

**Analysis of Brownfields Cleanup Alternatives
For Asbestos Abatement from
Air Force Plant 3 Building 7
Tulsa, Tulsa County, Oklahoma**



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Site History

The combination of oil money and Oklahoma's relative remoteness in the early 1900s fostered an era of aviation and aerospace entrepreneurs. Tulsa's municipal airport was established in 1929, and by 1930 the airport was the second busiest in the world behind London. In 1941 the War Department built Air Force Plant 3 (AFP3) on the east side of the airport and used the one-mile long structure as to construct over 3,000 bombers on its assembly lines throughout World War II. In the same period, Rogers and Hammerstein's "Oklahoma" opened on Broadway with images of flight, "making lazy circles in the sky" and American Airlines established what is now the largest commercial aircraft maintenance base in the world. Following World War II, Rockwell International built key parts of the rocket that sent men to the moon and the space shuttle. And in 1988, the Air Force transferred AFP3 to the City of Tulsa.

In 1999, the United States Army Corps of Engineers transferred the AFP3 Building 7, located at 2232 North Mingo Road, to the City of Tulsa. AFP3 Building 7 is approximately 28,000 square feet and its original use was a boiler house. AFP3 is, itself, part of the industrial complex at Tulsa International Airport. The sheer scale of AFP3 has created a demand for its use. The City of Tulsa has progressively rehabbed portions of the AFP3 to allow occupation by Navistar, a top three manufacturer of school buses, and Nordam Aerospace, a manufacturer of wing assemblies. Additional reuse of the structure will require abatement of remaining asbestos-containing building materials (ACBM) to enable economic development.

Source, Nature and Extent of Contamination

Abatement of ACBM from within AFP3 Building 7 is the topic of this ABCA. AFP3 is, itself, part of the industrial complex at Tulsa International Airport. ACBM was identified in the facility by the Air Force as part of their environmental baseline closeout study and transfer documents in 1995 and were resurveyed by A&M Engineering for the City of Tulsa in 1999. A separate survey of ACBM in the area was conducted by Cinnabar for the City of Tulsa in 2004. No additional asbestos surveys have been conducted since that time. An abatement Project Design will be developed and approved by the Oklahoma Department of Labor's Asbestos Division prior to cleanup in AFP3 Building 7.

Overall, the condition of AFP3 Building 7 ACBM was found to be in good to poor condition. The current state of ACBM in the building prevents it from being re-utilized, although there is a demand for the space for manufacturing.

Table 1: ACBM for Abatement

Product	Quantity	Unit
Pipe Insulation	20,300	LF
Pipe Fittings	3,500	EA
Blanket Insulation	66,350	SF

AFP3 Building 7 comprises 28,000 square feet of industrial-zoned space. The City of Tulsa was awarded a \$500,000 grant to assist with the cleanup of ACBM from EPA; however, additional funds were needed in order to complete the ACBM in AFP3 Building 7. The City of Tulsa was awarded a \$500,000 subgrant from the Oklahoma Department of Environmental Quality (DEQ) Brownfields Revolving Loan Fund (BRLF) with funding originating from the United States Environmental Protection Agency's (EPA) BRLF Supplemental Bipartisan Infrastructure Law Funding to address a portion of the funding needed for this project.

Exposure Pathway(s), Oversight and Regulations

The primary exposure pathway of concern for asbestos is inhalation. As ACBM within the building continue to deteriorate and/or are disturbed, asbestos fibers can be released. Inhalation of asbestos fibers is a known hazard to human health and the environment and the fibers are carcinogenic. If applicable, worker exposure to asbestos is regulated by the Occupational Safety and Health Administration (OSHA) and the EPA. Asbestos abatements of regulated and/or friable asbestos are overseen by the Oklahoma Department of Labor. The DOL oversees the control of the release of friable asbestos to the ambient air during demolition and renovation operations and additional provisions for handling, storing and transporting friable asbestos during demolition or renovation operations. Additionally, the Oklahoma Department of Environmental Quality (DEQ) oversees the operational requirements for all disposal facilities and has an approved list of landfills approved to accept asbestos in Oklahoma.

