Municipal Auditorium is currently being supported with environmental assessment and remediation funding coordinated by the City Planning Commission's Brownfield Program. Phase I and Phase II Environmental Site Assessments are currently complete. City Planning Commission's Brownfield Program applied for and was awarded additional remediation funding in the amount of \$250k from LDEQ to continue remediation support for this culturally and architecturally significant structure. To accept the additional funding, CPCBP is required to submit additional documentation for public review. These documents include the Analysis of Brownfield Cleanup Alternatives or ABCA and an EPA Clean-up Plan.

According to the EPA, the Analysis of Brownfield Cleanup Alternatives (ABCA) is a report that compares site cleanup options based on site-specific conditions, effectiveness, feasibility and cost. The ABCA describes briefly, the background of the site, as well as the current conditions, in addition to evaluating applicable regulations, cleanup standards and potential alternatives. The document is currently available for public comment and review.

According to the EPA, the Clean-up Plan is a document outlining the detailed steps needed to remediate a site contaminated by hazardous waste. The plan commonly includes various stages such as, assessment, remediation, site design and layout, maintenance, community engagement, land use controls and other factors. This plan serves as an important guide and ensures the successful completion of the environmental process. The document is currently available for public comment and review.



ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES

Municipal Auditorium 1201 St. Peter Street New Orleans, Louisiana 70116

LDEQ Agency Interest No. 111362 LaGov Contract No. 2000590641 Work Order No. 55 EPA-LDEQ Cooperative Agreement No. BF-01F96101

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> May 2025 LTBA-035D

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES

Municipal Auditorium 1201 St. Peter Street New Orleans, Louisiana 70116 LDEQ Agency Interest No. 111362

Prepared for: Louisiana Department of Environmental Quality (LDEQ) Baton Rouge, Louisiana

Prepared by:

Madeline Dickson, Project Manager

Approved by:

April 25, 202

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Date

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Figure 1. Site Location Map

Figure 2. Site Vicinity Map

The Analysis of Brownfields Cleanup Activities (ABCA) reported herein was funded wholly or in part through a grant administered to the Louisiana Department of Environmental Quality (LDEQ) through a cooperative agreement between the Environmental Protection Agency (EPA) and LDEQ (EPA CA No. BF-01F96101). The contents of this document do not necessarily reflect the views and policies of the EPA or the LDEQ, nor does the EPA or LDEQ endorse trade names or recommend the use of commercial products mentioned in this document.

1.0 INTRODUCTION

Leaaf Environmental, LLC (Leaaf) has prepared this Analysis of Brownfields Cleanup Alternatives (ABCA) for the Municipal Auditorium (site/property/facility) located at 1201 St. Peter Street, New Orleans, Louisiana 70116. This document was prepared as requested by the City of New Orleans through the Louisiana Department of Environmental Quality's (LDEQ's) Targeted Brownfields Assessment (TBA) Program. The LDEQ TBA is funded by grant monies provided through the Environmental Protection Agency (EPA) cooperative agreement (CA No. BF-01F96101) between the LDEQ and the EPA. The LDEQ requested this document in support of the City of New Orleans' use of the LDEQ's Brownfields Cleanup funding administered by the LDEQ to address asbestos remediation options to facilitate redevelopment of the site. A Site Location Map and Site Vicinity Map are included as Figures 1 and 2, respectively.

Funding for this project was provided by the LDEQ's TBA Program. LDEQ's Brownfields program empowers states, communities, and other stakeholders to work together to assess, clean up, and sustainably reuse Brownfields. A Brownfield is a property where expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The TBA program provides communities with environmental services such as environmental site assessments or investigations, and cleanup planning needed for revitalization projects at no cost to the stakeholders.

Built in 1930, the Municipal Auditorium operated as a former multi-purpose civic center for the City of New Orleans until damage from Hurricane Katrina in 2005 prompted its permanent closure and subsequent deterioration. Environmental investigations completed by Materials Management Group, Inc. (MMG) from 2010 through 2015 and a Phase II Environmental Site Assessment (ESA) completed by Leaaf in 2024 have confirmed the presence of asbestos containing materials (ACM) at the site.

The objective of this ABCA is to identify and evaluate cleanup options to address ACM in building materials impacted as part of the roofing stabilization project to facilitate redevelopment of the property.

