



1. Applicant Identification  
Southwest Arkansas Planning and Development District, Inc.  
101 Harvey Couch Boulevard  
Magnolia, Arkansas 71753
2. Funding Requested
  - a. Grant Type: Single Site Cleanup
  - b. Federal Funds Requested: TBD
3. Location
  - a) City of El Dorado b) Union County c) Arkansas
4. Property Information  
Former Warner Brown Hospital (West Wing).  
470 West Oak Street  
El Dorado, Arkansas 71852
5. Contacts
  - a. Project Director  
Jimmy Parker, Special Projects Officer, Brownfield Project Manager  
870 234-4260  
Jimmy.parker@arkansas.gov  
101 Harvey Couch Boulevard  
Magnolia, Arkansas 71753
  - b. Chief Executive/Highest Ranking Elected Official  
Renee Dycus, Executive Director  
870 234-4260  
Renee.dycus@arkansas.gov  
101 Harvey Couch Boulevard  
Magnolia, Arkansas 71753
6. Population  
El Dorado-17,800 (United States Census Bureau 2017-2021 American Community Survey)



7. Other Factors

<b>Other Factors</b>	<b>Page #</b>
Community population is 10,000 or less.	N/A
The applicant is, or will assist, a federally recognized Indian Tribe or United States Territory.	N/A
The proposed brownfield site(s) is impacted by mine-scarred land.	N/A
Secured firm leveraging commitment ties directly to the project and will facilitate completion of the remediation/reuse; secured resource is identified in the Narrative and substantiated in the attached documentation.	N/A
The proposed site(s) is adjacent to a body of water (i.e., the border of the proposed site(s) is contiguous or partially contiguous to the body of water, or would be contiguous or partially contiguous with a body of water but for a street, road, or other public thoroughfare separating them).	N/A
The proposed site(s) is in a federally designated flood plain.	N/A
The reuse of the proposed cleanup site(s) will facilitate renewable energy from wind, solar, or geothermal energy.	3
The reuse of the proposed cleanup site(s) will incorporate energy efficiency measures.	2
The proposed project will improve local climate adaptation/mitigation capacity and resilience to protect residents and community investments.	2
The target area(s) is located within a community in which a coal-fired power plant has recently closed (2013 or later) or is closing.	N/A

8. Releasing Copies of Applications

Not Applicable.

## Threshold Criteria

### 1. Applicant Eligibility

- a. Southwest Arkansas Planning & Development District, Inc. (SWAPDD) is eligible to apply for the EPA Brownfields Cleanup grant as a nonprofit organization as described in section 501(c)3 of the Internal Revenue Code. Please see attached 501(c)3 non-profit documentation.
- b. SWAPDD is not exempt from Federal taxation under section 501(c)(4) of the Internal Revenue Code.

### 2. Previously Awarded Cleanup Grants

SWAPDD affirms that the Former Warner Brown Hospital (West Wing) site located at 470 West Oak Street, El Dorado, Arkansas has not received funding from a previously awarded EPA Brownfields Cleanup Grant.

### 3. Expenditure of Existing Multipurpose Grant Funds

SWAPDD affirms that they do not have an open EPA Multipurpose Grant.

### 4. Site Ownership

SWAPDD acquired the property on **TBD**, through Special Warranty Deed and will retain ownership while the Brownfields Cleanup Grant funds are disbursed for clean-up.

### 5. Basic Site Information

- a) Site Name: Former Warner Brown Hospital (West Wing)
- b) Site Address: 470 West Oak Street, El Dorado, Arkansas 71854

### 6. Status and History of Contamination at the Site

- a) The Former Warner Brown Hospital (West Wing) is contaminated with Hazardous Substances; asbestos containing materials (ACMs) and lead-based paint (LBP). Cleanup grant funds will be used for cleanup of ACM and LBP of the West Wing.
- b) The Former Warner Brown Hospital is located on an approximate 6.9-acre tract of land located at 470 West Oak Street, El Dorado, Arkansas. The Former Warner Brown Hospital includes an approximate 80,620-square foot West Wing (initially developed in 1921, with additions in the 1940s-1950s) an approximate 138,070-square foot East Wing and Physical Plant (developed in 1972). Prior to being developed as a hospital, the site was residentially developed. The Former Warner Brown Hospital has been vacant since 2015.
- c) Previous Phase I and Phase II Site Assessments have been conducted at the site. ACMs and LBP were identified at both the West Wing and East Wing of the Former Warner Brown Hospital. Abatement of ACM was previously conducted at the East Wing. Cleanup of the East Wing is NOT proposed for this grant.
- d) Materials used in the construction and renovations of the West Wing include ACMs and LBP. Thirty-seven (37) homogenous materials have been identified as ACM and twenty-six (26) LBP surfaces (interior and exterior) were identified on the West Wing.

**7. Brownfields Site Definition**

SWAPDD affirms the site is:

- NOT listed (or proposed for listing) on the National Priorities List (NPL);
- NOT subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued to or entered into by parties under CERCLA;
- and
- NOT subject to the jurisdiction, custody, or control of the U.S. government.

**8. Environmental Assessment Required for Cleanup Grant Applications**

The following site assessment reports have been completed for the site at 470 West Oak Street:

- Phase I Environmental Site Assessment, December 23, 2015
- Asbestos Inspection Report-40 (West) Wing, December 2015/January 2016
- Lead Based Paint Inspection Report, January 6, 2016
- Phase I Environmental Site Assessment, January 19, 2023
- Phase II Environmental Site Assessment, June 12, 2023
- Draft Analysis of Brownfield Cleanup Alternatives (ABCA), October 26, 2023
- Phase I Environmental Site Assessment Update, October 25, 2023

**9. Site Characterization**

- a. **Not applicable.**
- b. **Not applicable.**
- c. For an applicant other than a State or Tribal Environmental Authority that is proposal a site that is not eligible to be enrolled in a voluntary response program State or Tribal equivalent oversight program (e.g., sites contaminated with hazardous building materials):
  - i. See attached letter from Arkansas Department of Environmental Quality indicating that asbestos and/or lead paint abatement activities are not eligible for enrollment in the Elective Site Cleanup Agreement (ESCA) Program (voluntary response program);
  - ii. An Environmental Professional has certified that there is a sufficient level of site characterization from the environmental site assessment performed to date for the remediation work to begin on the site.

**10. Enforcement or Other Actions**

SWAPDD is not aware of any ongoing or anticipated environmental enforcement actions relating to the site for which Brownfields Grant funding is sought.

**11. Sites Requiring a Property-Specific Determination**

SWAPDD affirms that the site does not require property-specific determination to be eligible for EPA Brownfields Grant funding.

**12. Threshold Criteria Related to CERCLA/Petroleum Liability**

**a. Property Ownership Eligibility – Hazardous Substance Sites**

**i. EXEMPTIONS TO CERCLA LIABILITY**

**(1) Indian Tribes**

Not applicable.

**(2) Alaska Native Village Corporations and Alaska Native Regional Corporations**

Not applicable.

**(3) Property Acquired Under Certain Circumstances by Units of State and Local Government**  
Not applicable.

**ii. EXCEPTIONS TO MEETING THE REQUIREMENTS FOR ASSERTING AN AFFIRMATIVE DEFENSE TO CERCLA LIABILITY**

**(1) Publicly Owned Brownfield Sites Acquired Prior to January 11, 2002**

Not applicable.

**iii. LANDOWNER PROTECTIONS FROM CERCLA LIABILITY**

**(1) Bona Fide Prospective Purchaser Liability Protection**

**(a) Information on the Property Acquisition**

- (i) SWAPDD acquired the property from Union County via Special Warranty Deed dated TBD;
- (ii) SWAPDD does NOT have familial relationships with any prior owners or operators of the site.
- (iii) SWAPDD does NOT have contractual relationships with any prior owners or operators of the site.
- (iv) SWAPDD does NOT have corporate relationships with any prior owners or operators of the site.
- (v) SWAPDD does NOT have financial relationships or affiliations with any prior owners or operators of the site.

**(b) Pre-Purchase Inquiry:**

- (i) The following environmental site assessments have been prepared for the site prior to SWAPDD's ownership:
  - Phase I Environmental Site Assessment dated December 23, 2015, prepared by Impact Environmental, Inc. for Warner Brown Building, LLC
  - Asbestos Inspection Report-40 (West) Wing dated December 2015/January 2016, prepared by Snyder Environmental for Warner Brown, LLC
  - Lead Based Paint Inspection Report dated January 6, 2016, prepared by EEG for Snyder Environmental
  - Phase I Environmental Site Assessment, January 19, 2023, prepared by Terracon Consultants for SWAPDD
  - Phase II Environmental Site Assessment, June 12, 2023, prepared by Terracon Consultants for SWAPDD
  - Draft ABCA, October 26, 2023, prepared by Terracon Consultants for SWAPDD
  - Phase I Environmental Site Assessment Update, October 25, 2023, prepared by Terracon Consultants for SWAPDD
- (ii) Merrick Rotenberry (PG)-Project Manager for Terracon Consultants performed the Phase I and Phase II Environmental Site Assessments. Mr. Rotenberry is an Environmental Professional as defined in Section 312.10 of 40 CFR.
- (iii) The most recent Phase I ESA and ESA Update were conducted by Merrick Rotenberry, Professional Geologist (PG) - Project Manager. At the time of the ESA report, Mr. Rotenberry stated that to the best of his professional knowledge and belief, he met the definition of Environmental Professional as defined in

Section 312.10 of 40 CFR. This Phase I ESA/ESA Update was conducted within 180 days of the acquisition of the property.

(c) Timing and/or Contribution Toward Hazardous Substances Disposal

All disposal of hazardous substances at the site occurred before SWAPDD acquired the property. SWAPDD has not caused or contributed to any release of hazardous substances at the site. SWAPDD has not, at any time, arranged for the disposal of hazardous substances at the site or transported hazardous substances to the site.

(d) Post-Acquisition Uses

Since obtaining ownership of the site, the site has not been used or occupied by SWAPDD or other parties. SWAPDD has no relationships with prior site owners.

(e) Continuing Obligations:

(i) There are no known continuing releases at this time. SWAPDD has taken steps to prevent the spread of asbestos and lead-based paint by securing and limiting access to the West Wing including the use of security fencing.

(ii) The West Wing has been secured with locked doors and windows, which remain intact and will be routinely monitored. In addition, the corridor that connects the East Wing with the West Wing will be secured, preventing access from the East Wing to the West Wing. SWAPDD will exercise appropriate care with hazardous substances found at the site by taking reasonable steps to prevent any threatened future release. SWAPDD plans to use clean up funds to abate ACM and abate, encapsulate, and/or stabilize LBP at the West Wing; and

(iii) The West Wing has been secured with locked doors and windows, which remain intact and will be routinely monitored. In addition, the corridor that connects the East Wing with the West Wing will be secured, preventing access from the East Wing to the West Wing. Abatement of ACM and LBP will prevent potential exposure to asbestos and LBP at the site. Stabilization and/or encapsulation of LBP will limit exposure to any remaining LBP that may be left in place. Remaining LBP, if any, will be managed under an Operations and Management (O&M) Program.

SWAPDD confirms its commitment to:

- (i) comply with any land use restrictions and not impede the effectiveness or integrity of any institutional controls;
- (ii) assist and cooperate with those performing the cleanup and provide access to the property;
- (iii) comply with all information requests and administrative subpoenas that have or may be issued in connection with the property; and
- (iv) provide all legally required notices.

### **13. Cleanup Authority and Oversight Structure**

- a. The site is not currently, nor will it be enrolled in ADEQ's ESCA due to the nature of contamination (asbestos and lead paint) as these contaminants are not addressed by the ESCA Program. The Arkansas Department of Health (ADH) oversees the Arkansas Lead-Based Paint-Hazard Regulation, which sets forth certification, licensing, and training

requirements for those persons and firms who perform lead-based paint abatement activities and training in the state of Arkansas. EPA retains oversight authority over ADH's Lead-Based Paint Program. The Arkansas Department of Environmental Quality Air Division – Asbestos Section is the cleanup authority for asbestos. Standard Notice of Intent (NOI) and a certified Project Design will be submitted in accordance with ADEQ Regulation 21 prior to commencement of field activities. If necessary, US EPA will also be consulted in order to ensure that the asbestos cleanup is protective of human health and the environment.

