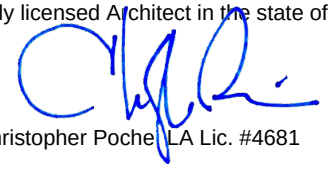
# LSUHSC New Orleans

# CALS PLANT BUILDING DEMOLITION

# PROJECT MANUAL

LSUHSC New Orleans

I certify that these specifications were prepared by me or under my direct supervision and that I am a duly licensed Architect in the state of Louisiana.



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2110 Gravier Street

New Orleans,LA 70112

November 13, 2025

LSU Health NEW ORLEANS
Property and Facilities

# LSUHSC – NO DOWNTOWN CAMPUS
# CALS Plant Building Demolition
# New Orleans, Louisiana

Outline Specifications

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## DIVISION 1 - GENERAL REQUIREMENTS

01000 - Summary

Quote your price to furnish all labor, materials, equipment, and expertise necessary for this construction project. The successful bidder will furnish all necessary components and devices as required by the plans and specifications and as required to meet the intent of the specifications for a complete and finished space acceptable for occupancy. This work is to be performed at the **LSUHSC CALS Plant Building at 2110 Gravier St., New Orleans, LA 70112.** The Contractors price must be firm and not subject to change for a period of thirty days (30) from the date of the bid opening. The University reserves the right to reject any and all bids at its discretion. After the job has been awarded, no changes will be made to any part of the job without written approval from the Construction Coordinator.

01001 – Approved Manufacturers, Materials, Products and Service Representatives

Approved manufacturers, materials, products, and service representatives are not meant to exclude other manufacturers, materials, products, and service representatives. It is meant to set a standard for acceptance. Cited throughout the specifications and on the drawings are approved manufacturers, materials, products and service representatives. This list is not meant to be exhaustive of all manufacturers, materials, products and service representatives required to complete this project.

Manufacturers, materials, products or service representatives not listed as approved or mentioned in the specifications or on drawings as being equal must be submitted for approval, prior to bid. Substitution of a non-approved manufacturer or service company will disqualify the contractor's bid.

01010 – Scope of Work

**BASE BID**

Provide all labor, material, equipment and expertise necessary to demolish and dispose of all items in the designated areas in accordance with the attached drawings and specifications herein.

1. Please read attached Asbestos and Lead Base Paint Reports and perform all abatement work before any demolition activities.
2. Make sure all utilities are de-energized and valved off before demolishing any electrical or mechanical systems.
3. Provide temporary barriers to protect pedestrians and vehicles during demolition.
4. Provide Traffic control at Gravier Street and S. Prieur Street during demolition activities.
5. Protect existing underground utilities that are to remain. (Reference site plan for approximate location)
6. Demolish and remove from site pipe enclosure and all associated piping, demolish concrete base below grade and seal opening at tunnel. (protect existing walkway)
7. Demolish and remove from site: plant building, equipment, site paving, fuel tanks, underground fuel / water separator tank and fencing. ( Reference site photos)

8. Supply and Install fill in demolished area to bring back up to natural surrounding grade; please refer to highlighted specs section on fill type and installation procedures
9. Install Zoysia Sod over entire area impacted by demolition and water periodically as necessary to establish growth.
10. Extend sidewalk and curb at S. Prieur (Reference site photos)
11. Clean site and remove all leftover debris and construction material. Make repairs to any areas, buildings, or property damaged by demolition.

**Notice to Successful Bidder: This Project is expected to be completed exactly 120 days after the issuance of the notice to proceed.**

01020 - Intent

1. In all areas, the intent of this specification is to provide modified spaces that have a neat, finished appearance. All trim, transitions, caulking, patching, and similar work shall be included unless specifically excluded from this specification.
2. All drawings provided by LSUHSC indicating the location and dimensions of spaces and equipment are meant as a guide to the contractor. It is the responsibility of the contractor to verify all dimensions and job site conditions that may affect the cost of the project. Verification of job conditions and dimensions prior to bid is the responsibility of the contractor.
3. The intended designated representative of the University for this Project is Stacey Coe. Any changes to the scope of work, type or quality of materials, or scheduling must be submitted to the designated representative of the University. Stacey Coe may be contacted via phone at 504-655-0143

   Mail should be addressed to:
   Stacey Coe, Construction Coordinator
   LSU Health Sciences Center
   Department of Facility Services
   1901 Perdido Street
   New Orleans, LA 70112

4. Drawings and specifications are intended to provide the basis for the proper completion of the project suitable for the intended use of LSU Health Sciences Center.
5. Items not expressly set forth but which are reasonably implied or necessary for the proper performance of this work shall be included.
6. All items specified as needing to be “installed”, or “new”, shall be supplied by the contractor unless otherwise specified.
7. The use and/or inclusion of any hazardous materials, including, but not limited to, asbestos, PCB, or any other hazardous substance which is forbidden by state or federal regulations, laws, or codes is expressly forbidden. If these materials are found to be present as part of the material or equipment supplied, or if existing hazardous materials were disturbed as part of the work done, all remedial actions, fines, and expenditures shall be borne by the contractor.
8. All workmanship and materials required to complete this project shall be guaranteed free from defects for a period of one (1) year from date of acceptance of the Project.

01030 – Termination by the Owner for Convenience

1. The owner may, at any time, terminate the Contract for the Owner's convenience and without cause.
2. Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall: cease operations as directed by the Owner in the notice; take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
3. In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed along with reasonable overhead and profit.
4. Owner shall not be responsible or otherwise liable for any demobilization costs or incidental or consequential damages resulting from such termination.

