharge to the municipal sanitary sewer.

#### **4.1.11 Pits, Ponds, Lagoons, and Surface Waters**

No pits, ponds, lagoons or surface waters were observed on the subject property.

#### **4.1.12 Stressed Vegetation**

No evidence of stressed vegetation was observed on the site.



#### **4.1.13 Odors**

No unusual odors were noted during the site visit.

#### **4.1.14 Dry Cleaning**

Dry cleaning operations are frequently sources of recognized environmental conditions due to the chlorinated solvents used in the cleaning process. No dry cleaning operations were observed on the site.

#### **4.1.15 Other Observations**

MACTEC conducted a review of other potential issues of concern, which may warrant further investigation. Issues of concern may impact or affect the manner or timeline in which development of the property can occur. Other potential issues of concern may include, but are not limited to, the presence of suspect Asbestos-Containing Material (ACM) and Lead-Based Paint (LBP) in structures located on the property.

**ACM and LBP** – MACTEC did not conduct sampling for asbestos or lead-based paint at the facility as part of this assessment. We reviewed an asbestos inspection report conducted at the facility in 2001 by Alpha Environmental Sciences, Inc (AES). The AES report documented the presence of asbestos in various building materials including fireproofing, roofing, floor tiles, thermal system insulation, ceiling panels and window caulking. Based on the AES report, ACM exists in the on-site buildings, therefore we recommend asbestos abatement activities be performed at the site. We also recommend a lead-based paint survey be performed at the facility. A copy of the AES report is included in Appendix E of this report.

**Wetlands-** Based on a review of the USGS 7.5-Minute Topographic Map, Elk Park and Valle Crucis, North Carolina Quadrangle National Wetlands Inventory Map, no wetland areas are identified on the site.

## **4.2 PAST SITE USE**

The following historical information is based on our review of available aerial photographs, topographic maps, and on interviews with persons knowledgeable of the past operations at the site. Based on our review of historical information, the site was initially developed in 1960, and was

operated as a general hospital from 1960 to 2000. The property has been vacant since 2000 and prior to 1960, the site was used as farm land or was wooded.

#### **4.3 CURRENT AND PAST SURROUNDING LAND USE**

Nearby property usage could potentially impact the surface and subsurface conditions of a property. Developing a history of past to present uses or occupancies can provide an indication of the likelihood of recognized environmental conditions. There were no past surrounding land uses noted in the historical references reviewed that could be considered recognized environmental conditions in relation to the subject property with the exception of those uses noted in the following sections.

##### **4.3.1 North**

The site is currently bound to the north by wooded land and a municipal water tower. Properties to the north have been undeveloped since at least 1964.

##### **4.3.2 East**

The site has been bound to the east by farm land and wooded areas since at least 1964.

##### **4.3.3 South**

The site is bound to the south by a residence and farm land. Properties to the south have been developed as the residence or farm land since at least 1964.

##### **4.3.4 West**

The site is bound to the west by wooded land and Tynecastle Highway. Further to the west is the campus for Lees-McRae College. Properties to the west have not changed significantly since at least 1964.

## **5. INTERVIEWS/ USER/OWNER-PROVIDED INFORMATION**

### **5.1 TITLE RECORDS**

MACTEC was not provided with title records of the property. Current tax records for the property were reviewed at the Avery County Tax Office. The current property owner is Mr. Olin Wooten.

### **5.2 ENVIRONMENTAL LIENS**

MACTEC's site contact was Mr. Olin Wooten. Mr. Wooten does not have knowledge of environmental liens held against the property.

### **5.3 SPECIALIZED KNOWLEDGE**

MACTEC personnel interviewed Mr. Haskell Ruppard, former maintenance superintendant for the Cannon Hospital from 1960-2000 and Mr. Olin Wooten to obtain information regarding past operations at the site. Mr. Ruppard and Mr. Wooten were unaware of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in or on or from the subject property, (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in or on or from the subject property, (3) any notices from any governmental entity regarding any possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products. Mr. Ruppard stated that during the early 1990s, a small heating oil release occurred in the vicinity of the aboveground heating oil tanks near the boiler room. The petroleum-impacted soils were excavated and disposed at an off-site location. Mr. Wooten indicated that asbestos sampling activities were performed at the site in 2001. An Environmental Questionnaire was submitted to Mr. Wooten, however at the time of this report, Mr. Wooten has not responded with the answers to the questionnaire. Should his response alter the conclusions of this report, an addendum will be issued.