SWAPDD will hire a qualified environmental contractor prior to implementing abatement/remediation activities. SWAPDD will comply with competitive procurement provisions of 2 CFR 200.317 through 200.327 for contracting the qualified environmental consultant. The consultant will provide the technical expertise required to conduct, manage, and oversee the cleanup, ensuring the adherence to applicable state and federal regulations and requirements.

- b. The site is accessible on all sides from public roads. Based on the nature and location of the identified contamination on the subject property, it is not anticipated that neighboring property access is necessary for proposed cleanup/abatement activities.

#### **14. Community Notification**

##### **a. Draft Analysis of Brownfield Cleanup Alternatives**

A Draft ABCA and draft Cleanup Grant application were made available through the SWAPDD website on October 27, 2023, to allow the community to provide input and comment. The draft ABCA is included as an attachment.

##### **b. Community Notification Ad**

A community notification ad was placed in the (LOCATION) on October 25, 2023, and on SWAPDD website on October 27, 2023. The ad announced the following:

- The grant application and draft ABCA will be made available through the website, and the documents will also be available for review at the Union County Courthouse, located at 101 N Washington St, El Dorado, AR.
- Project Staff can be contacted should there be public input or comment;
- The public meeting will be held on November 7, 2023 at 5 p.m. at the Union County Courthouse, located at 101 N Washington St, El Dorado, AR; and
- Public comments were accepted until **TBD**.

##### **c. Public Meeting**

A public meeting to discuss the Cleanup Grant application and Draft ABCA was held on November 7, 2023, at 5:00 PM at the Union County Courthouse located at 101 N Washington Street, El Dorado, Arkansas. Comments were accepted until **TBD**.

#### **15. Contractors and Named Subrecipients**

- **Contractors.**  
Not Applicable.



**SWAPDD, Inc.**  
**FY2024 US EPA Brownfields Cleanup Threshold Criteria**

- **Named Subrecipients.**  
Not Applicable.



## **1. PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION**

### **a. Target Area and Brownfields i. Overview of Brownfield Challenges and Description of**

**Target Area:** The Southwest Arkansas Planning and Development District (SWAPDD) encompasses 12 counties and 65 cities in southwest Arkansas. One of the largest municipalities in the SWAPDD is the city of El Dorado (City). With a population of 17,800 and the county seat of Union County, El Dorado is known as Arkansas's Original Boomtown with a rich history as a nation-wide producer of petroleum, timber products, and a world-class provider of bromine, used in fire retardants and related products.<sup>1</sup> Founded in 1843, the city began as a small farming community, and in the early-1920s, the City's economy reached its peak with the discovery of oil causing the population of the small agricultural town of 4,000 to grow to nearly 30,000 by the mid-1920s.<sup>2</sup> El Dorado became known as the oil capital of Arkansas housing 59 oil contracting companies, 13 oil distributors and refiners, and 22 production companies.<sup>2</sup> Furthermore, the onset of World War II prompted several chemical and munitions facilities to move to the city and the first industrial development organizations were created attracting a large-scale poultry processing plant which became the largest employer in El Dorado.<sup>3</sup> In the 1950s, the discovery of bromine in the oil field brines created even more job opportunities in Union County.<sup>4</sup> However, these former thriving businesses could not withstand the economic hardships that followed. The end of World War II meant the closing of several chemical and munitions plants, and by the 1960s, the oil industry was in decline. Approximately 1,200 jobs were subsequently eliminated, which devastated El Dorado's economy and forced residents to search for job opportunities elsewhere.<sup>5</sup> Economic hardships are still present today, evident in the trending decline in population, which has decreased every decade since the 1960s.<sup>2</sup> And those that have remained in the area have had to endure a steady rise in crime and poverty.

The **geographic boundary** for this application is the **El Dorado city limits, with a target-area focus on the Justice 40 Initiative Disadvantaged Census Tract (CT) 9508**. This target area is a focus for City leadership because of its sensitive populations and underutilization but central location and proximity to schools, including Barton Junior High School and South Arkansas Community College.

The need for affordable housing is a significant welfare concern for this area. The need is evident by the high vacant housing rate and high homeowner vacancy rate. In addition to affordable housing concerns, the site area suffers from high crime rate and has a high percentage of sensitive populations including minorities, the impoverished, women, youth, and elderly residents. Residents in the site area also suffer significant economic disparities with a significant number of residents living with low income and living below the poverty level. Cleanup of asbestos and LBP hazards will remove a significant community health concern. Renovation into apartment/dormitories and public support space will help alleviate the social burden on community residents.

ii. **Description of the Proposed Brownfield Site:** The Former Warner Brown Hospital is situated on an approximate 6.9-acre tract of land located at 470 West Oak Street, El Dorado, Arkansas, within CT 9508. The Former Warner Brown Hospital includes an approximate 80,620-square foot West Wing (initially developed in 1921, with additions in the 1940s-1950s), an approximate 138,070-square foot East Wing, and Physical Plant (developed in 1972). The Former Warner

<sup>1</sup> 2013-2017 American Community Survey – US Census

<sup>2</sup> El Dorado (Union County)-Encyclopedia of Arkansas, Central Arkansas Library System (CALs)

<sup>3</sup> The History of El Dorado-goeldorado.com/history

<sup>4</sup> Bromine-Encyclopedia of Arkansas, CALs

<sup>5</sup> Statements of Public Hearings of the Commission on Population Growth and the American Future -Vol. VII of Commission Publications, 1972.

Brown Hospital sat vacant since 2015. The Former Warner Brown Hospital West Wing is contaminated with Hazardous Substances; asbestos containing materials (ACMs) and lead-based paint (LBP). The East Wing has already undergone asbestos abatement and is being converted into a 911 call center and Crises Stabilization Unit. Cleanup grant funds will be used for cleanup of ACM and LBP in the West Wing. Previous Phase I and Phase II Site Assessments have been conducted at the site. ACMs and LBP were identified at both the West Wing and East Wing of the Former Warner Brown Hospital. Abatement of ACM was previously conducted at the East Wing. Materials used in the construction and renovations of the West Wing include ACMs and LBP. Thirty-seven (37) homogenous materials have been identified as ACM and twenty-six (26) LBP surfaces (interior and exterior) were identified at the West Wing. Abatement and/or stabilization of ACMs and LBP will need to be completed prior to renovations being able to take place.

**b. Revitalization of the Target Area** i. Reuse Strategy and Alignment with Revitalization Plans SWAPDD's 2019-2024 Comprehensive Economic Development Strategy (CEDS) has identified population decline and lack of available housing as the two biggest threats in their community. The CEDS discusses the need for existing housing issues to be addressed. Removing blight and restoring older buildings are priorities in CEDS; however, before the restoration of older buildings can take place, contamination from asbestos and lead paint on existing building materials must be addressed.

The West Wing has already had the needed environmental assessment for asbestos and lead. Now the next step to remediate the hazardous building materials needs to be taken. However, the remediation cost is going to be significant and existing funding is not currently available to pay for the remediation. City would like to see the West Wing renovated and reused as dormitories and apartments for use by students of South Arkansas Community College, as well as use as Crises Stabilization Unit, and mass vaccination space for the public. Office use is also being considered for portions of the West Wing in the future. Cleanup and renovation of the West Wing will reduce blight in the area, help create education opportunity, add jobs, and lead to more private investment in the area. The Former Warner Brown Hospital is one such property that has great potential for beneficial reuse.

ii. Outcomes and Benefits of Reuse Strategy: As it exists today, the West Wing is vacant and continues to deteriorate from lack of use and lack of routine maintenance activities. If the West Wing does not receive cleanup funds it will continue to decay. With cleanup funding, ACM and LBP can be properly addressed and pave the way for renovation and beneficial reuse of the site for desperately needed student housing and social service support space. Renovation of the West Wing will decrease crime and blight in the area (non-economic benefit), contribute to more higher education opportunity (non-economic benefit), add jobs (economic benefit), and lead to more private development of the area (economic benefit). Potential for release of ACM and LBP from climactic change (significant weather events) will be reduced by this cleanup thus providing a layer of protection to local residents and encourage future investment in the target area. Renovation of the West Wing will not displace any business or residents and will incorporate the use of energy efficient mechanical and lighting systems that reduce overall energy use. Use of solar and geothermal systems is also being considered as part of the overall redevelopment plan.

c. **Strategy for Leveraging Resources** i. Resources Needed for Site Characterization: SWAPDD will not need additional funding for site assessment and/or characterization of the West Wing. A Phase I Environmental Site Assessment report (dated January 19, 2023), Phase II Environmental Site Assessment report (dated June 12, 2023), and Phase I Environmental Site Assessment Update (report dated October 25, 2023) have been conducted for Former Warner

Brown Hospital Property. An Asbestos Inspection Report (completed December 2015/January 2016) and a Lead Based Paint Inspection Report (dated January 6, 2016) were also prepared for the site. Based on the results of these prior assessments, the Former Warner Brown Hospital West Wing is contaminated with Hazardous Substances; asbestos containing materials (ACMs) and lead-based paint (LBP). Cleanup grant funds will be used for cleanup of ACM and LBP in the West Wing.

- ii. Resources Needed for Site Remediation: SWAPDD is applying for **\$TBD** in Cleanup Grant funds to provide the necessary funding to remediate ACM and LBP at the Former Warner Brown Hospital-West Wing. This will be adequate funding allow for the necessary remediation of the West Wing to take place.
- iii. Resources Needed for Site Reuse: Funding sources for the initial planning and coordination of the redevelopment planning will stem from SWAPDD and the City. Additional unsecured funds available to the City for reuse of the site include, but are not limited to, Community Development Block Grant (CDBG), USDA Rural Development (Community Facilities Program), Economic Development Administration (EDA), issuance of Act 9 Bonds, and Southern Arkansas Community College private. Overall, the City and SWAPDD will continue to apply for state and federal grant opportunities as they become available for redevelopment purposes.
- iv. Use of Existing Infrastructure: The cleanup and redevelopment plan for renovation of the West Wing will use existing infrastructure (roads, power, water, sewer) as they are all sufficient for construction and reuse.

## **2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT**

### **a. Community Need i. The Community's Need for Funding:**

The City of El Dorado has a small population (17,800) and a high rate of poverty (14%) compared to both the State of Arkansas (11%) and nationally (9%). With a median household income of \$41,831, the City of El Dorado ranks well below both the State of Arkansas (\$52,123) and national (\$69,021) averages. The percentage of El Dorado resident's dependent on food stamps/SNAP (15%) is also well above the Union County, State of Arkansas, and national average of 11% (2017-2021 ACS Demographics).

High poverty rates are leading to a lower tax base, resulting in the City's lack of available funding for environmental cleanup of the West Wing. Although the City and SWAPDD do not have discretionary funding to pursue cleanup activities on their own, both routinely apply for federal and state funding for projects to supplement existing City programs.

Areas with high poverty rates experience desperation, fear, and hopelessness, resulting in higher criminal activity. The 2020 (most recent) crime index rate for El Dorado was 675, which was 2.6 times the national average and higher than almost 99% of all US Cities. Since 2014, crime rates in El Dorado have been at least double the national average. El Dorado's violent crime rate in 2020 was 796 compared to the 228 national average and property crime rate was 568 compared to the 170 national average (<http://www.city-data.com/crime/crime-El-Dorado-Arkansas.html>). The high crime rates in the area create a strain on the police department, and due to the low tax base, there is limited opportunity to hire additional staff to help mitigate the high crime rates. Crime will be reduced when venues for criminal activity are removed, allowing for redevelopment and prosperous growth of the area. Renovation of the West Wing into student housing and apartments in combination with a nearby law enforcement presence (East Wing 911 Call Center) will result in an increased amount of quality housing, an overall reduction in crime, and lead to stability of the neighborhood, ultimately leading to more prosperity.

ii. Threats to Sensitive Populations (1) Health or Welfare of Sensitive Populations: Both El Dorado and CT 9508, have a high percentage of sensitive populations including the impoverished, women, minorities, youth, and the elderly. Elderly citizens in CT 9508 make up approximately 26% of the population (20% US). The City of El Dorado's African American population is nearly 48% with the CT 9508 African American population at 30%. Both exceed the Arkansas average of 15% and national average of 13%. El Dorado's population under the age of 18 is nearly 26% (US 23%). The population of female householders with no spouse present is about 55% in CT 9508 and about 33% in El Dorado. Both exceed the national average of about 25%. Cleanup of this site will support public health, providing space for mass vaccinations, especially beneficial for the area's elderly and children who are at higher risk. Having law enforcement presence in the 911 Call Center in the adjacent East Wing will provide a significant level of safety for sensitive populations, a critical step needed to re-establish this community.

