

ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

**Gray's Hospital
477 East Main Street
Batesville, Ark. (Independence County)
AFIN: 32-00704**



Arkansas Department of Energy and Environment
Division of Environmental Quality
Office of Land Resources, Brownfield Program

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1.0 Introduction and Background

This analysis of brownfield cleanup alternatives for the Gray's Hospital property describes cleanup options considered by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), Brownfield Program, to address existing contamination at the site and to ensure that the selected cleanup action is protective of human health and the environment.

1.1 Site Location

The Gray's Hospital site is located at 477 East Main Street, Batesville, Ark. (Independence County).

1.2 Previous Site Uses

The 0.61-acre site was developed with residences in the late 1800s. Gray's Hospital was built in 1939 and operated until the 1980s. The site was then used as medical offices until 2021 and has been vacant since. The site was donated to the City of Batesville on Dec. 30, 2025.

1.3 Site Assessments

An asbestos inspection was completed by Snyder Environmental in April 2018. A total of 161 samples representing 84 homogenous areas were collected and submitted to Environmental Enterprise Group, Inc. in Russellville, Ark., for analysis of bulk asbestos using polarized light microscopy. The survey identified 24 asbestos-containing materials (ACM), which are defined as materials containing greater than 1% asbestos:

Material Description	Location	Quantity
Roof Penetration Mastic	Lower roof on back middle building	8 each
Roof Penetration Mastic	Middle roof on breezeway	3 each
Light Brown Cove Base and Mastic	Interior rooms on 4th floor	674 linear feet (LF)
Dark Tan 9x9 Floor Tile and Mastic	Throughout 4th floor	3,014 square feet (SF)
Light Tan 9x9 Floor Tile and Mastic	Patch areas on 4th floor	N/A
Tan 12x12 Floor Tile and Mastic	Throughout 3rd floor (layered with 9x9 Floor Tile and Mastic)	3,100 SF
Gray 12x12 Floor Tile and Mastic	Patch areas on 3rd floor (layered with 9x9 Floor Tile and Mastic)	N/A
Floor Tile and Mastic Under Carpeting	Room off north "T" at rear of 3rd floor	323 SF

Material Description	Location	Quantity
Tan 12x12 Floor Tile and Mastic	Throughout 2nd floor	2,744 SF
Gray 12x12 Floor Tile and Mastic	Patch areas of 2nd floor	42 SF
Flat Black 9x9 Floor Tile and Mastic	File room on west end of 2nd floor	112 SF
Black Mastic Pucks	Hallways of 2nd floor – above grid	N/A
Fire Door Insulation	Entrance to stairwell	1 each
Gray 9x9 Floor Tile and Mastic	2nd floor kitchen wing	1,313 SF
Off-White 12x12 Floor Tile and Mastic	Newer kitchen wing on 2nd floor	805 SF
Glossy 4x24 Floor Tile and Mastic	File room border on west end of 2nd floor	100 SF
Dark Brown 9x9 Floor Tile and Mastic	Mop room by rear entrance	24 SF
Yellow/Tan 12x12 Floor Tile and Mastic	Throughout original 1st floor structure	2,979 SF
Tan 12x12 Floor Tile and Mastic	Throughout 1st floor front addition	4,728 SF
Brown 12x12 Floor Tile and Mastic	Accents in 1st floor front addition	N/A
12x12 Floor Tile and Mastic Under Carpeting	Various rooms in original 1st floor structure and new addition	1,555 SF
Dark Tan 12x12 Floor Tile and Mastic	Southwest room at end of hall in original 1st floor area	221 AF
Floral Print Vinyl Sheen Flooring	Bathrooms in northeast rooms in original 1st floor area	72 SF
Tan 12x12 Floor Tile and Mastic	Throughout former morgue	1,350 SF

A Phase I Environmental Site Assessment was completed by Tetra Tech, Inc. in October 2025. The Phase I Environmental Site Assessment identified three Recognized Environmental Conditions in connection with the site:

- The historical use of an incinerator at the property
- A nearby property that was historically used for dry cleaning
- A nearby property that was historically used for automotive services

Prior to site redevelopment, the identified Recognized Environmental Conditions may require additional investigation, including sampling soil and groundwater, to determine whether contamination is actually present and to evaluate the risks to human health and the environment. The additional investigations will be accomplished after the building at the site has been demolished.