Cleanup Alternatives

Alternative 1: No Action Alternative

Alternative 1 would leave the identified ACBM in place and no abatement would occur. Alternative 1 would have little effectiveness in reducing the human health and environmental hazards associated with the ACBM. The current hazards would remain and would expand as site conditions deteriorate. Furthermore, this approach would significantly impact the ability to perform redevelopment efforts at the site. This alternative is easily implemented and requires no additional effort beyond the status quo.

Alternative 1 has no direct and immediate costs. Alternative 1 would incur indirect costs associated with loss of redevelopment opportunity, potential regulatory fines, and potential legal liability. These costs are difficult to estimate but could easily reach in the hundreds of thousands of dollars over the life of the structure.

Alternative 2: Action Alternative

Alternative 2 would see the removal of ACBM from the building, removing the human health and environmental hazards inherent with the presence of ACBM. This approach would allow unrestricted redevelopment of the building. Alternative 2 has an estimated cost of \$2,000,000 and has indirect benefits from potential site reuse. The following tasks are proposed to be used for Alternative 2, the abatement of asbestos from AFP3 Building 7.

Task 1: Contract Award & Oversight. The City of Tulsa would work with the DEQ RLF Project Manager to put into place the Analysis of Brownfield Cleanup Alternatives (ABCA), Community Involvement Plan (CIP), and Quality Assurance Project Plan (QAPP). DEQ will review and comment on the required documents (listed above) and obtain EPA approval for the CIP and QAPP. These documents, as well as previous asbestos survey information, would be placed into a public accessible Administrative Record on the following website <https://partnertulsa.org/doing-business/retail/help-for-broken-real-estate/>. This task also includes subgrant administration and oversight consisting of public outreach and quarterly reporting. Task Duration: 7 months.

Task 2: Project Bid Package. The Project Bid Documents have been developed by the Tulsa Authority for Economic Opportunity, dba PartnerTulsa, on behalf of the City of Tulsa and in coordination with both the city's Facilities Management and Purchasing Departments. Task Duration: 4 months.

Task 3: Select Abatement Contractor. A bid package was issued from the City of Tulsa in November 2023, which included required compliance with grant WBE/DBE requirements as well as Davis-Bacon regulations. Bids were received, evaluated, and a Contractor was competitively selected. An abatement contract has been developed and executed between the City of Tulsa

Preferred Alternative

Based upon redevelopment opportunities and potential liability of no-action, the preferred alternative is the Alternative 2: Action Alternative to fully abate asbestos from AFP3 Building 7.

Green and Sustainable Remediation Measures for Selected Alternative

The selective alternative will consider the resilience of the remedial options to address potential adverse impacts caused by extreme weather events. The preferred alternative addresses potential adverse impacts by removing asbestos that could be dispersed by extreme weather events affecting building integrity, such as high wind, tornados, or hail. Under the current scenario, disruption of the building envelope by significant weather events has the potential to distribute building materials, and associated ACBM, over a wide area. By removing ACBM from the building, this potential is mitigated. During cleanup, an adjoining building, AFP3 Building 6, will be used for project staging, removing the potential for weather impacts on the cleanup, itself. In addition, cleanup will make the building usable for future renovation and climate resilience improvements that have not been possible with ACBM in place.

Final Decision Document

A copy of the draft ABCA will be made available to the public for review and/or comments for thirty (30) days at <https://partnertulsa.org/doing-business/retail/help-for-broken-real-estate/>. Public Comments will be sent to Kasie Stambaugh at DEQ at the following email address kasie.stambaugh@deq.ok.gov. All public comments received by DEQ will be responded to and incorporated into a Decision Document. The Decision Document will be made available for the public at the website, above.