As part of their Master Plan, El Dorado is focused on developing and enhancing pedestrian and bicycle connectivity signifying that the health and welfare of their residents are top priorities. It is crucial to create an environment that encourages healthy choices, and thus it is vital for residents of all ages to utilize sidewalks in the target area instead of driving their vehicles. However, the blight and crime in the target area are suppressing local residents' willingness to walk or cycle as a means of transportation. Renovating the Former Warner Brown West will remove blight and suppress criminal activity, encouraging the use of easily accessible sidewalks, and promote healthy lifestyle changes.

(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions: Sensitive populations are the most at risk when it comes to disease and health conditions that are created by brownfield sites, such as the Former Warner Brown Hospital. Lead paint and asbestos exposure, associated with older structures (commercial and residential), pose an increased risk to sensitive populations including the target area's minorities, children, elderly, and those living in poverty. Exposure to environmental contaminants is a significant health hazard for target area residents. Because of its proximity to Hazardous Waste facilities, CT 9508 ranks in the 79th percentile for the state. CT 9508 ranks in the 88th percentile in the state for levels of particulate matter and in the 99th percentile for toxic releases to air. These exposure factors have contributed to an Air Toxics Cancer Risk in the 99th percentile in the state and an Air Toxics Respiratory Hazard Index in the 92nd percentile in the state.

If allowed to continue to decay, the West Wing of the Former Warner Brown Hospital will present a significant ongoing risk of airborne disease for local residents due to presence of ACM and LBP. When compared to national statistics, cancer risk for CT 9508 is in the 76th percentile and Asthma rates are in the 46<sup>th</sup> percentile. CT 9508 ranks in the 83rd percentile in the state for exposure risk to lead-based paint and in the state 97th percentile for proximity to Superfund sites. Risk of heart disease is in the 77<sup>th</sup> percentile in CT 9508. These factors contribute to a low life expectancy with CT9508 ranking in the 79th percentile nationally. Cleanup of the ACM and LBP from the West Wing will remove a significant source of contamination for the site area thus reducing overall health risk to the areas sensitive populations.

Student housing redevelopment at the Former Warner Brown Hospital will be within 4 blocks of South Arkansas Community College campus and the SouthArk Library. This will lead residents to spend more time outdoors walking, socializing, and exploring, helping alleviated physical and mental health issues associated with a sedentary lifestyle.

(3) Environmental Justice (a) Identification of Environmental Justice Issues: Sensitive populations in the target area are not experiencing economic opportunity due to the high number of business

closings, vacant buildings, crime, and declining tax base. The target area is a prime example of an underserved community according to the Biden Administration Justice 40 Initiatives with high poverty rates (14%), high crime rates (2.6 times the national average), and racial segregation (30% African American). According to EJ Screen for CT 9508, 31% of the population is considered low income, and 16% have less than high school education. Many EJ health screening statistics are also bleak for the residents. Levels of particulate matter in CT 9508 ranks in the 88<sup>th</sup> percentile both statewide and nationally. Risk of Air Toxic related cancer is extremely high with CT 9508 ranking in the 99<sup>th</sup> percentile in the state and the 94<sup>th</sup> percentile nationally.

(b) Advancing Environmental Justice: The renovation of the West Wing will benefit the target area by decreasing the amount of vacant building space and replacing it with affordable student housing units. In turn, leading to an increased opportunity for residents to enroll in higher learning. CT 9508 residents rank in the 92<sup>nd</sup> percentile on both the state a national level for Air Toxics Respiratory Hazard Index. Cleanup of the ACM and LBP from the West Wing will also remove a significant source of contamination for the site area thus reducing overall health risk to the area’s sensitive populations.

**b. Community Engagement i. Project Involvement & ii. Project Roles**

The following have been identified by SWAPDD as project partners who will assist in the process of future redevelopment of the brownfield sites.

<b>Name of Organization</b>	<b>Point of Contact (name, email, &amp; phone)</b>	<b>Specific involvement in the project or assistance provided</b>
South Arkansas Community College	Interim President-Stephanie Tully-Dartez, Ph.D. <a href="mailto:stully-dartez@southark.edu">stully-dartez@southark.edu</a>	Renovate West Wing for use as college dormitories/apartments
El Dorado Chamber of Commerce	Kaitlyn Rigdon <a href="mailto:kaitlyn@goeldorado.com">kaitlyn@goeldorado.com</a> , 870-863-6113	Assist in engaging legislative bodies regarding future reuse of properties, informing local businesses on project status
Civitan Club of El Dorado	Mike Dumas <a href="mailto:thedumases@att.net">thedumases@att.net</a>	Assist in outreach by informing local businesses on brownfield project status.

iii. Incorporating Community Input :

SWAPDD informed the public of their intent to pursue an EPA Brownfield Cleanup Grant for the West Wing through local publications and on their website on October 27, 2023. SWAPDD has already been working with their community for several years on their Brownfields Community Wide Assessment program. SWAPDD plans to conduct several community meetings throughout the grant lifecycle to educate target area residents, project partners, and stakeholders on the brownfield cleanup program, especially those underserved directly impacted by the project. Meetings will be held to explain the cleanup project and give progress updates throughout the process. Input from target area residents will be gathered and recorded in meeting minutes then evaluated during SWAPDD/project partner meetings. Responses to community input will be posted to the SWAPDD’s brownfield program webpage and/or will be responded to individually within two weeks of receipt.

SWAPDD will prepare a Community Involvement Plan (CIP) that will describe project background, planned engagement activities, schedule, and key players that will be involved in the brownfield project. The CIP will be available for public review at SWAPDD’s office and on their brownfield’s program website. Public and partner feedback will be encouraged and discussed

internally. Responses will be posted to the SWAPDD brownfield program website and/or discussed at the next engagement activity.

SWAPDD understands the importance of utilizing several forms of media to communicate brownfield program information to ensure a wide reach throughout the district. The newly revised SWAPDD website and Facebook page have reached a growing audience due to the increase in usage, creating a solid platform for sharing brownfield program information. Furthermore, with the Murphy Arts District (MAD) hosting weekly events, there is an opportunity to reach a larger segment of the population through an increased social media presence and announcements during scheduled events. Additionally, SWAPDD will hand out fliers explaining the project, which will be distributed at community events and placed at city offices. Upcoming City meetings, meeting minutes, materials from past brownfield meetings, and project updates will be posted on SWAPDD's website and Facebook page. Press releases to the local media will keep the community and the district updated on brownfield project milestones.

### **TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS**

**a. Proposed Cleanup Plan:** A draft Analysis of Brownfield Cleanup Alternatives (ABCA) was prepared for the Former Warner Brown Hospital-West Wing due to its impact from ACM and LBP. Based upon effectiveness and cost considerations, it was determined that pre-renovation removal/abatement of ACM is the best recommended procedure to address the asbestos concerns at the West Wing. **As part of the cleanup process, barriers and signage will be put in place to ensure the safety of residents at all work sites.** Conventional removal/abatement of ACMs will be performed using standard industry practices within vacant housing units. Abatement areas will be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions, and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Some abatement procedures may require wet removals to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates, and other residual materials will be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system. ACM will be removed under an ADEQ-approved permit and containerized for off-site landfill disposal as a special or regulated waste. The most common removal method is a "bag out" approach that uses labeling bags designed to contain ACM in manageable quantities. Leak-tight containers will be required if wet removals are performed. Landfill disposal authorizations will be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM removal will be performed by an Arkansas-licensed abatement contractor. This work requires a 10-business day notification to the Arkansas Department of Environmental Quality (ADEQ) Asbestos Section and appropriate coordination with ADEQ representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM. Final clearance would be granted following a visual examination of the work area, followed by receipt of acceptable air quality testing results for regulated ACM. Federal statute 42 US Code 4852D – Disclosure of Information Concerning Lead upon Transfer of Residential Property states that LBP can remain in a habitable structure if the occupants are made aware. Westminster informs residents of the potential for LBP in the structure before an individual takes up residence by conforming to the statute's rule: "lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention."

**b. Description of Tasks/Activities and Outputs**

<b>Task 1: Outreach</b>	
i.	<i>Project Implementation:</i> SWAPDD will develop a Community Involvement Plan (CIP), outreach materials, brownfield project website, and social media posts with the assistance of the environmental contractor (EC). SWAPDD staff will lead the community meetings to keep the public informed on project plans and updates. Supplies are budgeted for the printing of outreach materials (brochures/handouts), office supplies, and software to manage the grant.
ii.	<i>Anticipated Project Schedule:</i> CIP created within 3 months of award. Community Meetings held 1 <sup>st</sup> quarter of year of the grant. Website and Outreach Materials created in the 1 <sup>st</sup> quarter and posted monthly throughout the grant project.
iii.	<i>Task/Activity Lead:</i> SWAPDD – Jimmy Parker, Brownfield Project Manager
iv.	<i>Outputs:</i> CIP, Brownfield Website, 4 Community Meetings, Brochures/Handouts, Social Media Posts, Summary of Community Meetings in EPA-required Quarterly Reports.
<b>Task 2: Programmatic Support</b>	
i.	<i>Project Implementation:</i> SWAPDD will procure an EC. The Brownfields Project Manager will oversee grant implementation and administration to ensure compliance with the EPA Cooperative Agreement Work Plan, schedule and terms and conditions. The consultant will assist SWAPDD in completing ACRES Database Reporting, Yearly Financial Reporting, Quarterly Reporting, MBE/WBE Forms, and all additional Programmatic Support for the four-year term of the grant. SWAPDD staff travel budget allows for two staff to attend three national/regional/grantee brownfield training conferences/workshops.
ii.	<i>Anticipated Project Schedule:</i> ACRES Reporting begins in the 1 <sup>st</sup> quarter & Quarterly Reporting begins in the 2 <sup>nd</sup> quarter and continues throughout the grant project. Yearly Reporting and Forms are created in 5 <sup>th</sup> , 9 <sup>th</sup> , and 13 <sup>th</sup> quarters, and during final close out.
iii.	<i>Task/Activity Lead:</i> SWAPDD – Jimmy Parker, Brownfield Project Manager
iv.	<i>Outputs:</i> ACRES Database Reporting, 4 Yearly Financial Reports, 16 Quarterly Reports, 4 MBE/WBE Forms, Programmatic Support for the four-year grant period. Two staff to attend three conferences.
<b>Task 3: Cleanup/Reuse Planning</b>	
i.	<i>Project Implementation:</i> SWAPDD’s Brownfields Project Manager will oversee the EC as they finalize the ABCAs and Abatement Designs, prepare QAPPs, Health and Safety Plans (HASP)
ii.	<i>Anticipated Project Schedule:</i> The above documents will be created within three months of award.
iii.	<i>Task/Activity Lead:</i> The EC will handle the technical aspects of the project with oversight from SWAPDD – Jimmy Parker, Brownfield Project Manager
iv.	<i>Outputs:</i> 1 ABCA, 1 Abatement Designs, 1 Site Specific-QAPPs & HASPs
<b>Task 4: Cleanup</b>	
i.	<i>Project Implementation:</i> SWAPDD’s Brownfield Project Manager will oversee the EC as they manage the proposed site cleanup activities including contractor mobilization, abatement and/or encapsulation of ACM and LBP, Asbestos Air Monitoring, clearance sample analysis, contractor oversight, and cleanup reporting.
ii.	<i>Anticipated Project Schedule:</i> Abatement activities will begin within nine to twelve months of award and will be completed with nine to twelve months after initial abatement activities

iii.	<i>Task/Activity Lead:</i> The EC will handle the technical aspects of the project with oversight from SWAPDD – Jimmy Parker, Brownfield Project Manager
iv.	<i>Outputs:</i> 1 site ready for reuse, 15 remediation jobs created (annualized), 1 cleanup reports

**c. Cost Estimates:** Below are the anticipated cost estimates for this project *based on past brownfield projects as determined by local market standards with contractual hourly rates based on the skills needed for the specific tasks.* The budget for this project includes travel, supplies and contractual costs only.