2.0 BACKGROUND

2.1 General Site Description and Location

The Municipal Auditorium building, formerly named the Morris F.X. Jeff Auditorium, is located at 1201 St. Peter Street, New Orleans, Orleans Parish, Louisiana 70116 in the Treme neighborhood of New Orleans (Figures 1 and 2). The Municipal Auditorium property is bordered by St. Ann Street to the northeast, N. Rampart Street to the southeast, St. Peter Street to the southwest, and Treme Street to the northwest. The Municipal Auditorium is a five-story concrete structure that features a large, enclosed arena space with tiered seating around the perimeter and a basement. A two-story annex structure is attached to the west rear side of the building. The Municipal Auditorium has remained vacant since Hurricane Katrina in August 2005.

2.2 Previous Land Use

The Municipal Auditorium was constructed in 1930 as a multi-purpose civic center for the City of New Orleans and provided a large public space for special events. The building was used as a

temporary casino and hockey rink in the 1990s and has remained vacant since August 2005 following significant damage from Hurricane Katrina.

2.3 Current Land use

The onsite building has remained vacant since August 2005 following significant damage from Hurricane Katrina. The site is currently unoccupied.

2.4 Future Land Use

The City of New Orleans plans to remove ACM that will be impacted as part of the roofing stabilization project at the site to facilitate redevelopment of the property. The roofing stabilization project includes, but is not limited to, demolition, roofing structure repairs, and new roofing system for the entire building, as required for a weathertight roof. The planned reuse of the property is to restore the auditorium.

2.5 Summary of Previous Assessments

MMG performed environmental investigations at the site from 2010 through 2015 which confirmed the presence of ACM on the interior and exterior of the building, as well as lead-based paint (LBP) and indoor mold throughout the building. In 2015, MMG oversaw a third-party contractor perform LBP stabilization and ACM abatement activities at the site. Stabilization of LBP (removal of loose and flaking paint, cleaning of area, and repainting of stabilized area with conventional painting primer) was conducted on all floors on a variety of building and structural components including, but not limited to, walls, ceilings, windows, doors, and support columns. Abatement of ACM was also conducted on all floors, but the work was limited to the removal of flood damaged thermal system insulation (TSI), ceiling texture, and 9" x 9" floor tiles in select areas as approved by the Federal Emergency Management Agency (FEMA).

In January 2024, Leaaf conducted a Phase II ESA at the site to determine the presence and quantity of ACM and LBP, and to identify suspect mold impacted and/or moisture impacted building components prior to future redevelopment and renovation of the property.

2.5.1 Asbestos-Containing Materials

ACM has been identified at the site based on previous asbestos surveys. Results of the asbestos surveys indicated that friable and non-friable ACM are present in building materials sampled throughout the property. This plan is addressing only those materials sampled for the building's roofing system expected to be impacted by the roofing stabilization project.

As documented in Leaaf's Phase II ESA Report (dated 2024) and the City of New Orleans Morris F.X. Jeff Municipal Auditorium FEMA Stabilization Package 1 - Roofing (Section 028200 - Asbestos Abatement: Roof Replacement Package), a summary of ACM identified at the site that will be impacted as part of the roofing stabilization project is presented below:

Table 1. ACM Summary

Material	Location	% Asbestos	Condition	Estimated Quantity	
Parapet Wall / ACM associated with Parapet Wall	Roof throughout	2% - 5% Chrysotile	Non-Friable, Poor Condition	3,500 linear feet (LF)	
Roof Edge / ACM Roofing Components	Roof throughout	1% - 3% Chrysotile	Non-Friable, Poor Condition	118,000 square feet (SF)	
Roof Debris	Roof throughout	5% - 10% Chrysotile	Non-Friable, Poor Condition	22,750 SF	
Black/Gray Wall Caulk	Annex Roof 11	1.5% - 3% Chrysotile	Non-Friable, Poor Condition	6 LF	
Silver Duct Wrap	Annex Roof 12 HVAC	5% - 6% Chrysotile	Non-Friable, Poor Condition	8,400 SF	
Gray Corrugated Transite Panel	Annex Roof 12	20% Chrysotile	Non-Friable, Poor Condition	300 SF	
Total ACM	Parapet Wall / ACM associated with Parapet Wall – 3,500 SF Roof Edge / ACM Roofing Components – 118,000 SF Roof Debris – 22,750 SF Wall Cauk – 6 LF Duct Wrap – 8,400 SF Corrugated Transite Panel – 300 SF				

2.6 Exposure Pathways of Concern

The sources of potential health risks at the site include ACM that will be impacted as part of the building's roofing stabilization project.