1.4 Project Goal

The City of Batesville intends to demolish the building and redevelop the site as a community green space. Prior to demolition, asbestos must be removed by an Arkansas-licensed asbestos abatement contractor. The DEQ Brownfield Program will provide asbestos abatement funding from its State Response Program grant.

2.0 Regulatory Considerations

2.1 Cleanup Oversight Responsibility

DEQ will provide regulatory oversight of cleanup activities at the site. The site is enrolled in the Arkansas Brownfield Program at DEQ, which is the state response program for brownfield properties.

Tetra Tech, Inc. will be the primary contractor for the project and will oversee the removal and disposal of ACM by subcontractors. Gerken Environmental Enterprises, Inc., as the remediation subcontractor, is an Arkansas-licensed asbestos abatement contractor and is authorized to dispose of asbestos waste. Environmental Enterprise Group, Inc., as the licensed Arkansas Air Monitor, will be subcontracted to perform oversight and clearance sampling.

A 10-Day Notice of Intent will be filed with the DEQ Asbestos Section prior to site activities.

2.2 Applicable Laws and Regulations

The following laws and regulations apply to the asbestos cleanup alternatives for the site:

- Toxic Substances Control Act (15 U.S. Code § 2601 et seq.) – Regulates certain hazardous chemical substances, including asbestos, and authorizes EPA to take regulatory action to protect against unacceptable risk of injury to human health or the environment.
- National Emissions Standard for Hazardous Air Pollutants (Regulation 40 CFR Part 61, Subpart M) – Specifies work practices for asbestos during demolitions and renovations of buildings. The regulations require the owner or the operator of the building to notify the appropriate state agency before any demolition, or before any renovations of buildings that could contain a certain threshold amount of asbestos or ACM.
- Clean Air Act (24 U.S. Code § 7401 et seq.) – Includes provisions for the EPA to set national emission standards for hazardous air pollutants, including asbestos.
- Occupational Safety and Health Administration (OSHA) (29 CFR 1910.1001, Asbestos General Standard) – Specifies permissible exposure limits, limits,

engineering controls, worker training, labeling, respiratory protection, and disposal of asbestos waste.

- OSHA (29 CFR 1926.1101, Asbestos Construction Standard) – Covers construction work involving asbestos, including work practice during demolition and renovation, worker training, disposal of asbestos waste, and specification of exposure limits.
- 20 Code of Arkansas Rules (CAR) pt. 860, Arkansas Asbestos Abatement Rule – Specifies work practices for asbestos during demolitions and renovations of commercial buildings, including licensing and certification, inspections, notifications, work procedures, and disposal requirements.
- 8 CAR pt. 60, Solid Waste Management Rules – Describes disposal requirements for asbestos containing materials.

Under federal and state laws and regulations, before any renovation or demolition activities can commence on commercial properties, it is mandatory to determine the presence of ACM, including all Category I and Category II non-friable materials.

Asbestos regulations differentiate between friable and non-friable asbestos-containing building materials. Friable materials are those that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, potentially releasing asbestos fibers into the air. Non-friable materials cannot be damaged by hand pressure.

Regulated ACM (RACM) includes any ACM that is friable; any Category I and II ACM that is in poor condition; and any Category I or II ACM that becomes friable during renovation or demolition activities and is present in quantities greater than 160 square feet, 260 linear feet, or 35 cubic feet.

Any ACM that will be rendered friable during renovation or demolition activities due to sawing, sanding, drilling or abrading, regardless of the quantity of the material, also are considered to be regulated. DEQ requires these materials to be removed prior to any such renovation or demolition.