**Task 1 Outreach:** Contractual: Community Involvement Plan \$4,000 (32hrs x \$125), Brownfield Website, Outreach Brochure/Handouts, Social Media Posts \$3,000 (25hrs x \$120), 4 Community Education Meetings \$6,000 (40hrs x \$150) (\$1,500/meeting). Supplies: Outreach Supplies (software, printouts, etc.) \$750. **Task 2 Programmatic Support:** Contractual: ACRES Database Reporting, Yearly Financial Reporting, Quarterly Reporting, MBE/WBE Forms, Programmatic Support for the three-year grant period \$24,000 (160hrs x \$150). Travel: Two staff to attend three conferences \$10,000 (flights at \$550, 3 nights in hotel at \$250, incidentals and per diem at \$100 x days 2 attendees x 3 conferences). **Task 3 Planning:** Contractual: # ABCA \_\_\_\_\_ for a total of \$\_\_\_\_\_. **Task 4 Cleanup:** Contractual: \_\_\_\_\_

Category	Tasks				Totals
	<i>Outreach</i>	<i>Programmatic Support</i>	<i>Planning</i>	<i>Cleanup</i>	
Personnel					
Fringe Benefits					
Travel					
Equipment					
Supplies					
Contractual					
<b>Total Budget</b>					

**d. Plan to Measure and Evaluate Environmental Progress and Results:** To ensure this EPA Brownfield Grant is on schedule, the SWAPDD Brownfields Team, which will include the contractor, will meet quarterly to track all **outputs identified in 3.b** using an Excel spreadsheet. SWAPDD will report progress to the EPA via quarterly reports, and project expenditures and activities will be compared to the project schedule to ensure the project will be completed within the four-year time frame. Site information will be entered and tracked in the ACRES database. Outputs to be tracked include QAPP, ABCA, and cleanup plan development, contractor procurement, quarterly, annual, and closeout reports, and the number of community meetings. The outcomes to be tracked include community participation, acres ready for reuse, redevelopment dollars leveraged, and jobs created. In the event the project is not progressing efficiently, countermeasures are in place to address the problem which include making monthly calls to their EPA Project Officer and, if needed, revising the existing Work Plan to get back on schedule.

**4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE**

**a. Programmatic Capability** i. Organizational Structure & ii. Description of Key Staff: Southwest Arkansas Planning & Development District (SWAPDD) serves 12 contiguous counties and 64 municipalities located in the southwest corner of the state. The District is positioned at the juxtaposition of Louisiana to the south and Texas to the southwest and is often described as the “ArkLaTex” region. The District serves a population of more than 241,000 residents and includes



five municipalities with a population of 10,000 or more. SWAPDD staff is very familiar with successfully managing federal- and state-funded grant projects for their jurisdiction. The Team, described below, and their supporting staff are more than adequate and capable to successfully manage this Brownfield Cleanup Grant.

SWAPDD's Administrator and **Brownfields Program Director, Ms. Renee Dycus**, will be responsible for the timely and successful expenditure of funds and completion of administrative and financial requirements of the project. **Mr. Jimmy Parker serves as the Brownfield Project Manager** for the SWAPDD's Brownfield Program, and Mr. Blake Harrell is the Quality Assurance Manager. They will be assisted by **Ms. Christina Tate, SWAPDD accountant**.

Ms. Dycus has over 35 years of overall management experience in all aspects of district operations including management of District staff, programs, and operations. Mr. Jimmy Parker has over 15 years of district management experience and is responsible for grant writing, grant administration, community planning, special projects, and community outreach. With over 20 years of experience, Mr. Harrell is the Director of Community and Economic Development and is SWAPDD QA Manager for the grant programs. He is responsible for staff oversight as well as economic development planning, project development, grant preparation, and grant administration. Ms. Tate graduated from Southern Arkansas University in December 2008 with a B.B.A of Accounting. She has worked in the accounting field for 13 years with 9 years small business and 4 years non-profit. Her duties have included all aspects of payroll, federal and state reporting, tax reporting, accounts payable, accounts receivable, account reconciliation, quarterly budget reports, financial reporting, and grant compliance.

These key staff members successfully managed the FY13 & FY20 Brownfield Assessment Grant. A qualified environmental contractor will assist with the technical and reporting portions of the project.

iii. Acquiring Additional Resources: Utilizing local contracting requirements and procurement process, SWAPDD will procure a qualified environmental contractor to assist with technical and reporting portions of the Brownfield Cleanup Grant, in addition to any other contractors needed to complete the project. SWAPDD will ensure compliance with the EPA's "Professional Service" procurement process. SWAPDD will promote strong practices, local/hiring, and will link members of the community to potential employment opportunities for all brownfield-related redevelopment via community outreach practices and project updates to project partners.

**b. Past Performance and Accomplishments** i. Currently Has or Previously Received an EPA Brownfields Grant: (1) Accomplishments: SWAPDD was awarded and successfully managed the FY2013 \$400,000 EPA Brownfields Assessment Grant and is currently executing a FY2020 \$300,000 EPA Brownfields Assessment Grant managed under the same project management team identified above. SWAPDD was successful in meeting all reporting requirements and completing technical reports. Under the FY2013 assessment grant, SWAPDD completed 20 Phase I and 20 Phase II ESAs throughout the District, which were accurately reported in ACRES. Assessed under the FY2013 Brownfield Assessment Grant, the former Howard County Hospital received two grants under the Arkansas Department of Environmental Quality Abatement Grant to aid in the cleanup and abatement of the former hospital.

(2) Compliance with Grant Requirements: SWAPDD maintained compliance with the Work Plan, scheduling and terms, and conditions issued under the grant agreement FY2013 throughout the grant period. The grant was extended for an additional year to utilize remaining funds for site assessment and planning. All grant award administration, including yearly and quarterly reporting,



**SWAPDD, Inc.**  
**FY2024 US EPA Brownfields Cleanup Grant**

deliverables, and ACRES reporting were maintained and completed in a timely manner. The full award of funds issued under the grant were expended and closed in 2018.

# **DRAFT** Analysis of Brownfield Cleanup Alternatives

**Asbestos and Lead-Based Paint Cleanup  
Former Warner Brown Hospital  
470 West Oak  
El Dorado, Union County, Arkansas**

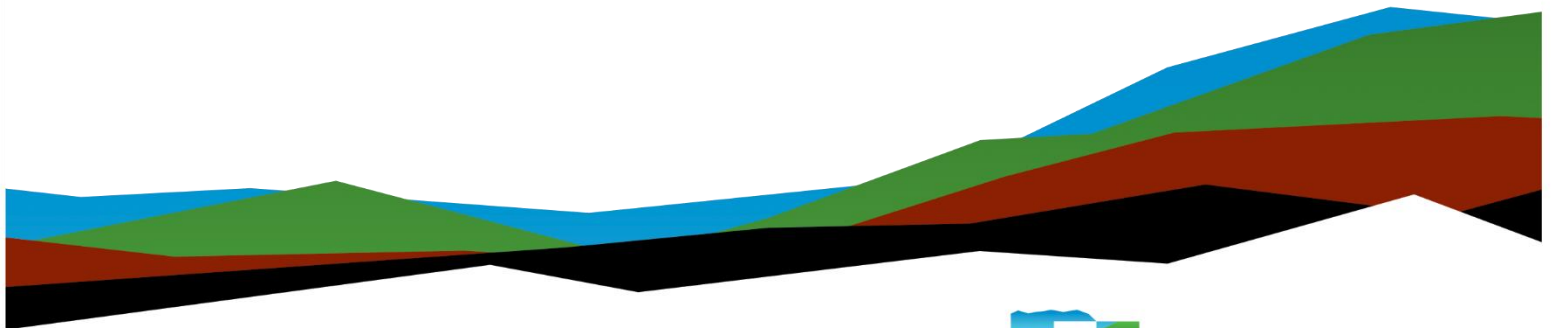
**October 26, 2023 | Terracon Project Number: 35147002  
EPA Brownfields Cooperative Agreement BF 01F86101-0**

**Prepared for:**

Southwest Arkansas Planning and Development District  
(SWAPDD)  
Magnolia, Arkansas

**Prepared By:**

Terracon Consultants  
Bryant, Arkansas



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- Materials

# **DRAFT** Analysis of Brownfield Cleanup Alternatives

**Former Warner Brown Hospital – West Wing  
470 West Oak  
El Dorado, Union County, Arkansas**

**EPA Cooperative Agreement No. BF 01F86101-0  
Date: October 26, 2023**

**Prepared by:  
Terracon Consultant's**

**PROJECT MANAGER** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Merrick Rotenberry / Terracon, Inc.**

**QA REVIEWER** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quin Baber / Terracon, Inc.**

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## Appendices

Appendix A - Exhibits

## 1.0 INTRODUCTION AND BACKGROUND

This Analysis of Brownfield Cleanup Alternatives (ABCA) evaluates cleanup alternatives and establishes the costs for cleanup activities to address hazardous substances as asbestos-containing material (ACM) and lead-containing paint (LCP) wastes at the Former Warner Brown Hospital – West Wing (Site) located at 470 West Oak in El Dorado, Union County, Arkansas. Union County Arkansas intends to remove the hazardous materials from the site in support of their goal to renovate and re-utilize the facility as dormitory living for students at South Arkansas College (SAC). SAC was established in 1992 in El Dorado and located within walking distance of the site.

This ABCA is intended to briefly summarize information about the site and contamination issues, cleanup standards, applicable laws, cleanup alternatives considered, and the proposed cleanup, and includes information on the effectiveness, the ability of the grantee to implement each alternative, the cost of each proposed cleanup alternative, an evaluation of how commonly accepted climate change conditions might impact proposed cleanup alternatives, and an analysis of the reasonableness of the various cleanup alternatives considered, including the one chosen. The ABCA is intended as a brief document summarizing the larger and more detailed technical and financial evaluations performed in addressing each of these areas. The ABCA may be modified technically and financially or in more depth relative to each of these areas upon award of funding and in response to community interaction.

Cleanup alternatives were evaluated in accordance with EPA Region 6 protocols and general guidance required prior to implementation of a cleanup design using EPA Brownfields Grant funding. More specifically, viable cleanup alternatives based on site-specific conditions, technical feasibility, resiliency to climate change conditions, and preliminary cost/benefit analyses are summarized herein. Specific cleanup alternatives and associated recommendations are presented in the applicable sections of this report.

### 1.1 Background

The site is an approximate 6.9-acre tract of land located at 470 West Oak Street in El Dorado, Union County, Arkansas. The site is developed with one approximate 80,620 s.f. four-story vacant former hospital (west wing), one approximate 138,070 s.f. six-story vacant former hospital (east wing), one approximate 4,750 s.f. former physical plant building and associated parking areas. The buildings on site were formerly in use as the Warner Brown Hospital, but have been vacant since around 2015.

It should be noted that this ABCA is associated solely with proposed hazardous waste removal/renovation at the west wing (80,620 s.f. four-story building), as ACM/LBP abatement has already occurred in the east wing. The west wing building was developed in 1921, with

additions to the hospital in the early 1950s.

The location of the site is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. The site vicinity and site layout are depicted on Exhibit 2 of Appendix A.