ACM poses a concern as asbestos minerals are easily separated into microscopic size particles that can become airborne and are easily inhaled. Diseases associated with exposure to asbestos include asbestosis, mesothelioma, and lung cancer. Exposure to asbestos is most likely to occur if ACM is significantly damaged or has the potential to become significantly damaged and become friable. Direct exposure pathways include inhalation and/or ingestion of airborne particles by people performing demolition or renovation within the building. Indirect exposure pathways include transport of fibers on the clothing or hair of people within the building and subsequent inhalation/ingestion by people with whom they come in contact.

2.7 Objectives

The planned reuse of the property is to restore the auditorium. The objective of the Cleanup Plan will be to remove hazardous materials and their associated health risks to allow for unrestricted renovation of the existing exterior roofing system of the entire building. The objective of this ABCA is to identify and evaluate cleanup alternatives to address the ACM that will be impacted as part of the roofing stabilization project to facilitate redevelopment of the property.

It should be noted that for this ABCA, ACM not impacted as part of the roofing stabilization project have been excluded from the evaluation of proposed remedial action alternatives as asbestos

remediation of ACM identified for the exterior envelope and building interior are not required prior to the roofing stabilization project scope of work. The roofing stabilization project scope of work will disturb ACM identified on the exterior roof of the building only, and any ACM identified on the exterior envelope and building interior may remain in place without restricting demolition of the existing roofing system, roofing structure repairs, and new roofing system for the entire building.

3.0 IDENTIFICATION AND ANALYSIS OF REMEDIAL ACTION ALTERNATIVES

Cleanup alternatives were evaluated with specific consideration of applicable federal and state regulations regarding the presence and cleanup of asbestos. Regulations that govern these activities include:

- EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Part 61, Subpart M)
- Occupational Safety and Health Administration (OSHA) Asbestos in Construction Regulations (29 CFR 1910.134)
- LDEQ Emissions Standards for Asbestos (LAC 33:III.5151)
- State of Louisiana Contractors Licensing Law and Rules and Regulations (La. R.S. 37:2150 – 2165)

3.1 Identification and Description of Remedial Action Alternatives

Three alternatives have been identified as viable remedial action alternatives for the ACM identified at the Municipal Auditorium. These alternatives are:

- No Action Alternative
- Removal of all ACM
- Removal of High-Risk ACM

Additional information regarding each of these alternatives is discussed below.

3.1.1 No Action Alternative

The No Action Alternative must be considered as part of the ABCA process. This alternative involves no remedial activity; therefore, the building would be left in its current condition.

3.1.2 Removal of All ACM

This alternative would involve abatement and removal of all ACM identified in previous asbestos surveys that will be impacted as part of the building's roofing stabilization project. Per the architectural plans provided by VergesRome Architects, all parapet wall / ACM associated with parapet wall, roof edge / ACM roofing components, roof debris, wall caulk, duct wrap, and corrugated transite paneling will be abated prior to the roofing stabilization project which includes the demolition of the existing roofing system, roofing structure repairs, and new roofing system for the entire building. This alternative would provide weather resilience (protection against adverse impacts due to extreme weather events), as all ACM will be removed to allow for construction of the new roofing system. Prior to commencement of abatement activities, an Asbestos Abatement Plan will be prepared. If the intended reuse meets the definition of a school or state building, an asbestos abatement Project Designer, certified in accordance with LAC 33.III.2799, will need to approve the Asbestos Abatement Plan. The plan will include the scope of

work, methods to be utilized, and specifications regarding project monitoring and clearance sampling.

All removal, abatement, transportation, and disposal activities will be conducted by licensed firms and certified individuals. All waste materials generated because of the abatement activities will be transported to an offsite facility permitted to accept the type of waste to be disposed of.

3.1.3 Removal of High-Risk ACM

This alternative includes removal of materials which will present a high-risk during future renovation activities at the site but would limit the scope of current renovation plans. The ACM that is in poor condition will be abated, but the structural roof components with ACM will remain in place. The following high-risk ACM will be removed during abatement activities: roof debris, wall caulk, duct wrap, and corrugated transite paneling. The planned roofing stabilization project scope of work includes but is not limited to demolition, roofing structure repairs, and a new roofing system for the entire building. The removal of high-risk ACM would not include the parapet wall / ACM associated with the parapet wall and roof edge / ACM roofing components, which would impact the planned renovation of the roof. Roofing materials would remain in place, prohibiting the City of New Orleans from replacing the roof structure at this time. This alternative would provide limited weather resilience, as the new roofing system could not be constructed as planned. Prior to commencement of abatement activities, an Asbestos Abatement Plan will be prepared. If the intended reuse meets the definition of a school or state building, an asbestos abatement Project Designer, certified in accordance with LAC 33.III.2799, will need to approve the Asbestos Abatement Plan. The plan will include the scope of work, methods to be utilized, and specifications regarding project monitoring and clearance sampling.