01035 – Termination for Noncompliance

LSUHSC may terminate this Contract for cause based upon the failure of the Contractor to comply with the terms and/or conditions of the Contract; provided that LSUHSC shall give the Contractor written notice specifying the Contractor's failure. If within thirty (30) days after receipt of such notice, the Contractor shall not have either corrected such failure or, in the case which cannot be corrected in thirty (30) days, begun in good faith to correct said failure and thereafter proceeded diligently to complete such correction, then LSUHSC may, at its option, place the Contractor in default and the Contract shall terminate on the date specified in such notice. The Contractor may exercise any rights available to it under Louisiana law to terminate for cause upon the failure of LSUHSC to comply with the terms and conditions of this contract; provided that the Contractor shall give LSUHSC written notice specifying LSUHSC's failure and a reasonable opportunity for LSUHSC to cure the defect.

01040 - Coordination of work

1. Coordinate the work of all trades.
2. Work performed outside of the designated project area, or work in the area that will impact adjacent areas, i.e. floor above, floor below, etc., must be scheduled before or after normal working hours (8:00 am- 4:30 PM) or on weekends; must be submitted in writing seventy-two (72) hours in advance and coordinated with the Construction Coordinator.
3. LSU Health Sciences Center is a twenty-four (24) hour a day, three hundred and sixty-five (365) days a year operation. The Construction Coordinator and the Associate Director of Planning and Construction must approve any utility outage and any demolition or renovation work that will interfere with the normal operation of the facility or its personnel.
4. All requests for outages must be submitted in writing seventy-two (72) hours in advance of any planned utility outage. Utility outages may have to be scheduled before or after normal working hours (8:00 am- 4:30 PM) or on weekends. The Construction Coordinator, based on the length and scope of the outage required, will determine the time and date of the requested outage.
5. Prepare coordination drawings for areas where close tolerances are required between

building elements and new installations.

6. Verify location of all utilities i.e. gas, vacuum, air, water, drains, electric, etc and existing conditions. Notify the Construction Coordinator of conditions that may require any deviation from the specified locations shown on the drawings.
7. Verify dimensions on drawings with dimensions at the project site. Do not scale drawings.
8. The University shall give the successful bidder access to the area to be renovated in such a manner that the work will be completed in a timely fashion with a minimum of disruption to the normal flow of business. The timing and sequence of the work will be coordinated by the Construction Coordinator and discussed during the pre-bid and/or pre-construction meeting.
9. The Construction Coordinator will be notified before any work is done which will create noise, smoke and/or dust, or involve soldering, welding, or other heat or flame-producing process. The Contractor will file a Hot Work Permit with LSUHSC seventy-two (72) hours prior to beginning any of the work mentioned in this paragraph. A fine of $500 per incident will be due from the contractor for each incident where the work performed in the execution of his contract, causes a false alarm on the fire and smoke detection system in the building because the above-mentioned people were not notified before starting the work, and a Hot Work Permit was not filed before starting the work.
10. All work must be performed in accordance with all applicable state, and federal codes, laws, regulations and ordinances. Knowledge of existing codes, laws, regulations and ordinances pertaining to the above work is the responsibility of the contractor.

<u>01060 - Special Project Information</u>

1. The successful bidder warrants to the LSUHSC that the workmen used on the job are regularly employed by his company or his subcontractor's company or companies. Further, the successful bidder warrants that craftsmen skilled in the trades necessary to complete the work will perform all skilled work on the job. Laborers and unskilled workmen will not be used under any circumstances to perform tasks requiring a skill such as carpentry, roofing, or plumbing. The foregoing examples of skilled trades are intended as examples only, and do not constitute a complete list of skilled trades.
2. The University reserves the right to examine the contractor's past payroll records and those of any subcontractor to determine whether the employees being used on the contract are regularly employed. The University also reserves the right to question the use of an employee whom it feels is unskilled or untrained on a task that requires a skill. If the bidder intends to use laborers or unskilled workmen on any aspect of the contract, the bidder must furnish a list of the tasks to be performed by said laborers and unskilled workmen with their bid.
3. If the contractor or subcontractor(s) are required to replace any employees because of their failure to comply with these requirements, any time lost on the job shall be the responsibility of the contractor and shall not be an acceptable reason for requesting extensions of any completion deadlines or waiver of any liquidated damages specified elsewhere in the bid specifications.
4. All equipment, fixtures, and other salvageable materials removed are the property of the University and must be turned over to the University, unless otherwise stated in the bid documents.
5. Where equipment is furnished as part of the bid, the contractor must be equipped to provide

prompt factory authorized and qualified local service. Service manuals for all furnished equipment must be supplied as part of the project. These manuals must include blueprints and schematics of the equipment supplied. The job will not be considered complete until the required manuals and schematics have been supplied to the University.

6. The University reserves the right to reject any and all bids at its discretion.
7. After the job has been awarded, no changes will be made to any part of the job without written approval from the Associate Director of Planning & Construction. The proposed change will be submitted in writing, with a complete breakdown of all material and hours, and the individual cost of each.
8. No notice of completion, delivery memo, invoice, or other document will be signed, or approvals of any type given for any part of the job or delivery of any equipment or materials, except by the Associate Director of Planning and Construction, or his designee, such designation to be made in writing and signed by the Associate Director of Planning and Construction. All work will be done during normal working hours unless the Associate Director of Planning and Construction grants prior written approval or Section 01010 requires that the work be performed after hours.
9. When a discrepancy or ambiguity arises between the written specifications and the drawings, the specifications, shall govern.

<u>01080 - Cutting and Patching</u>

1. Provide cutting and patching work to properly complete the project.
2. Do not remove or alter structural components without written approval.
3. Cut with tools appropriate for materials to be cut.
4. Employ skilled and experienced installers to perform cutting and patching for weather exposed and moisture resistant elements, and sight exposed surfaces.
5. Execute patching to complement adjacent structures/improvements.
6. Patch with materials and methods to produce patch, which is not visible from a distance of five feet.
7. Do not patch in a manner that would result in a failure of the work to perform as intended, decrease fire performance, decrease weather performance, decrease energy performance, decrease operational life, or decrease safety factors.
8. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

<u>01100 - Field Engineering</u>

1. **All drawings are for reference only. The contractor is responsible for field verification of all dimensions and job site conditions that may affect the cost of the project.**
2. Verify and locate utilities, existing facilities, and equipment.
3. Inspect, examine, and layout improvements, utilities, structures, and components.