## 1.2 Site Assessment Findings

A Hazardous Materials Assessment (ACM/LBP) of the site was conducted by Snyder Environmental as follows:

- *ACM Inspection Report, Warner Brown Hospital – 40 Wing, Snyder Environmental, 2016 (west building)*
- *Lead Based Paint Inspection Report, Warner Brown Hospital – Snyder Environmental 2016*

Bulk samples of suspect ACM were collected and analyzed using Polarized Light Microscopy (PLM) in accordance with the Arkansas Department of Environmental Quality (ADEQ) Regulation 21 requirements using a National Voluntary Laboratory Accreditation Plan (NVLAP) accredited laboratory.

Additionally, paint samples were analyzed using an X-Ray Fluorescence Spectrometer (XRF) for lead generally following the U.S. Department of Housing and Urban Development (HUD) guidelines.

The assessment identified quantities of asbestos in various roofing, caulking, floor tile and mastics, and pipe wrap and insulation. Concentrations of LBP (as measured by XRF to be greater than 1.0 mg/cm<sup>2</sup>) were identified in several of the samples collected from the interior and exterior painted surfaces.

Subsequently, as part of the Phase II activities conducted at the site (Phase II ESA – Terracon, June 2023), Terracon performed an asbestos re-inspection survey on May 17, 2023. The survey was conducted to ensure that previously identified ACM materials were properly identified. ACM and friable regulated ACM (RACM) identified in Snyder’s report (2016) were observed throughout the west wing. The materials were observed in locations identified in Snyder’s report and were improperly stored throughout the west wing and at risk of disturbance. The materials were observed in poor and damaged condition.

The June 2023 Terracon Phase II ESA report stated that activities associated with the previously identified ACM and RACM, including installation of containment system, must be performed by ADEQ-licensed asbestos abatement contractor in accordance with a Project

Design prepared by an ADEQ-licensed Asbestos Consultant. Air monitoring must be conducted during the abatement activities; a third-party air monitor is recommended. Access to the west wing should not be allowed except by ADEQ-licensed personnel with proper personal protective equipment to prevent exposure.

In addition, RACM must be removed prior to renovation or demolition activities which will disturb the materials. In the state of Arkansas, asbestos activities are regulated by the ADEQ. The ADEQ requires that asbestos-related activities conducted in a public building be performed by personnel licensed by the ADEQ. The owner or operator must provide the ADEQ with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities.

Locations of identified ACM are depicted in the Appendix A. The following table provides a summary of the ACM that was identified in the structure in the Snyder Asbestos Inspection Report (2016):

HA #	Material Description	Material Location	Estimated Quantity
<b>Penthouses</b>			
WB40-02-03 WB40-02-04	Roof Flashing	Roof	TBD*
WBP-01-01 WBP-01-02	Perimeter Caulking on Doors and Windows	Penthouses	TBD*
WBP-03-05	Transite Panel	Main Elevator Penthouse Awning	TBD*
WBP-04-06 WBP-04-07	Steam Pipe Insulation (White)	Penthouses	TBD*
WBP-05-08 WBP-05-09	Steam Pipe Joints (White)	Penthouses	TBD*
WBP-06-10 WBP-06-11	Steam Pipe Insulation (Silver)	Penthouses	TBD*
WBP-07-12 WBP-07-13	Steam Pipe Joints (Silver)	Penthouses	TBD*
WBP-08-14 WBP-08-15	Duct Insulation	Penthouses	TBD*
WBP-09-16 WBP-09-17	HVAC Vibration Joint	Penthouses	TBD*
WBP-12-22 WBP-12-23	Bake-Lite Breaker Material	Elevator Switch Gear	TBD*
WBP-13-24 WBP-13-25	Gasket Material - Flanges	Penthouses	TBD*
WBP-14-26	Duct Joint Tape	Penthouses	TBD*



HA #	Material Description	Material Location	Estimated Quantity
WBP-14-27			
WBP-15-28	Pipe Insulation	Penthouses	TBD*
WBP-16-29	Pipe Joint Insulation	Penthouses	TBD*
<b>Mechanical Room</b>			
WB40M-01-01 to WB40M-01-04	DW Insulation	Mechanical	TBD*
WB40M-02-05 to WB40M-02-08	DW Mudded Joints	Mechanical	TBD*
WB40M-03-09 to WB40M-03-12	Steam Pipe Insulation	Mechanical	TBD*
WB40M-04-13 to WB40M-04-16	Steam Header Insulation	Mechanical	TBD*
WB40M-05-17 to WB40M-05-20	Steam Pipe joints		TBD*
WB40M-06-21 WB40M-06-22	Gasket Material	Flanges	TBD*
WB40M-07-23 to WB40M-07-25	Steam Line Insulation	Service Tunnel	TBD*
WB40M-08-26 to WB40M-08-28	Window Glazing	Exterior Windows	TBD*
<b>1<sup>st</sup> Floor</b>			
WB-41-05-15 to WB-41-05-18	9X9 Floor Tile/Mastic	1 <sup>st</sup> Floor	TBD*
WB-41-06-19 WB-41-06-21	Pipe Insulation	1 <sup>st</sup> Floor	TBD*
WB-41-08-25 WB-41-08-26	Spray-on Ceiling Texture	1 <sup>st</sup> Floor	TBD*
WB-41-11-33 to WB-41-11-36	Black Mastic Covered Cork	Walk-in Cooler Ceiling	TBD*
<b>2<sup>nd</sup> Floor</b>			
WB42-04-14 WB42-04-15	Sheet Vinyl Flooring	2 <sup>nd</sup> Floor	TBD*
WB42-07-20 to WB42-07-26	Ceiling Texture	2 <sup>nd</sup> Floor	TBD*
WB42-08-27 to WB42-08-29	Pipe Insulation	2 <sup>nd</sup> Floor	TBD*
WB42-09-30 to WB42-09-32	Pipe Joint Mud	2 <sup>nd</sup> Floor	TBD*
<b>3<sup>rd</sup> Floor</b>			
WB43-05-21 to	Pipe Insulation	Interior Chases	TBD*



HA #	Material Description	Material Location	Estimated Quantity
WB43-05-24			
WB43-07-30 to WB43-07-33	Duct Mastic (White)	3 <sup>rd</sup> Floor	TBD*
WB43-08-34 to WB43-08-37	Pipe Joint Mud	3 <sup>rd</sup> Floor	TBD*
WB43-09-38 to WB43-09-44	Ceiling Texture	3 <sup>rd</sup> Floor	TBD*
<b>4<sup>th</sup> Floor</b>			
WB44-06-34 to WB44-06-40	Pipe Insulation	Interior Chases	TBD*
WB44-07-41 to WB44-07-47	Duct Mastic	Interior Chases	TBD*
WB44-08-48 to WB44-08-52	Pipe Joint Mud	Interior Chases	TBD*

LF = Linear Feet

SF=Square Feet

\*TBD - To be determined. Quantities and abatement costs are being estimated the week of 10.30.23 and the ABCA will be reposted once finalized.

The following table provides a summary of where LBP was identified in the west wing.

Sample Location	Color	Description	Estimated Quantity
Interior			
1 <sup>st</sup> Floor Large Mech Room	Brown	Metal Door Frame	17 LF
1 <sup>st</sup> Floor Large Mech Room	Yellow	Metal Stair Handrail	8 LF
1 <sup>st</sup> Floor	Various	Ceramic Tile Wall	368 SF
2 <sup>nd</sup> Floor	Various	Ceramic Tile Wall	420 SF
2 <sup>nd</sup> Floor Room 8	White	Metal Door	2 @ 3'x 7"
2 <sup>nd</sup> Floor Room 8	White	White Wood Door	3'x7'
3 <sup>rd</sup> Floor	Various	Ceramic Tile Wall	1,050 SF

**DRAFT Analysis of Brownfield Cleanup Alternatives****BF 01F86101-0**

Former Warner Brown Hospital – West Wing ■ El Dorado, Arkansas

October 26, 2023 ■ Terracon Project No. 35147002



<b>Sample Location</b>	<b>Color</b>	<b>Description</b>	<b>Estimated Quantity</b>
3 <sup>rd</sup> Floor Dark Room	Brown	Metal Interior Door Frame	3'x7'
4 <sup>th</sup> Floor	Various	Ceramic Tile Wall	1,414 SF
4 <sup>th</sup> Floor North Wing Corridor	Pink	Ceramic Tile Water Fountain	1 SF
5 <sup>th</sup> Floor Roof	Various	Metal Rung Ladder	30 LF
5 <sup>th</sup> Floor Penthouse Mech Room	Red	Metal Safety Railing	20 LF
5 <sup>th</sup> Floor Penthouse Mech Room	Gray	Metal Safety Railing	40 LF
5 <sup>th</sup> Floor Penthouse Mech Room	Red	Metal Open Top Expansion Tank	1 SF
5 <sup>th</sup> Floor Penthouse Mech Room	Brown	Metal Door Lentil	4 LF
5 <sup>th</sup> Floor Penthouse Mech Room	Brown	Metal Window Lentil	12 LF
5 <sup>th</sup> Floor North Wing Penthouse	Brown	Metal Roof I Beam	22 LF
Exterior			
Exterior East Covered Walkway	Brown	Metal I Beam	50 LF
Exterior East Covered Walkway	Brown	Metal Support	50 LF
Exterior East	Gray	Metal Hoist Stand	1 LF
Exterior West Covered Walkway	Various	Metal Handrail	50 LF
Exterior	Brown	Metal Window Lentil	ALL
Exterior	Brown	Metal Door Lentil	ALL
Exterior	Various	Concrete Overhang Ceiling	ALL

LF = Linear Feet

SF=Square Feet

## **2.0 PROJECT GOALS AND RE-USE PLAN**

Union County Arkansas intends to remove the hazardous materials from the site in support of their goal to renovate and re-utilize the facility as dormitory living for students at South Arkansas College (SAC).

Abatement of ACM and removal of LBP from the site structure prior to renovations allows definitive resolution of the public health issue, while final renovations can then proceed on a schedule that time and resources allow without worry or expense of maintaining and isolating damaged materials from public exposure. Throughout renovations, all paint systems will be managed and disposed of as “lead-containing.”

The objective of the ABCA is identify and evaluate cleanup alternatives to address the hazardous materials to facilitate redevelopment and reuse the property.

## **3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS**

The regulated contaminant of concern for remedy is asbestos and lead-based paint. Asbestos is the name given to a group of six different fibrous minerals that occur naturally in the environment. Asbestos minerals have separable long fibers that are strong and flexible enough to be spun and woven and are heat resistant. Because of these characteristics, asbestos has been used for a wide range of manufactured goods, mostly in building, friction products, heat-resistant fabrics, packaging, gaskets, and coatings. Asbestos fibers can enter the air or water from the breakdown of natural deposits and manufactured asbestos products. Asbestos fibers do not evaporate into air or dissolve in water. Small diameter fibers and particles may remain suspended in air for a long time and be carried long distances by wind or water before settling down. Larger diameter fibers and particles tend to settle more quickly. Asbestos fibers are not able to move through soil. Asbestos fibers are generally not broken down to other compounds and will remain virtually unchanged over long periods. Exposure to asbestos usually occurs by breathing contaminated air in workplaces that make or use asbestos. Asbestos is also found in the air of buildings containing asbestos that are being torn down or renovated. Asbestos exposure can cause serious lung problems and cancer.

The United States Environmental Protection Agency (USEPA) regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), and the Louisiana Environmental Regulatory Code (ERC) Title 33, Part III, Section 5151 (Chapter 51), which both prohibit the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP and Chapter 51 require that potentially regulated asbestos-containing building materials be identified, classified, and quantified prior to planned

disturbances or demolition/renovation activities.

Lead is regulated by the Arkansas Department of Health (ADH) and USEPA through the United States Occupational Safety and Health Administration (OSHA). As such, lead safe work practices will be required if lead paints are identified. USEPA, ADEQ and ADH regulations would also apply for disposal of lead-containing demolition waste. Occupational exposure to lead occurring in the course of construction work, including renovation activities, painting, alteration, and repairs is subject to the OSHA lead standard (29 CFR 1926.62). The presence of lead in demolition debris from non-residential buildings has the potential to impose limitations on where and how the debris may be disposed. The Resource Conservation and Recovery Act (RCRA) requires each waste generator to determine if his wastes are hazardous.