All removal, abatement, transportation, and disposal activities will be conducted by licensed firms and certified individuals. All waste materials generated because of the abatement activities will be transported to an offsite facility permitted to accept the type of waste to be disposed of.

3.2 Evaluation of Alternatives

Each of the remedial alternatives identified were assessed for effectiveness, implementability, and costs. The cost estimates presented below are preliminary estimates based on visual observations and sampling of building materials, publicly available cost information from similar projects, and general discussions with abatement contractors. Conservative assumptions were used in development of the costs; however, actual costs may vary based on final remediation/renovation plans and site-specific characteristics. These preliminary ABCA cost estimates are intended for planning purposes and should be used for relative comparison only.

3.2.1 No Action Alternative

Under the no action alternative, the presence of ACM in the building would continue to pose potential long-term health risk to the public. The building would remain in its present condition making it unusable for the proposed reuse due to the potential health risks. This alternative is not considered effective, as the toxicity of the materials would not decrease over time. Rather, as the materials further deteriorate, exposure to these hazards will increase. There are no costs associated with the no action alternative. However, over a period of time, cleanup costs will become higher as the building materials further deteriorate. Therefore, no action is not considered a feasible alternative.

3.2.2 Removal of All ACM

This alternative would provide short- and long-term effectiveness as all ACM would be permanently removed. This alternative is implementable and the most feasible remedial option since removal of the ACM building materials must be accomplished prior to demolition of exterior roof as required under LAC 33:III.5151.

Costs associated with complete removal, including disposal (except as noted), are itemized below:

Removal of all ACM: Total \$1,498,636.00

- Complete abatement and removal of approximately 3,500 LF of ACM parapet wall / ACM associated with parapet wall: \$35,000.00
- Complete abatement and removal of approximately 118,000 SF of ACM roof edge / ACM roofing components: \$1,180,000.00
- Complete abatement and removal of approximately 22,750 SF of ACM roof debris: \$227,500.00
- Complete abatement and removal of approximately 6 LF of ACM wall caulk: \$36.00
- Complete abatement and removal of approximately 8,400 SF of ACM duct wrap: \$25,200.00
- Complete abatement and removal of approximately 300 SF of ACM corrugated transite panel: \$900.00
- Perform asbestos air monitoring/contractor observation during asbestos abatement work (up to 20 days on site): \$30,000.00 (not included in estimated cost)
- Clearance sampling \$1,500 \$3,000 per containment (not included in estimated cost)

3.2.3 Removal of High-Risk ACM

This alternative is cost effective but would provide short-term effectiveness as only some ACM would be permanently removed and the structural ACM on the roof itself would remain in place. This alternative would be ineffective based on the City of New Orleans' plan to demolish the existing exterior roof to repair and renovate the structure. This alternative is not a feasible remedial option since abatement and disposal of all ACM building materials must be accomplished prior to demolition of exterior roof as required under LAC 33:III.5151.

Costs associated with removal of high-risk ACM (except as noted) are itemized below:

Removal of high-risk ACM: Total \$253,636.00

- Complete abatement and removal of approximately 22,750 SF of ACM roof debris: \$227,500.00
- Complete abatement and removal of approximately 6 LF of ACM wall caulk: \$36.00
- Complete abatement and removal of approximately 8,400 SF of ACM duct wrap: \$25,200.00
- Complete abatement and removal of approximately 300 SF of ACM corrugated transite panel: \$900.00
- Perform asbestos air monitoring/contractor observation during asbestos abatement work (up to 20 days on site): \$30,000.00 (not included in estimated cost)
- Clearance sampling \$1,500 \$3,000 per containment (not included in estimated cost)

4.0 RECOMMENDED REMEDIAL ACTION ALTERNATIVE

Based on the information discussed in the previous sections, three remedial action alternatives for ACM were evaluated for effectiveness, implementability, and cost. The No Action Alternative is the least favorable, as it is not effective in protecting human health or the environment and will not allow for the proposed reuse or future weather resilience of the building. The removal of all ACM is protective of human health and the environment as it removes all ACM as required for renovation and demolition of the exterior roofing system and provides future weather resilience. It is the costliest of the three alternatives but is the most feasible option to allow for the roofing stabilization project (demolition of the existing roofing system, roofing structure repairs, and new roofing system) to facilitate redevelopment of the property.