### **5.4 COMMONLY KNOWN INFORMATION**

Mr. Ruppard indicated that there is an approximate 1,000-gallon diesel UST buried near the generator room. Other commonly known information was not provided to MACTEC.

### **5.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES**

Mr. Wooten was not aware of contamination at the site.



## **5.6 OWNER/PROPERTY MANAGER/OCCUPANT INFORMATION**

The current owner of the site is Mr. Wooten. Currently, the building is vacant.

## **5.7 REASON FOR PERFORMING THE PHASE I**

The Phase I ESA performed at the site was requested to fulfill certain due diligence requirements for a potential real estate transaction and to evaluate the property for the presence of potential contamination.

## **5.8 INTERVIEW WITH OWNER**

MACTEC interviewed the current owner of the property Mr. Olin Wooten. Mr. Wooten provided MACTEC with a copy of an asbestos sampling report completed in 2001. A copy of the AES report is included as Appendix E in this report.

## **5.9 INTERVIEW WITH SITE MANAGER**

MACTEC interviewed Mr. Ruppard who had worked at the site as a maintenance superintendant from 1960 to 2000.

## **5.10 INTERVIEW WITH OCCUPANTS**

The site is currently unoccupied.

## **5.11 INTERVIEW WITH LOCAL GOVERNMENT OFFICIALS**

On May 22, 2006, MACTEC contacted Lt. Alan Bradford of the Banner Elk Fire Department regarding possible environmental incidents at the site including chemical spills and fires. Mr. Bradford stated that he was aware of several false alarms at the site prior to 2000, and that the Banner Elk police had reported numerous vandalism incidents at the site since the hospital closed in 2000. Mr. Bradford stated that he was unaware of fires or spills reported at the hospital.

## 6. RESULTS

Based on the findings of our Phase I Environmental Site Assessment at the subject property, we offer the following comments relative to recognized environmental conditions.

### 6.1 ON-SITE

MACTEC observed several 55-gallon drums and oil-stained soils at the rear of the hospital. We also observed two large diesel ASTs which are used to fuel the boiler and the emergency generator for the hospital. The tanks are located within a secondary containment structure that was filled with water at the time of our site visit. MACTEC observed a potential vent pipe to a UST. A former maintenance supervisor for the hospital indicated that there is an approximate 1,000-gallon diesel UST buried near the generator room. Throughout the interior of the hospital we noted various waste containers (biohazardous and chemotherapy wastes), large amounts of broken glass, stained ceilings and floor tiles, various pharmacy drugs and supplies, office trash, and damaged windows and doors, MACTEC did not observe evidence of other recognized environmental conditions on the property.

### 6.2 OFF-SITE

The surrounding area is a mixture of residential development, farmland and wooded areas. The western portion of the site is bound by wooded land and Tynecastle Highway. Portions of Lees-McRae College are located to the west of Tynecastle Highway. None of the properties identified on the regulatory databases within the ASTM search radii are considered to be a recognized environmental condition that could potentially impact the subject property at this time.