### 3.1 Cleanup Responsibility

SWAPDD and Union County will be responsible for hiring contractors and will use a qualified Environmental Professional to assist with contracting documents, cleanup contractor oversight, and final documentation. The cleanup will be conducted by an asbestos abatement contractor licensed in the State of Arkansas. Demolition and renovation permits and notifications will be obtained from the ADEQ and local agencies. Applicable documentation will be submitted as required to the ADEQ.

### 3.2 Cleanup Standards

Standards have been established by the Occupational Safety and Health Administration (OSHA) to limit exposure of workers in the workplace. There are two types of short-term limits, as follows:

- STEL (short-term exposure limit): 1.0 PCM f/cc (fibers per cubic centimeter as detected using phase contrast microscopy).
- TWA PEL (8-hour time-weighted average permissible exposure level): 0.1 PCM f/cc (Source: USEPA, 2003 – Libby Asbestos Site Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum, Final – December 15, 2003).

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. The asbestos NESHAP regulation also requires the identification and classification of existing ACM according to friability prior to demolition or renovation activity. Under NESHAP, ACM is identified as either friable, Category I non-friable or Category II non-friable ACM. Friable ACM is a material containing more than 1% asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. All friable ACM is considered regulated asbestos containing material (RACM).

RACM includes all friable ACM, along with Category I and Category II non-friable ACM that has become friable, will be or has been subjected to sanding, grinding, cutting, or abrading, or ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder in the course of renovation or demolition activity.

Category I non-friable ACM are exclusively asbestos-containing packings, gaskets, resilient floor coverings, resilient floor covering mastics and asphalt roofing products that contain more than 1% asbestos. Category II non-friable ACM are all other non-friable materials other than Category I non-friable ACM that contain more than 1% asbestos. Category II non-friable ACM generally includes but is not limited to cementitious material such as: cement pipes, cement siding, cement panels, glazing, mortar, and grouts.

The United States Occupational Safety and Health Administration (USOSHA) asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The USOSHA standard requires that employee exposure to airborne asbestos must not exceed 0.1 fibers per cubic centimeter of air (0.1 f/cc) as an eight-hour time weighted average (TWA) and not exceed 1.0 fibers per cubic centimeter of air (1.0 f/cc) over a 30-minute time period known as an excursion limit (EL). The TWA and EL are known as USOSHA's asbestos permissible exposure limits (PELs). The USOSHA standard classifies construction and maintenance activities that could disturb ACM and specifies work practices and precautions that employers must follow when engaging in each class of regulated work. The standard also specifies requirements for handling materials containing asbestos in concentrations less than or equal to 1%.

OSHA does not define lead-containing coatings. Any detectable level of lead presents a potential source of exposure depending on how the material is disturbed. Therefore, Terracon recommends that potential contractors are made aware of the findings of this limited lead paint survey. Personnel and/or contractors should utilize work practices pursuant to the OSHA lead standard (29 CFR 1926.62) when impacting lead-containing components.

Standards have been established by the Occupational Safety and Health Administration (OSHA) to limit exposure of workers in the workplace and establish work standards for and lead. The occupational exposure limits are as follows:

- Lead Action Level (8-hour time-weighted average permissible exposure level): 30  $\mu\text{g}/\text{m}^3$
- Lead PEL (8-hour time-weighted average permissible exposure level): 50  $\mu\text{g}/\text{m}^3$

### 3.3 Laws and Regulations Applicable to the Cleanup

Asbestos is regulated by the Asbestos Hazard Emergency Response Act (AHERA), the Toxic Substance Control Act (TSCA), the Clean Air Act (CAA), and the ADEQ.

Friable ACM, Category I and Category II nonfriable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM). A memo issued by the Arkansas Department of Environmental Quality (ADEQ) on December 19, 2006 clarifies that Category I nonfriable ACM becomes RACM if it has become friable or it will be or has been subjected to sanding, grading, cutting, or abrading, whether by manual or mechanical means.

RACM must be removed prior to renovation or demolition activities which will disturb the materials. In the state of Arkansas, asbestos activities are regulated by the ADEQ. The ADEQ requires that asbestos-related activities conducted in a public building be performed by personnel licensed by the ADEQ. The owner or operator must provide the ADEQ with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Asbestos abatement must be performed by ADEQ-licensed asbestos abatement contractors in accordance with a Project Design prepared by an ADEQ-licensed Asbestos Consultant. Air monitoring must be conducted during the abatement activities; a third-party air monitor is recommended. Management Plans developed for the in-place management of asbestos-containing materials must be developed by an ADEQ-licensed Management Planner.

The Occupational Safety and Health Administration (OSHA) Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the Permissible Exposure Limit (PEL) of 0.1 fibers per cubic centimeter (f/cc) of air as an 8-hour Time Weighted Average (TWA). The OSHA standard classifies construction and maintenance activities which could disturb ACM and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

Further, to protect asbestos abatement workers, abatement work must be performed in accordance with Occupational Health and Safety Administration (OSHA) asbestos regulations as promulgated in Title 29 of the CFR, Section 1926.1101.

The following work practices should be followed prior to the initiation of demolition activities on the project site:

- Prepare abatement specifications by an ADEQ Accredited Project Designer;
- Notify the ADEQ of intention to renovate or demolish by the required notification form and receive approval for abatement activities;
- Remove all regulated ACM from facilities being renovated or demolished before

disruptive activity begins;

- Handle and dispose of ACM in an approved manner (USEPA, 2006a: Asbestos/NESHAP Regulated Asbestos-Containing Materials Abatement);
- Comply with applicable OSHA standards;
- Perform third-party asbestos air monitoring prior to, during, and at the conclusion of the abatement activities by an ADEQ accredited asbestos Contractor Supervisor; and,
- Prepare an asbestos abatement and air monitoring close-out report at the conclusion of the project.

OSHA 29 CFR 1926.62 Subpart D, Lead, applies to all renovation/demolition where an employee may be occupationally exposed to lead. The employer shall communicate information concerning lead hazards and communicating information concerning hazards and appropriate protective measures to employees, including training. Where lead is present, it should be assumed that workers will be exposed to lead above the action level and personal protective measures (based on the type of disturbance) should be implemented until an exposure assessment is completed.

RCRA gave the USEPA authority to regulate the waste status of demolition or renovation debris, including lead containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead containing wastes are considered hazardous waste under RCRA if TCLP results exceed 5 mg/L.

The Resource Conservation and Recovery Act (RCRA) states that the generator of hazardous waste is required to follow certain procedures when generating, storing, transporting, and/or disposing of the waste generated. Wastes are defined as hazardous by EPA if they are specifically named on one of four lists of hazardous wastes (listed wastes) or if they exhibit one of four characteristics (characteristic wastes), including ignitability, corrosivity, reactivity, or toxicity.

## **4.0 EVALUATION OF CLEANUP ALTERNATIVES**

Asbestos and lead paints are considered a hazardous substance relative to grant funding. EPA requires the ABCA, at a minimum, to consider two different cleanup remedies and a “no action” alternative. Asbestos mitigation in the environmental industry is an established practice. Due to its chemical and physical nature, asbestos can, generally speaking, only be managed. Unlike chemical contamination, it cannot be readily altered or broken down. The industry has historically evolved two basic approaches: removal with off-site management and in-place isolation and on-site management.

In addition to effectiveness, implementability, and cost considerations, consideration was given to the sustainability of cleanup alternatives in regard to current and future climate



change concerns. According to the National Oceanic and Atmospheric Administration’s (NOAA) National Climate Assessment, the primary climate change conditions identified for the southeast region include increased weather activity. Increased weather activity has been identified as site-specific climate change considerations and the resiliency of each cleanup alternative will be evaluated against these considerations.

### **Cleanup Alternatives Considered**

To address hazardous substances at the Site, three different alternatives were considered. These alternatives are outlined below. The following subsections present each alternative in greater detail, including estimated costs and potential contingency items:

- Cleanup Alternative A: Hazardous Materials Removal Pre-Renovation
- Cleanup Alternative B: ACM and LCP Stabilized and Encapsulated
- Cleanup Alternative C: No Action

### **4.1 Cleanup Alternative A: Pre-Renovation Hazardous Materials Removal**

Alternative A includes conventional removal/abatement of ACMs using standard industry practices. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Abatement procedures require wet removals to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be removed in accordance with ADEQ regulations and containerized for off-site landfill disposal as a special or regulated waste under ADEQ regulations. Waste will be containerized (commonly double bagged) to contain ACM in manageable quantities. Leak-tight containers may also be used. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM removal must be performed by a Arkansas-licensed abatement contractor. In addition, this work requires a 10-business day notification to the ADEQ and appropriate coordination with ADEQ representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM, termed regulated asbestos-containing materials (RACM). Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

Alternative A also includes conventional removal/abatement of LBP via either physical removal

of components or removal of painted coatings from remaining substrates using standard industry practices; including exterior load bearing walls. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent lead dust migration beyond the work zone. Abatement procedures require wet removals to further control dust. During and following the abatement, lead dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

Several structural components with that contain lead will remain within the structure including interior and exterior structural steel, interior load bearing walls, and exterior doors/frames or other historical components to remain as part of the renovated facility. These components are to have any peeling paint abated or stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.1.1 Effectiveness – Including Climate Change Considerations

The hazardous materials are permanently removed. This approach is technically effective as a definitive and direct physical elimination of the contaminants that produce unacceptable public risk. The remedy usually does not significantly alter structural conditions due to typical ACM uses. Demolition restrictions would not remain following demonstration of clearance criteria. Excluding clearance sampling, follow-up inspections and maintenance will not be required. With removal and off-site disposal of contaminants, the approach requires no special post-remedy institutional or land use controls for the property.

Errors will be prevented and minimized by utilizing accredited abatement contractors to conduct the abatement activities in accordance with state regulations and best management practices.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Removal of all hazardous materials reduces the potential for environmental contamination.

#### 4.1.2 Implementability

This alternative is technically achievable. It is a mature remedy common in the remediation industry. The approach requires specialized equipment readily available in the local demolition and engineering markets. A specialized labor force exists in Arkansas to accomplish the remedy. The implementation period is shorter-term and can be conducted during any time of the year.

### 4.1.3 Cost

Based upon Terracon’s experience with similar projects, the estimated cost to remove ACM and LBP from the structure is approximately to be determined; including third-party industrial hygiene consulting services, waste removal, and disposal.

## 4.2 Cleanup Alternative B: ACM and LBP Encapsulation

Alternative B involves encapsulating or enclosing the ACM within the structure. Encapsulation is defined as the treatment of ACM with a liquid that covers the surface with a protective covering or embeds the fibers with an adhesive matrix to prevent the release of asbestos fibers. Enclosing the ACM would consist of covering the materials with a rigid and permanent material such as plywood. Encapsulation of friable regulated materials is considered an abatement activity. Abatement areas would be contained prior to the encapsulation using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Abatement procedures require wet removals of damaged ACM or ACM debris to further control potential spreading of damaged or friable asbestos and airborne particulates. Following the removal of any damaged ACM or ACM debris the remaining ACM would be sprayed with a bridging compound (similar to Fiberlock Asbestos Binding Compound). During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be encapsulated in accordance with applicable state regulations and may require ADEQ notifications. Any waste generated would be containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM encapsulation for RACM must be performed by a Arkansas-licensed abatement contractor. In addition, this work requires a 10-business day notification to the ADEQ and appropriate coordination with ADEQ representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM. Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

ACM encapsulation of non-friable flooring and mastics are not considered a regulated abatement activity as long as the ACM remains intact in a non-friable state. This can be achieved by covering the ACM flooring and mastic with a flowable cement covering and re-caulking windows. This activity does not require an ADEQ notification or a ADEQ-licensed abatement contractor.

This alternative also involves the Stabilization and encapsulating the LBP within the structure.