The removal of high-risk ACM is less costly than complete removal, but it is ineffective based on the City of New Orleans' plan to demolish the existing exterior roof and provides limited future weather resilience. Due to the roofing stabilization project scope of work, removal of all ACM is the recommended option. Should the City of New Orleans decide to fully renovate rather than demolish the building's roof, then the removal of high-risk ACM would be the recommended alternative.

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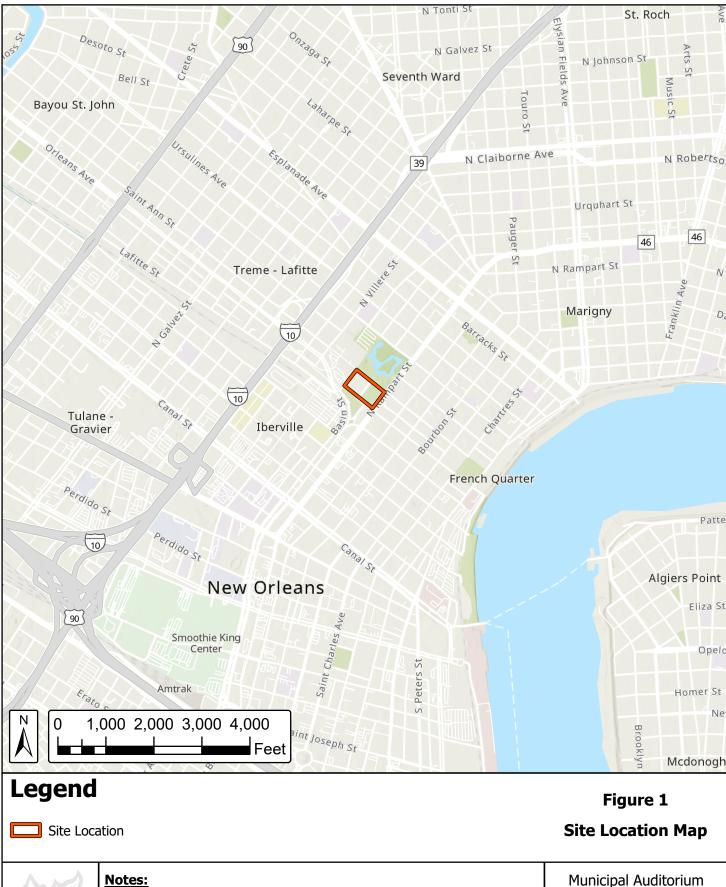
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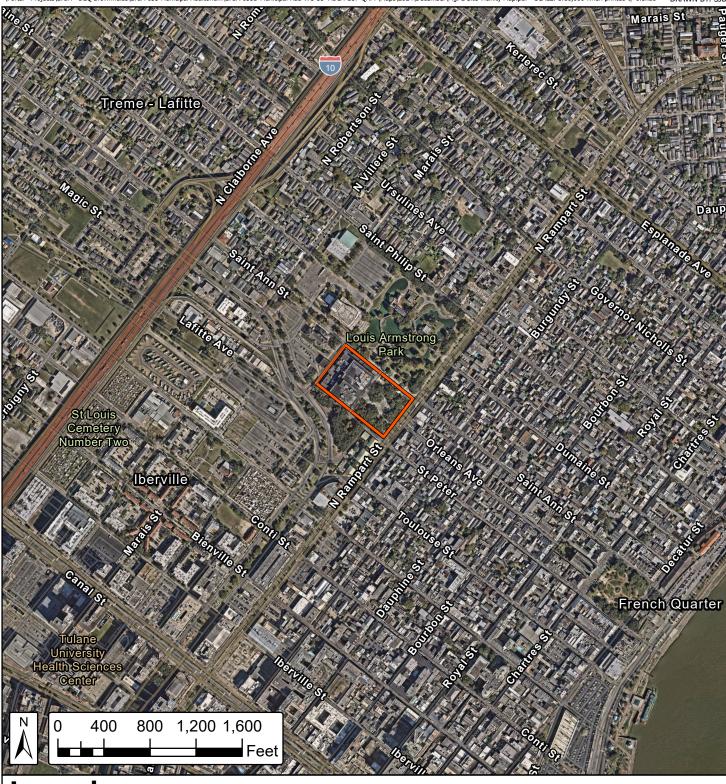
Figures

Figure 1. Site Location Map Figure 2. Site Vicinity Map

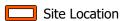


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Legend



Site Vicinity Map

Figure 2



Notes:

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