<u>01120 - Project Administration and Meetings</u>

1. Arrange for a pre-construction conference prior to start of construction.
2. Owner, the Construction Coordinator, contractor and major sub-contractors shall attend

meetings.
3. Arrange for progress meetings during construction prior to application for payment.
4. Record and distribute minutes promptly.
5. **A site visit is required to submit a bid.** All bidders must visit the site to determine the scope of the job. Failure to do so will be grounds for rejection of the bid. No allowances for previously existing site conditions will be made after the bid. It is the responsibility of the bidder to thoroughly inspect the site to determine any and all factors, which will affect the bid.

01130- Contractor's Construction Schedule

1. Gantt Chart Schedule: Prepare a fully developed bar-chart type contractor's construction schedule. Submit within seven (7) days of written request from the Construction Coordinator.
2. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to indicate the first working day of each week.
3. Schedule Updating: Revise the schedule after each meeting, event, or activity where schedule revisions have been recognized or made. Distribute updated schedule within seventy-two (72) hours to Construction Coordinator for review.

01140 –Shop Drawings and Submittals

1. Any proposed change order submittals must be submitted in writing, with a breakdown of materials and labor, and the individual cost of each task.
2. Submit a project schedule and update at least monthly.
3. Submit for review three (3) copies of the following:
   a. Product samples where applicable
   b. Test reports
   c. Warranties
   d. Other submittals as requested by the Construction Coordinator.
4. Clearly indicate any deviations from requirements of the contract documents.

01160 - Quality assurance

1. Comply with applicable codes, regulations, ordinances and requirements of authorities having jurisdiction, including accessibility guidelines where applicable.
2. Provide products of acceptable manufacturers that have been in satisfactory use in similar service for three years.
3. Submit copies of inspection reports, notices and similar documents to the Construction Coordinator.
   a. Use experienced installers. Furnish evidence of experience if requested.
   b. Deliver, handle, and store materials in strict accordance with manufacturer's instructions.
   c. Use of any supplier or subcontractor is subject to owner's approval.
   d. Engage and pay for testing agencies as required. Refer to individual sections for additional requirements.
   e. All normal factory warranties will apply. In addition, the successful bidder will warrant all work performed for a year from the date of acceptance by the University. The

contractor must have a service representative who will respond to warranty calls within twenty-four (24) hours of the time the call is placed.

f. Flammable chemicals are used in the Health Sciences Center. While the work is being done, especially cutting, welding, and painting, adequate ventilation must be provided to prevent the accumulation of smoke, fumes, or vapors, which could be annoying or hazardous. All normal precautions associated with cutting, welding, painting, and other work performed will also be taken to protect the safety of the building, its occupants and the contractor's workers.

01180 - Temporary facilities, utilities, and operations

1. Provide temporary facilities, connections and lighting as required for the proper completion of the project.
2. Provide temporary protection for adjacent areas to prevent contamination by construction dust and debris.
3. Should the area beyond the work area(s) become contaminated with dust or debris as a consequence of the work; the contractor will clean and decontaminate these areas at no additional cost, to the satisfaction of the Construction Coordinator.
4. The contractor will coordinate with LSUHSC maintenance personnel the disconnection of power, water, gas, drain, air and /or other utilities and services in the work area.
5. Provide suitable waste disposal units and empty regularly. Do not permit accumulation of trash and waste materials.
6. Maintain egress within and around construction areas.
7. Maintain fire alarm systems in operation during construction.
8. Provide temporary protection for adjacent construction/utilities. Promptly repair any damage, at no additional cost to the owner.

01200 – Products and Substitutions

1. Requests for substitutions shall be in writing, including reasons. Submit sufficient information for the Construction Coordinator to evaluate proposed substitution.
2. Proposed substitutions shall include complete submittal data, as specified herein, clearly denoting any and all deviations and/or exceptions to the equipment specified.
3. Provide products and materials specified. Request the Construction Coordinator's selection of colors and accessories in sufficient time to avoid delaying progress of the work.
4. Remove and replace work that does not conform to the contract documents at no additional expense to the owner.
5. Where specific materials or equipment are specified, changes or substitutions must be equal or greater in quality and/or quantity, and must meet or exceed all specifications for the item specified. The Construction Coordinator will make the decisions on approvals.

01220 - Installation

1. Inspect substrates and report unsatisfactory conditions in writing.
2. Do not proceed until unsatisfactory conditions have been corrected.
3. Take field measurements prior to fabrication where practical. Form to the required shapes

and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
4. Install materials in exact accordance with manufacturer's instructions and approved submittals.
5. Install materials in proper relation to adjacent construction and with proper appearance.
6. Restore items damaged during installation. Replace items that cannot be restored; at no additional expense to the owner.
7. Refer to additional installation requirements and tolerances specified under individual specification sections.
8. All debris, trash and packing materials resulting from the work described above must be removed from University property and disposed of properly by the successful bidder. The use of the University's trash compactors or trash containers is strictly forbidden. A $100 fine per incident will be subtracted from the total cost of the job if debris generated by this contract is found in the University's trash containers.
9. The work must be complete and ready to be used by the University.
10. University equipment, tools and personnel will not be used for any part of the job, unless such use and the conditions of use are stated in the contract documents.
11. All equipment installed and all other work done must be done in a way that will allow sufficient room for service and maintenance on all equipment, both that installed under this contract and existing. If there are questions and/or problems regarding available space for servicing equipment, they must be addressed to the Construction Coordinator prior to performing the work.