This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.2.1 Effectiveness – Including Climate Change Considerations

The ACM and LBP are isolated in a manner in which the ACM and LBP does not come into direct contact with humans. This approach is technically effective as a direct physical elimination of the contaminants available to public exposures. However, follow-up inspections and maintenance would be required. Damaged materials (**as is the case with most of the material at Warner Brown**) will still require abatement. Additionally, renovation to the structure can potentially disturb the ACM and cause a fiber release and /or lead dust contamination. Therefore, based on the current damage and potential disturbance of the ACM and LBP during planned renovations, this alternative is an ineffective option.

Potential disadvantages include errors during the application that could potentially release asbestos fibers to the environment, encapsulating materials is not a long-term solution and may fail in some environments. This option also creates a waste generation stream from removal of damaged materials and associated liabilities for the generator. Not all ACM lends itself to encapsulation, such as window glazing, therefore abatement activities will still be required to remove select materials. Asbestos and LBP that will remain will need to be managed in-place under an operations and management plan that would limit the ability to do certain minor activities such as hanging items on ACM walls, as well as maintenance activities.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Encapsulation still leaves the asbestos-containing materials and LBP in-place and has the potential for environmental contamination with damage.

#### 4.2.2 Implementability

This alternative is not technically achievable for all ACM and LBP at this project. Asbestos-containing materials in the structure are in poor condition, damaged or materials that do not lend itself to encapsulation. Damaged materials cannot be encapsulated without repair.

#### 4.2.3 Cost

Based upon Terracon’s experience with similar projects, the estimated cost to encapsulate ACM and LBP from the structure is approximately to be determined; including professional environmental consulting services, waste removal and disposal and encapsulation. Additional costs of approximately to be determined can be anticipated to perform the abatement of the materials not able to be encapsulated. Additional costs of approximately \$5,000 annually can be anticipated to perform routine maintenance and inspection activities to ensure encapsulation measure remain successful.

### 4.3 Cleanup Alternative C: No Action

The “no action” scenario is required by the EPA ABCA process. This alternative is to not address contaminants and trust that exposures as airborne particulate/fibers or dust through further weathering and degradation of the structure does not make contaminants available for human exposure by inhalation.

#### 4.3.1 Effectiveness

This alternative is deemed ineffective and unacceptable for continued Brownfield redevelopment for this Site because:

- It is to be considered unacceptable for potential redevelopment and reuse of the site.
- It is likely to be considered unacceptable to the community because citizens, nearby workers and construction workers could unknowingly be placed at risk in the future. No-action provides neither remedy nor preventive value to site conditions or in support of improved public health.
- This approach is unacceptable technically in that the microscopic asbestos fibers are known human carcinogens and provide no readily discernable exposure warning mechanism such as odor or other sensory identification. Without an expensive and long-term outdoor air/dust sampling program, there is no ability to identify if and when residual contaminants may be available for exposure.
- The continued presence of ACM and LBP in the building would continue to pose a long-term health risk to the public and also to workers entering the building. The No Action Alternative would make no progress toward achieving the goals of reduction of health risks to the surrounding public and facilitating the demolition of the building for redevelopment.

#### 4.3.2 Implementability

By its definition, taking no action precludes a discussion of implementation. The structure would be left in the unused state in which it currently exists. The identified ACM and LBP would still pose a hazard to those entering the building and asbestos fibers would be a continued threat to be released to ambient air. The value of the building would continue to decrease due to deterioration.

#### 4.3.3 Cost

By its definition, taking no action precludes a discussion of cost to implement. This cleanup alternative would not include any specific efforts to remove or maintain ACM and LBP in-place. There would be no direct cleanup costs associated with this alternative. Further, this alternative may later result in demolition complications, delays, and increased demolition costs due to

ACM and LBP remaining within the structures. Direct costs associated with the No Action Alternative and associated non-use of the building would consist of providing site security.

Expanded costs could occur if fugitive asbestos is released during future storms or weathering of damaged structures that might result in secondary deposition and contamination of soils. This would impair re-use and value of surrounding property adjacent to the structure.

#### 4.4 Cost Comparison Alternatives

The table below presents a summary of the estimated costs for all alternatives under consideration. There would be no capital cost if the site were to remain as an unused, vacant building.

ALTERNATIVE	CAPITAL COST	ANNUAL COST
A – Pre-renovation ACM & LBP	\$TBD*	N/A
B – ACM & LBP Encapsulation	\$TBD*	\$5,000 <sup>‡</sup>
C – No Action	\$0	\$4,000 <sup>‡</sup>

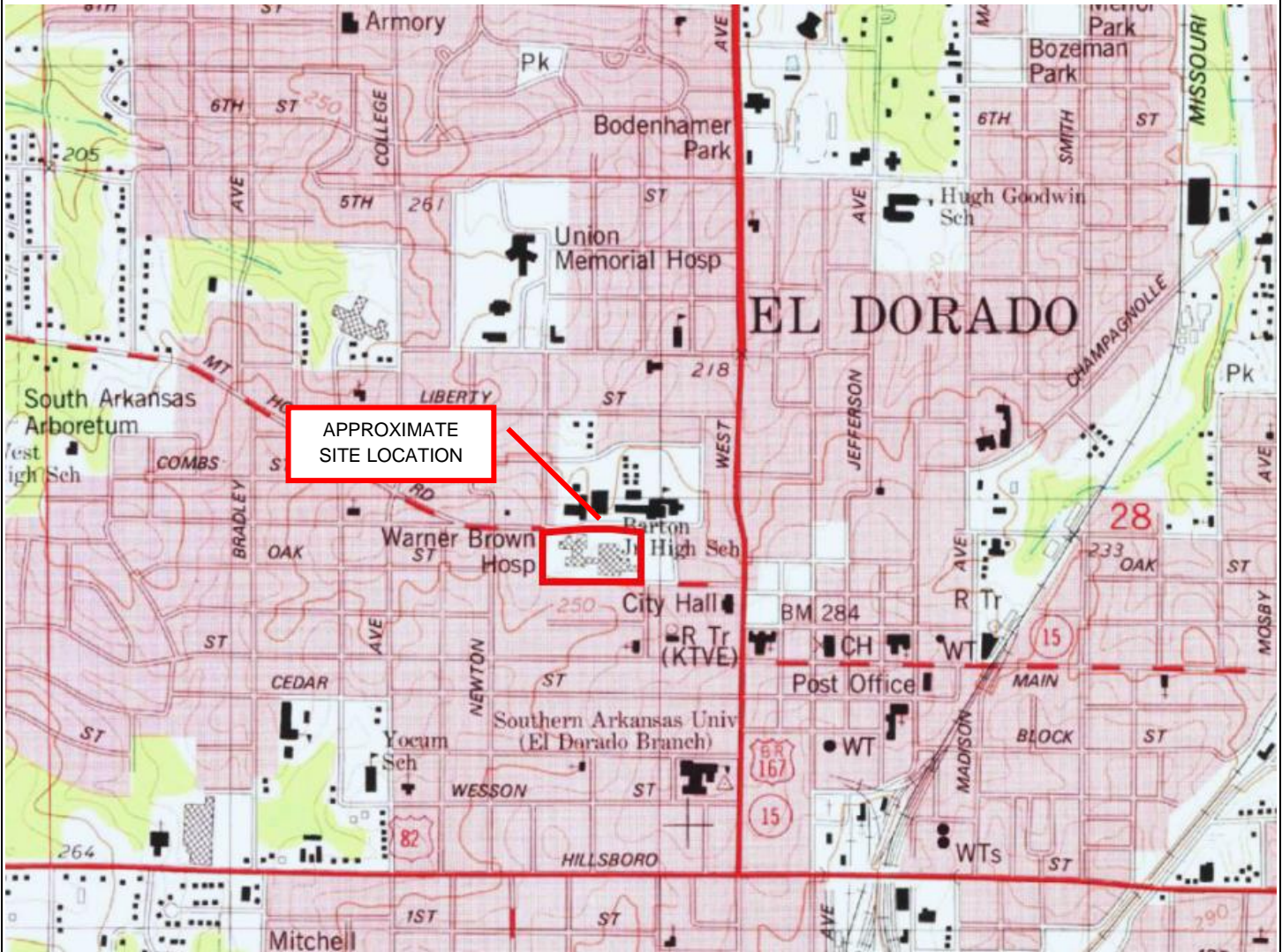
‡ - Includes costs for annual re-inspection of ACMs and LBP to document condition.

\*TBD - To be determined. Quantities and abatement costs are being estimated the week of 10.30.23 and the ABCA will be reposted once finalized.

## 5.0 RECOMMENDED CLEANUP ALTERNATIVE

The recommended cleanup approach is Alternative A: Hazardous Materials Removal Pre-Renovation. This alternative would address exposure risks using a proven approach consistent with recognized industry standards while at the same time easily garnering ADEQ approval. This option would remain comparably cost-effective under almost all abatement scenarios and building conditions. Hazardous materials removal would not require the need for subsequent inspections, maintenance and/or regulatory oversight. This alternative addresses liabilities, potential contaminant sources or potential limitations to future land use and brownfields redevelopment potential consistent with Union County’s and re-use planning.

# **APPENDIX A**



USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP  
 STATE OF AR QUADRANGLES  
 (PORTIONS OF EL DORADO WEST QUADRANGLE - 1981)

Project Mgr	MLR	Project No	35147002
Approved by	QB	Scale	As Shown
Checked by	MLR	Date	1/19/23
Drawn by	MLR	File No.	

**Terracon**  
 25809 I 30 Bryant, AR 72022-9313  
 Ph: 501-847-9292 Fax: 501-847-9210

TOPOGRAPHIC MAP
Warner Brown Hospital
470 West Oak
El Dorado, AR

EXHIBIT
1





Project Mgr MLR  
 Approved by QB  
 Checked by MLR  
 Drawn by MLR

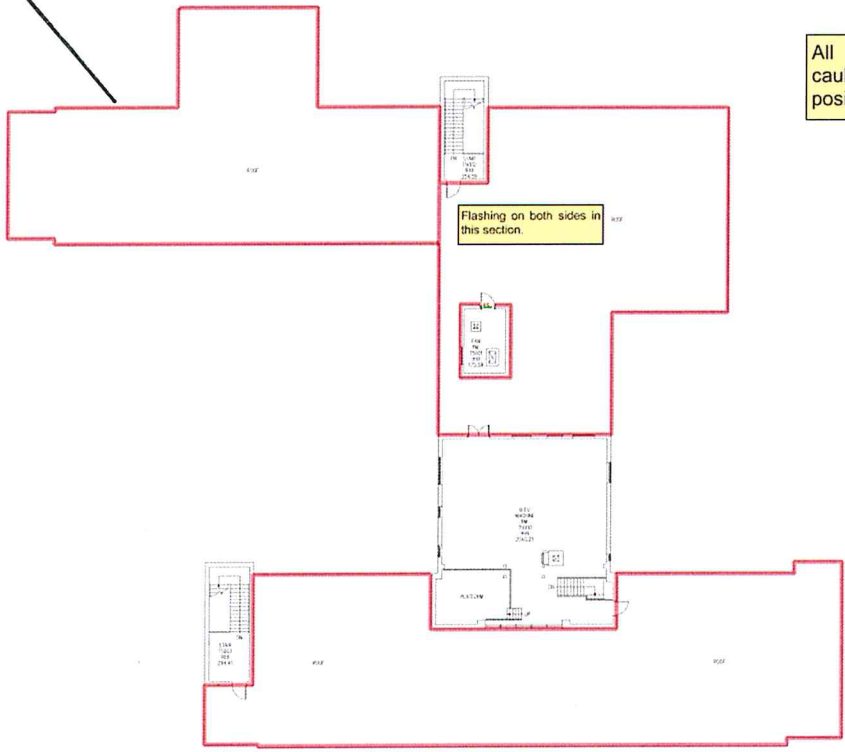
Project No 35147002  
 Scale As Shown  
 Date 1/19/23  
 File No.

**Terracon**  
 25809 | 30 Bryant, AR 72022-9313  
 Ph: 501-847-9292 Fax: 501-847-9210

SITE DIAGRAM  
 Warner Brown Hospital  
 470 West Oak  
 El Dorado, AR

EXHIBIT  
 2

All Roof Flashing is positive for asbestos.