## 7. CONCLUSIONS

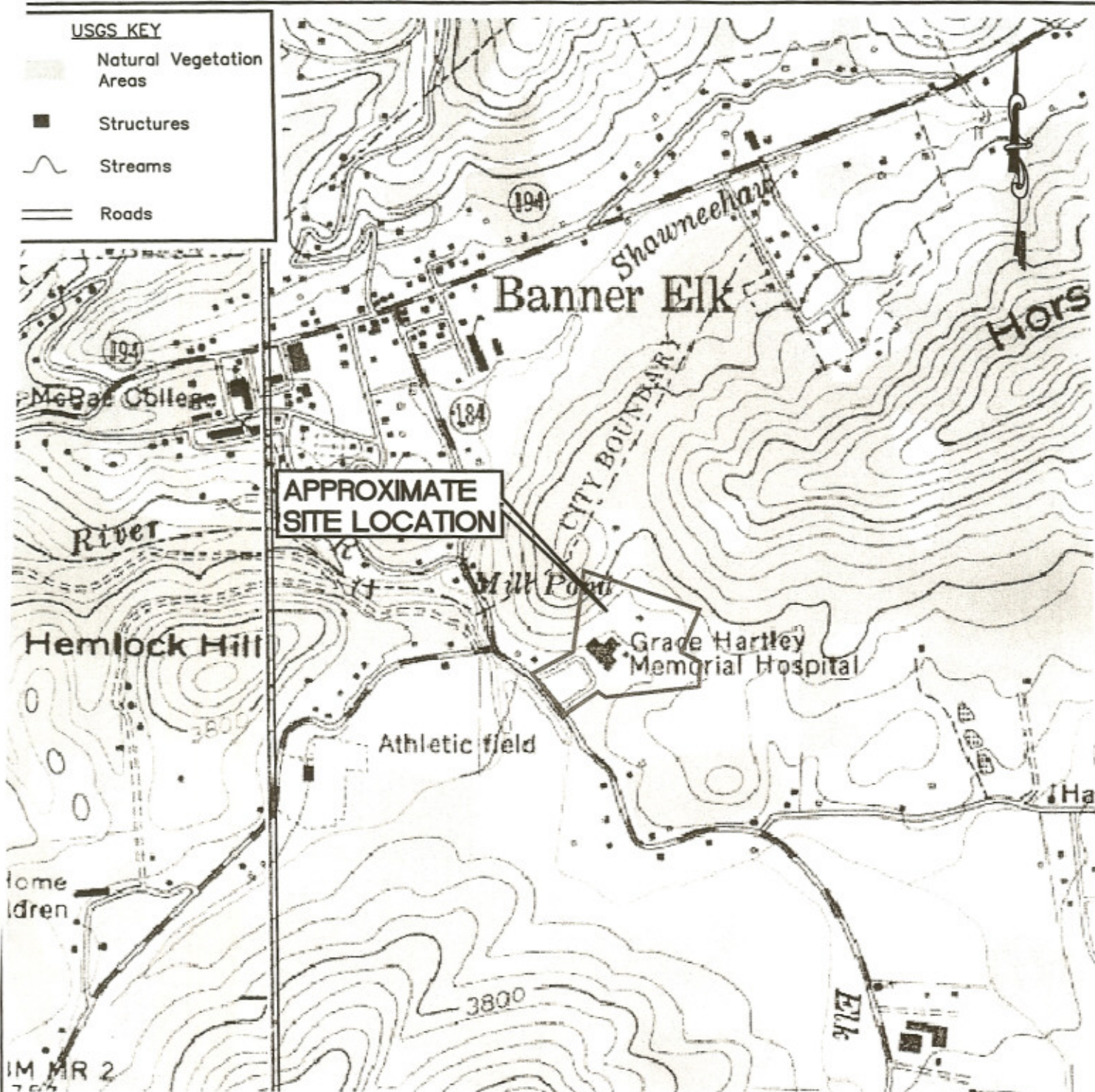
MACTEC performed a Phase I Environmental Site Assessment in general accordance with the scope and limitations of ASTM 1527-05 for the Former Charles A. Cannon Jr. Memorial Hospital located at 805 Tynecastle Highway in Banner Elk, North Carolina. Any exceptions to or deletions from this practice are described in the appropriate sections of this report. The property reconnaissance was performed on April 20, 2006.

Based on our observations, interviews, and review of historical and regulatory information, MACTEC recommends the proper removal and disposal of the storage tanks (ASTs and UST), hospital wastes, and drums. Based on the amount of observed staining in the vicinity of the 55-gallon drums and the proximity of the staining to a sewer manhole, MACTEC recommends the excavation of the petroleum-impacted soils and collection of soil samples to confirm the effective removal of the stained soils. MACTEC recommends that asbestos abatement activities and a lead-based paint survey be performed at the hospital prior to renovation or demolition activities.



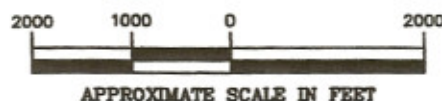
# USGS KEY

-  Natural Vegetation Areas
-  Structures
-  Streams
-  Roads



## EXPLANATION

— APPROXIMATE LOCATION OF PROJECT SITE BOUNDARY



REF.: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAP OF ELK PARK, N.C. AND VALLE CRUCIS, N.C. QUADRANGLES, BOTH DATED 1960; PHOTOREVISED 1978.



**MACTEC**  
ENGINEERING & CONSULTING, INC.  
CHARLOTTE, NORTH CAROLINA

## SITE LOCATION/SURROUNDING PROPERTY

FORMER CANNON MEMORIAL HOSPITAL  
BANNER ELK, NORTH CAROLINA

PREPARED BY *MM*

DATE *6/6/06*

CHECKED *CU*

DATE *6/6/06*

JOB NO. 6228-05-2984

FIGURE