<u>01600- Site Usage</u>

1. Measures of Protection: Provide adequate barricades and other necessary measures to ensure the safety to all persons and property adjacent to the site throughout the life of the contract.
2. The contractor will follow all applicable federal, state and local regulations, including OSHA, in the course of all work. The contractor will also comply with the LSUHSC New Orleans Contractor Safety Guidebook and the policies it references. The Guidebook is attached in Appendix A.
3. Store materials and construction equipment at the site in areas designated or in areas, which will not interfere with adjacent areas, construction operations, site access, or endanger LSUHSC personnel, equipment or property.
4. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction space.
5. Schedule daily clean-up of the worksite to prevent safety hazards and the accumulation of dust and debris.
6. Access to site: Workers are to remain in designated work/staging area. Workers are not to wander about the site.
7. Parking: There is no parking provided to the contractor.

<u>01940 – Project Closeout</u>

1. Prepare punch-list of remaining work for review by the Construction Coordinator.
2. Complete punch-list items promptly at no additional expense to the owner.

3. Remove temporary facilities and provide final cleaning and touch-up.
4. The successful bidder shall be responsible for any alterations to the building, grounds, or property of LSUHSC New Orleans. Alterations shall be made only when necessary for the completion of the work specified and will be discussed beforehand with the Construction Coordinator. The finished work shall match the look, style, color, and function of the building.
5. The job must be completed in 120 calendar days from the date of the notice to proceed, or the successful bidder will pay damages of five hundred dollars ($500) per calendar day over the specified time.

## DIVISION 2 – SITE WORK

02010 - Demolition General Conditions

The General Conditions, Amendments, associated drawings and Division 1 of the Specifications apply to all work under this Division.

02020 - Scope

Work required under this Section consists of all demolition required necessary to complete the work indicated on drawings and/or described in these Specifications.

Without restricting volume or generality of above, work to be performed under this section shall include, but is not limited to the following:

### Part I – General

- **Submittals**
  - A Construction Equipment List shall be submitted within 7 days of the request of the Construction Coordinator.
  - Contractor shall record Existing Conditions prior to starting work in accordance with the paragraph entitled, "Existing Conditions," of this section.
  - Contractor shall submit a detailed Demolition Plan of the work procedures and safety procedures to be used throughout the project.
    - Demolition and safety plans shall be submitted and reviewed by Construction Coordinator prior to beginning work.
  - Pre-demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by demolition operations. Submit before work begins.

- **Disconnecting Utilities**
  - The Contractor will disconnect and cap utilities serving each structure to be demolished prior to the start of demolition.
  - The Contractor shall obtain and provide written releases for each utility or service connection within the structure i.e. water, gas, electricity, sewer, etc., and ensure that the respective connections have been removed and sealed or plugged.

- **Precautions Against Movement**
  - Shoring and bracing or other support shall be provided as necessary to prevent movement, settlement, or collapse of a structure to be demolished and of facilities to remain.

- **Rodent And Vermin Extermination**
  - Rodents and vermin shall be exterminated in the buildings to be demolished in accordance with local health laws and regulations. Exterminator shall be licensed or certified by the state or local government to provide extermination services.

- **Construction Equipment List**
  - A Construction Equipment List of all major equipment to be used in this section shall be submitted to the Construction Coordinator prior to construction.

- **Demolition Plan**
  - Contractor shall prepare and submit a detailed Demolition Plan of the work procedures to the Construction Coordinator prior to the commencement of any demolition work. The plan shall be according to OSHA regulations 29 CFR 1926, Subpart T.

- **Hazardous Waste Disposal**
  - The Contractor shall be responsible for the proper management and disposal of all debris and waste generated from demolition of the structure in accordance with all applicable federal, state, and local regulations, codes, and authorities having jurisdiction.

- **Safety Plan**
  - Contractor shall submit a Safety Plan outlining the safety precautions to be taken for each phase of the demolition.

- **Existing Conditions**
  - Existing Conditions shall be recorded by the Contractor, in the presence of the Construction Coordinator, showing the condition of structures and other facilities adjacent to areas of alteration or removal. As applicable, such record shall contain the elevation of the top of foundation walls, the location and extent of cracks and other damage, and description of surface conditions that exist prior to the start of work. Copies of the record shall be submitted and the stated conditions shall be verified before starting work.

**Part II – Products**

- **Fill Material**
  - Fill material shall conform to the definition of satisfactory soil material as defined in AASHTO M 145. In addition, fill material shall be non-expansive, free from roots and other organic matter, trash, debris, frozen materials, and stones larger than 2 inches in any dimension.

**Part III – Execution**

- **Concurrent Earth-moving Operations**
  - Excavation, filling, and other earth-moving operations that are sequential to demolition work shall not be started in areas occupied by structures to be demolished until all demolition in the area has been completed and debris has been removed.

- **Dust Abatement**
  - Dust and dirt rising during demolition operations shall be effectively controlled by water sprinkling or other approved method.

- **Buildings**
  - Demolition shall proceed in a systematic manner from the top of the structure to the ground.

- **Below-grade Construction**
  - Foundations, basement concrete slabs on ground, footings, and other below-grade construction shall be demolished and removed to a depth of not less than 36 inches below the existing grade.

- **Filling Basements And Voids**
  - **Basements and voids, resulting from the demolition of structures, shall be completely filled with acceptable, non-expansive fill material and graded.**
  - **Prior to filling, basements and voids shall be free of standing water, frost, frozen material, trash, and debris.**
  - **Fill material shall be placed in horizontal layers not to exceed 12 inches in loose depth. Each layer shall be compacted to a minimum of 95 percent density of the maximum density as determined by AASHTO T 180, Method D, at optimum moisture content.**

- **Protective Measures**
  - Existing construction shall not be disturbed beyond the extent indicated or necessary for installation of new work. Temporary shoring, sheet piles, and bracing shall be provided for support of building components to prevent settlement, cave-ins, or other
  - movement. Protective measures shall be provided to control accumulation and migration of dust and dirt in all areas of work. Dust, dirt, runoff, and debris shall be removed from the areas of work daily.
  - Use methods to preserve the integrity of adjacent structures in close proximity, or abuts the fabric of the structure being demolished. Manual or hand demolition methods may be required.