Removal of RACM from any public school, public building, or commercial building is regulated by EPA, DEQ, and OSHA. These materials must be removed by an asbestos abatement contractor licensed by DEQ who employs trained and certified workers who are individually licensed by DEQ.

An asbestos abatement design must be submitted to the DEQ Asbestos Section prior to a renovation, demolition, or response action, other than a small-scale short-duration activity or minor release episode that involves RACM. The project design must be a site-specific written document and a copy must be maintained at the job site and be made available to DEQ employees upon request. A Notice of Intent also must be submitted to the DEQ Asbestos Section at least 10 working days prior to commencement of abatement activities.

Final clearance air sampling is required for all contained work areas when regulated materials are removed. Final clearance air monitoring is to be performed by an Arkansas-licensed air monitor.

The disposal of RACM is regulated by the DEQ Solid Waste Division. Removed materials must be transported and disposed of as asbestos waste at a Class I licensed and permitted landfill. Category I and II non-friable ACM in good condition can be disposed of at either a Class I or Class III licensed and permitted landfill.

2.3 Applicable Cleanup Standards

Final visual and air clearance sampling will be conducted to verify project completion. Tetra Tech will provide an Arkansas-licensed Air Monitor to designate locations where air sampling will occur. The project will not be deemed complete until clearance sample levels are within acceptable levels. Air samples will be analyzed by the Phase Contrast Microscopy Method 7400.

3.0 Evaluation of Cleanup Alternatives

Three cleanup alternatives were considered to address contamination at the site:

- Alternative #1: No Action
- Alternative #2: In-Place Management of ACM
- Alternative #3: Removal of All ACM

The effectiveness, feasibility, and cost of each cleanup alternative is evaluated below.

3.1 Alternative #1: No Action

The No Action alternative is included as a baseline for comparison to the other proposed alternatives. This option would leave all ACM in place at the site.

Effectiveness

This alternative would not reduce the ACM hazard in the short- or long-term and would not be protective of human health and the environment. Applicable laws and regulations require ACM to be removed prior to the demolition. Therefore, Alternative #1 would not allow for building demolition that is necessary to meet the project goal.

Feasibility

This option would not prevent exposure to ACM. It is not feasible as the building is being demolished, which will require removal of ACM.

Cost

There are no costs associated with the No Action alternative.

3.2 **Alternative #2: In-Place Management of ACM**

In-place management of ACM would include the development of a written Operations and Maintenance (O&M) Plan to provide education, training, monitoring, and recordkeeping regarding ACM left in place.

Effectiveness

This alternative would reduce the ACM hazard as long any future building occupants adhere to the O&M Plan; therefore, it would be protective of human health and the environment. However, the project plan includes building demolition that would not be an option under Alternative #2.

Feasibility

This option would prevent exposure to ACM as long as occupants follow the written O&M Plan. However, Alternative #2 is not feasible as the building is being demolished, which requires removal of ACM first.

Cost

Development of an O&M Plan is estimated at **\$4,500**.

3.3 **Alternative #3: Removal of ACM**

This option includes removal of all ACM identified at the site.

Effectiveness

Removal of all ACM is the most effective option as it would fully protect human health and the environment in the short- and long-term. The abatement would be conducted by licensed workers in accordance with applicable laws and regulations. Further, this option would allow building demolition to proceed so that the project goal can be met.

Feasibility

This option would prevent exposure to the ACM and would be in accordance with regulatory requirements.

Cost

The estimated cost for Alternative #3 is **\$129,205.79**. The estimate includes development of a site-specific Quality Assurance Project Plan, removal and disposal of all ACM, air monitoring, and project oversight and reporting.

3.4 Selected Cleanup Alternative

The selected cleanup alternative for the site is Alternative #3, which includes removal of all ACM identified at the site. This is the only method that is fully protective of human health and the environment, and allows planned building demolition to proceed so the property can be redeveloped in accordance with the project plan.