All window glazing and perimeter caulking on doors and windows is positive for asbestos.

**Advanced Technologies Group, Inc.**  
 FACILITY ASBESTOS SURVEILLANCE REPORT

307 EAST BAYVIEW DRIVE, SUITE 100, TARRANT, TEXAS 76104  
 (817) 441-1111

CLIENT: PENTHOUSE

ADDRESS: MEDICAL CENTER OF SOUTH ARKANSAS - WARNER BROS. (WEST)

LOCATION: 11000 ARCADE

DATE: MAY 11, 2005 10:00 AM

PROJECT: SPACE UTILIZATION

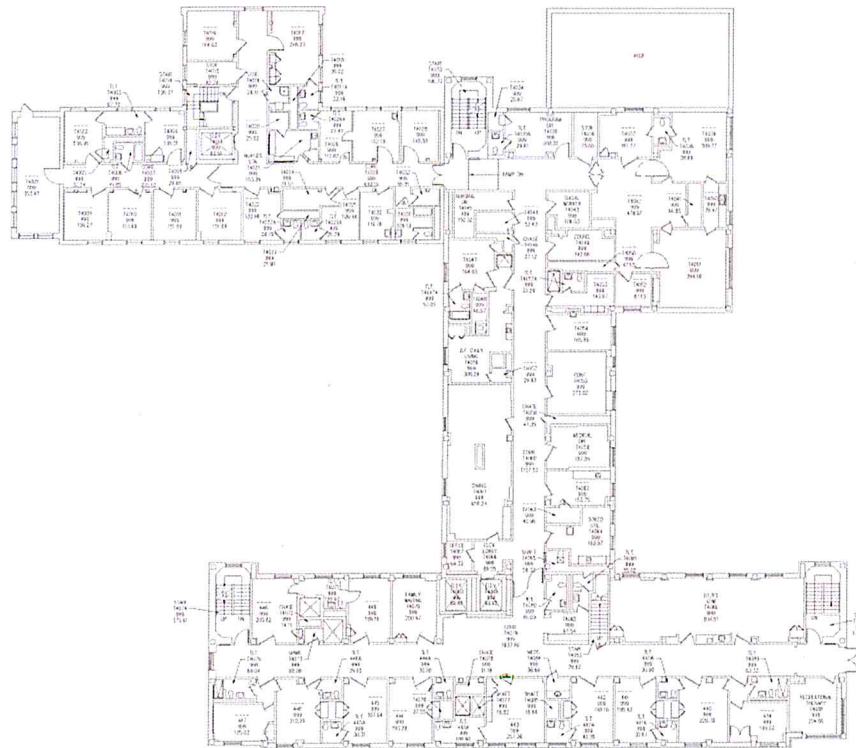
DATE: 05/11/05

REPORT NO: SP-PH

AREA SAID NOT TO BE NEEDED BY THE CLIENT OR OWNER  
 AREA SAID NOT TO BE ACQUIRED BY THE CLIENT OR OWNER  
 AREA UNDER CONSTRUCTION

**ROOF**

All Pipe Insulation, Duct Mastic, & Pipe Joint Mudd located above lay-in ceilings and interior chases is positive for asbestos.



**Advanced Technologies Group, Inc.**  
FACILITY MANAGEMENT CONSULTANTS

FOURTH FLOOR

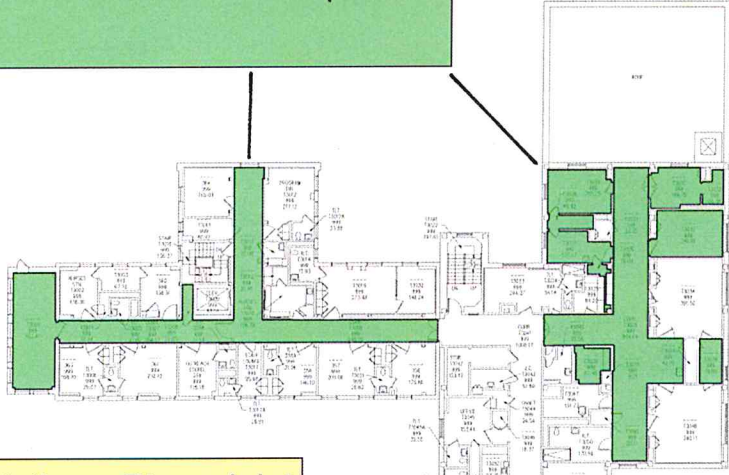
MEDICAL CENTER OF SOUTH ARKANSAS - WASKER BLDG. (WEST) -

SPACE UTILIZATION

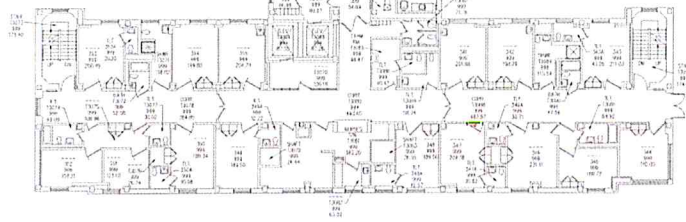
SP-04

4th Floor

Ceiling Texture in these areas is positive for asbestos.



All Pipe Insulation, Pipe Joint Mud, & Duct Mastic is positive for asbestos.



**Advanced Technologies Group, Inc.**  
FACILITY PERFORMANCE CONSULTANTS

THIRD FLOOR

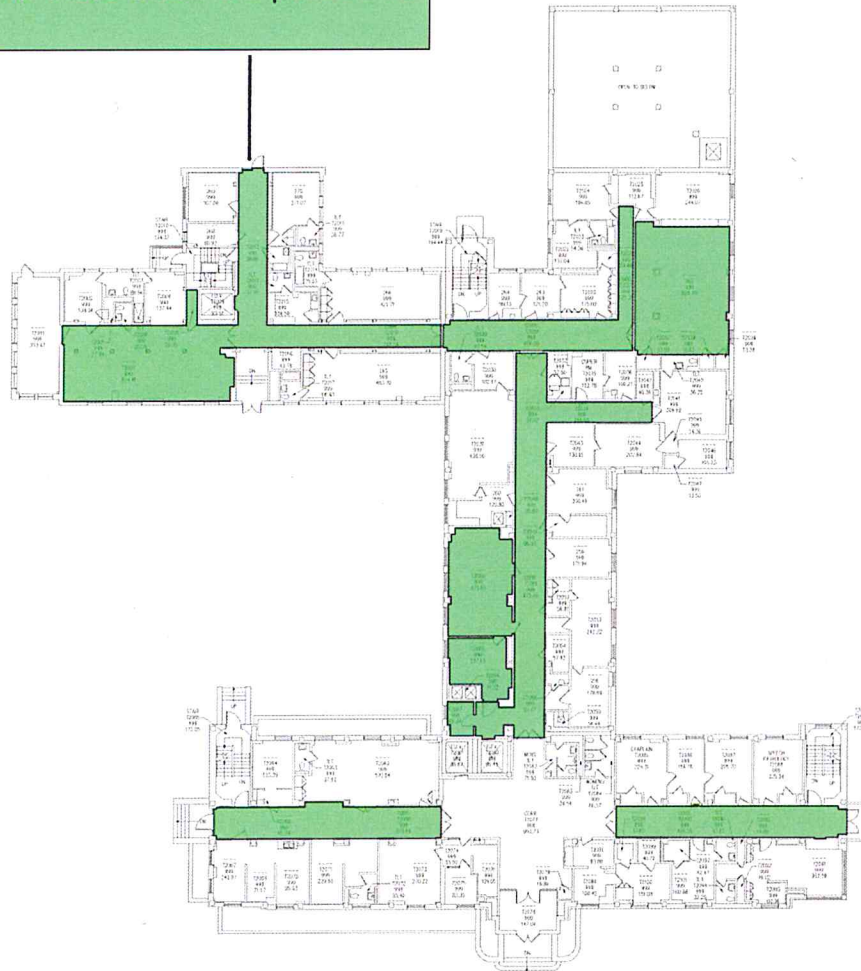
MEDICAL CENTER OF SOUTH ARKANSAS - WARNER BRIDAN (WEST) -

SPACE UTILIZATION

SP-B3

3rd Floor

Ceiling Textures in these areas are positive for asbestos.



**Advanced Technologies Group, Inc.**  
FACILITY MANAGEMENT SERVICES

02/24/2014  
SECOND FLOOR

MEDICAL CENTER OF SOUTH ARKANSAS - WARNER (WEST) -

SPACE UTILIZATION

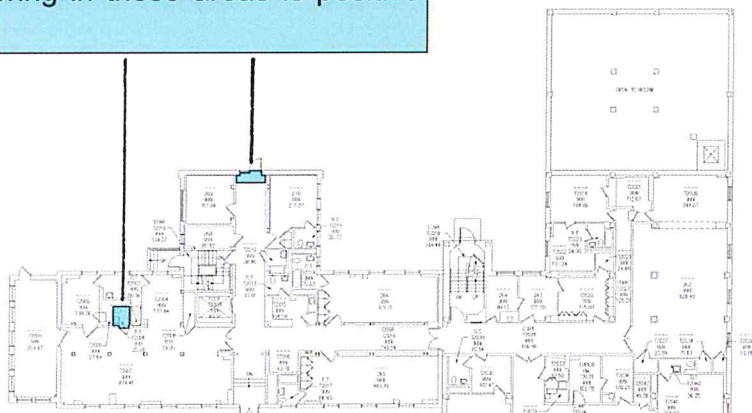
SP-02

NOT TO SCALE

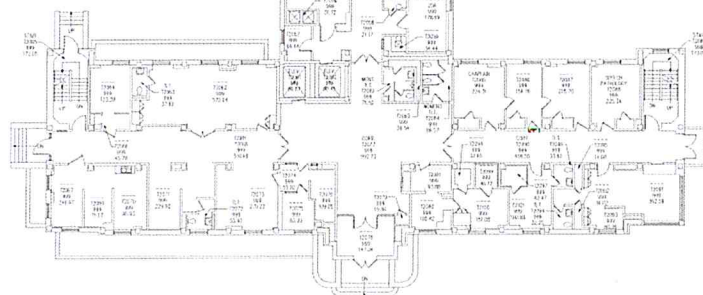
NOT TO BE USED FOR CONSTRUCTION

2nd Floor

Sheet Vinyl Flooring in these areas is positive for asbestos.



All Pipe Insulation & Pipe Joint Mud is positive for asbestos.



30701 SHERWOOD BLVD. SUITE 1000 WEST  
MIDLAND, TEXAS 79701

PHONE: 817-435-1111  
FAX: 817-435-1112  
WWW: www.advtechgroup.com

PROJECT: MEDICAL CENTER OF SOUTH ARKANSAS - BARNER DRUM (WEST)

DATE: 05/08/08

SCALE: AS SHOWN

DATE: 05/08/08

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DATE: 05/08/08

2nd Floor

9x9 Floor Tile and Mastic in these areas is positive for asbestos.

All Domestic Water Insulation/Mudded joints, Steam Pipe Insulation/Mudded Joints, & Window Glazing in the 1st Floor Mechanical Room is positive for asbestos.

All Pipe Insulation above lay-in ceilings and interior chases is positive for asbestos.

Black Mastic Coated Cork Insulation is positive for asbestos.

Ceiling Texture in these areas is positive for asbestos.

**Advanced Technologies Group, Inc.**  
FACILITY INVESTIGATION REPORT

PROJECT: MEDICAL CENTER OF SOUTH ARKANSAS - WESTERN BRANCH (ASBESTOS)

FLOOR: FIRST FLOOR

DATE: 08/11/2010

TIME: 08:00 AM

SPICES UTILIZATION: SP-01

AREA COULD NOT BE ASSESSED BY THE CLIENT/OWNER

AREA COULD NOT BE ASSESSED BY THE SPICER WORKING

ALL AREAS CONSIDERED

**1st Floor**

W.B. - West Branch