- **Scrap Metal**
  - Scrap metal shall become the Contractor's property and shall be removed from the site as it accumulates.

- **Additional Site Work**
  - Fencing, gates, and other miscellaneous items shall be removed. Gates shall be removed as whole units. Chain link fencing shall be cut into fabric lengths of 25 feet and stored in rolls off the ground.

- **Disposal Of Removed Materials**
  - Contractor shall remove debris, rubbish, runoff, and other materials resulting from demolition operations. Removed materials shall not be stored on the project site nor sold on Owner's property.
  - Waste materials, including excavated material classified as unsatisfactory soil material, trash, and debris, shall be removed from Owner's property and legally disposed of by the Contractor.

02050 - Demolition

1. Protect any existing improvements which are to remain. Repair any damage done to streets, sidewalks, or other improvements which are to remain.
2. Except for items or materials indicated to be reused or otherwise indicated to remain the property of the Owner, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.
3. Submit proposed methods and operations of demolition to the Construction Coordinator for review prior to start of work. Include a detailed sequence of demolition and removal work with start and end dates for each activity, pedestrian and/or vehicular traffic safety plan, coordination schedule of proposed utility service interruptions/connections, general and close proximity demolition plan/strategy, and site safety/protection plans.
4. It is the Contractor's responsibility to record, photograph or videotape, sufficiently and in detail, any and all existing conditions of adjoining construction and site improvements that might otherwise be misconstrued as damage caused by demolition operations.
5. Demolish existing building in a systematic manner from the top of the structure to the ground. Demolition works above each floor or tier shall be completed before the supporting members on the lower levels are disturbed. Buildings or the remaining portions thereof, not exceeding 85 feet in height may be demolished by the mechanical method of demolition with prior approval.

02060 - Quality Control

1. Engage an experienced firm that has successfully completed demolition work similar to that indicated for this Project.
2. Comply with governing EPA notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

3. Attend a pre-demolition conference at the project site before beginning demolition operations.
    a. Review methods and procedures related to demolition including, but not limited to, the following:
        - Inspect and discuss condition of construction to be demolished.
        - Review and finalize demolition schedule.
        - Review areas where existing construction is to remain and requires protection.
        - Safety, site usage and staging.

02062 - Job Conditions

1. Conduct demolition operations and the removal of debris and runoff to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
2. Ensure safe passage of persons around area of demolition. Conduct operations to prevent injury to adjacent facilities, and persons. Erect plywood and visqueen barriers on wood framing as necessary to control the spread of dust and dirt, protect the existing improvements from damage, and to ensure the safety of persons around the area being demolished.
3. Use demolition methods which preserve the structural integrity of adjacent structures, and utilize careful removal and handling of building fabric abutting adjacent structures not scheduled for demolition.
4. Promptly repair damages caused by demolition operations to adjacent facilities, structures, or improvements at no cost to the Owner.
5. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.
6. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by the Construction Coordinator and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to the Construction Coordinator and to governing authorities.
7. Provide not less than 72 hours' notice to the Construction Coordinator if shutdown of service is required during changeover.
8. Clean adjacent improvements of dust, dirt, runoff, and debris caused by demolition operations, as directed by the Construction Coordinator. Return adjacent areas to condition of surrounding existing areas prior to the start of the work.
9. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
10. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
11. Remove from site debris, rubbish, and other material resulting from demolition operations. Burning of removed materials from demolished structures will not be permitted on site. Transport materials removed from demolished structures and dispose of off-site in accordance with governing regulations.
12. Notify the Construction Coordinator of discrepancies between existing conditions and Drawings/Specifications before proceeding with demolition.

02070 - Demolition- Special Instructions

1. Protect existing structures, which are to remain, completely remove existing concrete, flooring, and base, topping, finishes and other items in area to be renovated under the Contract, to the extent required to meet the intent of the specifications and drawings. Repair any damage to existing structures caused by over demolition.
2. Include incidental demolition as indicated on the drawings, as necessary to complete the work, and/or as appropriate to meet the scope and intent of the contract.
3. The Contractor shall inspect the complete demolition and layout to determine the nature and location of all conflicts between new and existing construction and correct accordingly.
4. Properly protect all pipes, conduit, wire, equipment and similar existing items, which, are not noted to be demolished or removed.
5. Maintain existing utilities and building services not slated for demolition: keep in service and protect against damage during demolition operations.
6. Do not interrupt existing services serving occupied or used facilities except when authorized by the Construction Coordinator. Provide temporary services as necessary during interruption.
7. Remove abandoned piping, conduit, and similar utility systems, which are uncovered in the course of demolition and removal. Cap and seal ends where systems extend outside the construction area.
8. Seal as required by NFPA, Life Safety Codes all openings around pipes, ducts, conduits and similar utility systems, which extend through partitions, walls and floors to outside the construction area. Similarly seal openings in remaining walls, partitions, and floors, which result from removals.
9. Demolish existing work to be removed completely and remove from site. Use such methods as required to complete within the limitations of governing specifications and requirements.
10. Proceed to demolish in a systematic way.
11. Proceed to demolish in accordance with the guidelines set per plans and specifications.
12. All debris shall be removed from the site by the Contractor and disposed of in a legal manner and in accordance with all regulating authorities.
13. Conduct demolition operations and the removal of debris to ensure minimum interference with adjacent properties and operations.
14. Ensure safe passage of persons around areas of demolition. Conduct operations to prevent damage or injury to adjacent structures, equipment, facilities, and persons.
15. Provide interior and exterior shoring, bracing, or support to prevent movement or collapse of structures to be demolished and to adjacent structures that remain.
16. Clean adjacent structures and equipment of dust, dirt, runoff, and debris caused by demolition operations to the satisfaction of the Construction Coordinator.
17. Return adjacent areas such as streets, sidewalks, and landscaping areas to the condition that existed prior to the start of the work unless otherwise specified.
18. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in the air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
19. No vending of material is permitted on the project site.

02210 – Site Restoration General Conditions

A. The General Conditions, Amendments, associated drawings and Division 1 of the Specifications apply to all work under this Division.

02220 - Scope

A. Site preparation required for work under this Section includes, but is not necessarily limited to, replacement of undesirable areas of existing sub-grade, grading of sub-grade to provide site drainage, and installation of seeding.
B. Wherever reference is made to Standard Specifications, such reference is to the 2000 Edition or latest revision thereof of "Standard Specifications for Roads and Bridges," by the Office of Highways, Department of Transportation and Development, State of Louisiana.

02230 – Fill Material

A. Fill material for soft spots, if required, shall be crushed limestone or recycled concrete.

02240 – Sub-grade Preparation

A. Grading of the existing sub-grade surface shall be as necessary to bring the grade to match existing conditions at the property boundaries. After the site has been graded, the area shall be proof rolled sufficiently to detect any soft spots in the sub-grade. Soft spots shall be completely removed to the satisfaction of the Construction Coordinator. Excavated areas resulting from soft spots shall be backfilled with crushed limestone or recycled concrete.
B. Do not place, spread, or roll any material during unfavorable weather.
C. Do not resume operations until moisture content and fill density are satisfactory.
D. Provide berms or channels to prevent flooding of sub-grade; promptly remove all water collecting in depressions.
E. Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and re-compact as specified.
F. Provide and maintain at all times during construction, ample means and devices with which to promptly remove and dispose of all water from every source entering the excavations or other parts of the work.

02250 – Grading

A. Perform all grading required to drain properly. Finished slopes shall be free from irregularities, hollows and depressions.
B. After grading is completed and the Construction Coordinator/Engineer has finished inspection, no further filling or grading will be permitted except with approval.

C. Use all means necessary to prevent the erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

02300- Wire Mesh (Chain Link) Fencing

PART 1 – GENERAL

1. This specification covers fencing materials for a complete PVC coated (black) over galvanized steel wire fence system, including gates, accessories and installation. The fencing shall comply with the standards of the Chain Link Fence Manufacturer's Institute for "Galvanized Steel Chain Link Fence Fabric", and "Industrial Steel Specifications for Fence-Posts, Gates and Accessories", and as herein specified. The installer must examine the conditions under which the fence and gates are to be installed. Notify the Construction Coordinator in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

- All accessories shall be hot-dip galvanized in accordance with ASTM A 123 or as specified. Hardware coatings shall conform to ASTM A 153. Steel pipe and other framework shall be hot-dip galvanized in accordance with ASTM F 1083 and ASTM F 1043. Strength requirements for pipe shall also conform to ASTM F 1043. The product of the yield strength and section modulus shall not be less than that for pipe conforming to ASTM F 1083. In accordance with ASTM F 1043 apply supplemental color coating of 10 to 15 mils of thermally fused PVC in black color to match fabric on all fence fabric posts and framework, and accessories.
    - All exposed system parts shall be zinc galvanized prior to PVC coating. Color shall be black.
    - PVC coating shall be thermally fused and adhered to a primer, which is thermally cured onto the galvanized steel core wire.
    - PVC coating shall be applied in a continuous process.
    - All cut ends shall be coated with vinyl at the factory before shipping.
- Product shall be new from recognized, reputable manufacturers. The manufacturers shall have a minimum of 2 years' experience. Used, rerolled, or re-galvanized material is not acceptable. Fencing shall be provided as a complete unit produced by a single manufacturer, including necessary erection accessories, fittings, and fastenings.
- Both sides of corner posts shall be equipped with horizontal brace rails at the top and at mid-height of fence and adjustable 3/8" diameter truss rods in the upper and lower panels formed by brace rails. Install braces so posts are plumb when the diagonal rod is tightened.
- Concrete footings are required for fence posts. Concrete shall consist of "Portland Cement" complying with ASTM C 150, aggregates complying with ASTM C 94, and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 3000 psi. Concrete shall be thoroughly worked into post holes leaving no voids.
- Framework: Framework strength and coating shall be in accordance with ASTM F 1043.

- Grade A Pipe, hot-dip galvanized and PVC coated Schedule 40 pipe conforming to ASTM F 1043 Group IA.
- Grade B Pipe, manufactured by cold-rolling and radial frequency welding, the steel hot dipped galvanized and PVC coated shall conform to ASTM F 1043 Group IC with minimum yield strength of 50,000 PSI. Exterior and interior coatings shall be in accordance with ASTM F 1043.
- 'C' Post, manufactured by cold forming steel, hot dipped galvanized and PVC coated shall conform to ASTM F 1043 Group II with minimum yield strength of 50,000 PSI.
- PVC (polymer) coating shall be 10 mils minimum in accordance with ASTM F 1043, color conforming to ASTM F 934 (black).
- Performance: All framework shall meet the following performance in accordance with test method ASTM B 117 (Salt Spray Test).
  - Exterior: 1000 hours with maximum 5 % red rust.
  - Interior: 650 hours with maximum 5 % red rust.
- Wind loads: Post shall withstand 74 M.P.H. minimum wind load

2. Fittings and Accessories
   - Post Caps: Pressed steel or malleable iron, designed as a weather tight enclosure for tubular posts. Provide one cap for each exposed tubular post.
   - Tension Bar (for mesh sizes 1" x 1" and larger): Tension bands shall be heavy – pressed steel, ¾" x 1/10" nominal, used to secure tension bars to tubular, end, corner and gate post. Intervals of spacing not to exceed 12".
   - Top Rail: Provide continuous top rail securely fastened to fence fabric. The top rails shall run continuously from corner post to corner post, through post tops, with expansion couplings. Also, provide Stretcher Bars (two for each corner post) with the full height of the fabric and a cross-section of 3/16" x 3/4".
   - Tie and Bracket Combinations: The tie wires used shall be U-shaped wire, conforming to the diameter of pipe to which it is attached, clasping pipe and fabric firmly with ends twisted at least two (2) full turns. The wire ties used for tying the fabric to the line posts shall be coated 9-gauge galvanized wire ties spaced 12" O.C. For tying the fabric to the tension wire, use coated 11-gauge galvanized hog rings spaced at 18" O.C.
   - Tension Wires: All tension wire provided should be coated 7-gauge galvanized coiled spring wire, which shall run continuously from corner post to corner post. All fittings must be ASTM A-153 malleable steel construction.

PART 2 – EXECUTION

2. INSTALLATION
   - Installation of the framework components shall be in accordance with ASTM F 567 when applicable and as specified herein.
   - Installation of wire fabric shall be in accordance to manufacturer's recommendations.
   - Coordinate fence construction with other trades where applicable.
   - Install the smooth face of the fabric on the secure side of the fence. Install the upper and lower fence fabric sections in a manner so as not to create a hand or toe hold at the horizontal joint between the panels.

- Site Preparation: Prior to the fence installation, perform all necessary grading and cleaning, on both sides of the fence line, to complete the installation.
    - Grading shall be done in such a manner as to provide a straight flat and level surface (where applicable). Soil fill shall be thoroughly compacted.
    - All existing utilities shall be located prior to starting any excavation operations.
    - Erect the fencing in straight lines between angle points. Erect framework in accordance with ASTM F 567 and as approved by the Owner.
- Post Spacing: Space post equal distance in the fence line to a maximum of 10' on center.
- Post Holes in Solid Rock or Concrete: Drill holes into solid rock or concrete ½" wider than the pipe diameter, and 18" deep for end, corner, and gate posts; and for line posts, 12" deep – Owner approval shall be required prior to installation.
- Half-fill the void with non-shrinkable grout and force the post to the bottom of the hole, leaving no voids. Crown the grout to shed water. The use of sleeves in new concrete is recommended.
- Concrete Mix: Shall be in accordance with ASTM C 94 with maximum ¾" aggregate, and shall have minimum compression strength of 3000 psi at 28 days. Concrete shall be thoroughly worked into the post holes leaving no voids. Allow concrete to cure a minimum of seven (7) days before installing fence fabric or fittings. The top surface of the post hole concrete shall have a crown water shed finish.

3. CLEANING
    - Clean-up: Upon completion of the installation, clean up all waste material resulting from this construction.

END OF SECTION

**DIVISION 3 – CONCRETE**

03100-Concrete Formwork:

1. Construct formwork in full compliance with ACI 347, "Recommended Practice for Concrete Formwork.
2. Check the lines and levels of the erected formwork before placing concrete. Make corrections and adjustments to ensure the proper location and size of the concrete members.
3. During concrete placement check the formwork to ensure that the forms are not displaced and that the completed work will be within specified tolerances.

03200-Concrete Paving:

1. Concrete strength for the walks and/or handicap ramps shall be 4000psi at 28 days.
2. Set forms on base course so that the form is uniformly supported for its entire length.
3. Join the forms neatly and in such a manner that the joints are free from movement in any direction. Clean and oil forms. Check the forms for alignment and grade elevation before placing concrete.
4. All concrete pavements shall be reinforced. Comply with local regulations governing street and sidewalk work.
5. Deposit concrete on approved base course to the lengths and widths indicated by drawings.
6. Do not remove forms within twenty-four (24) hours after the concrete has been placed.
7. Protect and cure finished concrete walks. The use of curing compounds is not permitted.

03210-Concrete Crack Repairs:

1. Major cracks in the slab abutting the slab(s) being replaced must be enlarged and satisfactorily repaired. Enlarge the crack along its entire length with a cold chisel and hammer.
2. Undercut the crack to a minimum depth of 1 inch. The depth of the undercutting required depends on the size and depth of the crack to be repaired.
3. Remove all dirt and debris after undercutting.
4. Apply an acrylic resin adhesive into the crack.
5. Tamp the concrete patch into the undercut area. After the patch begins to set, smooth it down with a wooden float or a metal trowel.

6. Allow the patch to dry and then cover with plastic sheeting or boards. Keep the patch covered for at least five days. Lift the cover each day to wet down the repaired area, permitting the concrete to cure correctly.

PORTLAND CEMENT CONCRETE PAVING
PART 1 – GENERAL

1.1 SCOPE

A. Work under this section of the Specifications consists furnishing all plant labor, materials, tools, equipment, and operations in connection with the construction of the new concrete curbs, walks, islands, etc., as required within these Specifications and Contract Drawings.

B. Whenever reference is made to Standard Specifications, such reference is to the 2000 Edition or latest revision thereof of "Standard Specifications for Roads and Bridges," by the Office of Highways, Department of Transportation and Development, State of Louisiana.

1.2 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealers when ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer.

B. Do not proceed with installation of joint sealers when joint widths are greater or less than allowed by joint sealer manufacturer for application indicated.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Certain items in this Specification are listed by manufacturer and/or manufacturer's model number to establish general style, type, character and quality of the product desired. Similar items manufactured by other than those listed will be considered.

B. Where no manufacturer or model number are given, any product meeting performance or design criteria, or referenced trade association standard may be used.

2.2 MATERIALS

A. Concrete shall be proportioned and mixed for a minimum compressive strength of 4000 psi.
B. No fly ash or slag additives will be accepted.
C. No Quikrete accepted.
D. The minimum and maximum slump of the concrete shall be 4 inches and 6 inches, respectively.
E. Curing compound: Liquid Membrane-Forming Curing compound shall conform to ASTM Designation C 309, clear or translucent Type 1.

F. Joint sealant shall be self-leveling, premium polyurethane sealant with gray color and capable of setting up as a solid rubber-like material, and be able to withstand both tension and compression.

## 2.3 BASE COURSE - VEHICULAR TRAFFIC

A. Crushed limestone conforming to the following gradation:

| U. S. Sieve | Percentage Passing |
|---|---|
| 1 1/2" | 100 |
| 1" | 90 - 100 |
| 3/4" | 70 - 100 |
| No. 4 | 35 - 65 |
| No. 40 | 12 - 32 |
| No. 200 | 5 -12 |

B. The fraction of stone passing the No. 40 sieve shall conform to the following requirements:

1. Liquid Limit (Max.) 25

2. Plasticity Index (Max.) 6

## 2.4 BASE COURSE - SIDEWALKS

A. Compacted river sand base, plasticity index 15 or less.
B. Compacted limestone sub-base, # 610.

## 2.5 BASIC PAVING MATERIALS

A. Forms: Wood or metal conforming to lines and radii indicated or required; free of warps, bends or kinks, and well anchored in place.

B. Concrete, strength at 28 days.

1. Roadways and Drives: 4000 psi

2. Walks: 4000 psi

C. Reinforcement: ASTM A 615 (bars) and ASTM A 185 (WWF), sized and placed as indicated. Woven wire fabric shall be not less than 6 x 6 x 4/4 at walks and 6 x 12 x 0/1 at drives.

D. Expansion Joint Materials:

1. Fiber Joint Filler: ASTM D 1751, Bituminous Type

2. Joint Sealer: ASTM D 1190, Hot-Poured Type

E. Finish:
   a. Sidewalks & accessible ramps shall have broom finish.

b. Drives & aprons shall have broom finish.

PART 3 - EXECUTION

3.1 EXECUTION

A. Protect graded surfaces from erosion and from damage by construction work. Replace eroded and disturbed materials.

C. Comply with applicable requirements specified under Excavation, Filling and Grading.

D. Soils shall be removed to a sufficient depth to construct the new pavement and curb to required slopes and finish grades that reasonably conforms to the existing grades and drainage pattern of the site except as specifically shown otherwise on the Drawings.

E. The Contractor shall make minor grade revisions as required to correct drainage deficiencies identified in the field during construction.

F. All materials removed shall become the property of the Contractor, and shall be disposed of by the Contractor off site of the University.

3.2 BASE COURSE - VEHICULAR TRAFFIC AND WALKS

A. Prior to placement of concrete, existing pavements, soils, and other obstructions within the construction area shall be removed in accordance with the Specifications.

B. The sub-grade shall be properly shaped and uniformly compacted as required to construct the pavement to the full thickness, lines, and grades required.

C. The sub-base shall be properly placed, shaped, rolled, and uniformly compacted as required to construct the pavement and base materials to the full thicknesses, lines, and grades required.

D. The base material shall be placed, shaped, rolled, and uniformly compacted as required to construct the pavement to the full thickness, lines, and grades required.

E. Do not start placing base course until sub-base and sub-grade have been approved.

F. Deposit base course material uniformly, in two (2) layers, to approximately 6" of compacted depth.

G. Smooth to proper section with power grader and roll with approved vibratory equipment. Compact to a density of 95% of maximum density at optimum moisture content, using the modified Proctor test method, ASTM 0-1557.

H. Maintain complete base course in smooth, uniform condition until covered with surface course. Periodically sprinkle to prevent loss of binder and loosening of the surface.

## 3.3 GRADE PINS

A. Provide steel grade pins in sufficient numbers and locations to ensure conformity of finish paving to finish grade elevations indicated.

## 3.4 FORMWORK

A. Set forms on compacted base course so that form is uniformly supported for its entire length.

B. Join forms neatly and in such a manner that joints are free from movement in any direction. Clean and oil forms. Check forms for alignment and grade elevations before placing concrete.

## 3.5 REINFORCING

A. All concrete pavements shall be reinforced with #6 bars or as indicated on the drawings.

B. Place reinforcement as indicated. At splices, lap bars 40 diameters or 12" minimum and securely wire tie. Where no reinforcement is shown or noted on Drawings, comply with local regulations governing street and sidewalk work and ACI-318, Article 7.

C. Position, support and secure reinforcement against displacement. Locate and support with metal chairs, runners, bolsters, spacers and hangers, as required. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

D. Install welded wire fabric in the longest practical lengths, lap at least 12" minimum. Set mesh on chairs to ensure correct position.

E. Set anchorage devices and other embedded items required for work that is attached to, or supported by cast-in-place concrete. Use setting diagrams, templates and instructions for locating and setting.

## 3.6 CONCRETE PLACEMENT

A. Deposit concrete on approved base course to the depths and widths indicated in a continuous operation between intermediate forms or bulkheads.

B. Accurately screed to correct elevations, slopes, and profiles.

C. Concrete shall be mixed and placed only when the temperature is at least 40 degrees Fahrenheit and rising.

D. The Contractor shall employ means and methods necessary for conveying the concrete from the mixer to forms so as not the damage existing pavement. Any damage to existing pavement caused by Contractor’s operation shall be repaired at no additional cost to the Owner.

3.7 JOINTS

A. All concrete pavement joints shall be constructed as shown. Joint layout shall be made to form approximate square slabs avoiding acute angles or strips less than 2 feet wide.

B. Joint spacing shall match existing joint pattern unless otherwise shown.

C. Control joints for sidewalks shall be tooled or saw cut 1-inch deep. Control joints shall be placed in the sidewalk with spacing equal to the width of the sidewalk.

3.8 EXPANSION JOINTS AND DUMMY JOINTS

A. Expansion joints shall be 1/2" thick unless shown otherwise. Provide expansion joints around catch basins, hydrants, manholes, area drains, and elsewhere as indicated. Interrupt reinforcing at expansion joints.

1. Prepare and seal joints in accordance with recommendations of joint sealer manufacturer.

2. Keep expansion joint material at least 1" below the finished surface of concrete and extended to full depth. Seal top of joint with expansion joint sealer. Fill joint to no higher than level with concrete surface and not more than 1/8" below.

3. Except at intersection of concrete paving with vertical surfaces, provide 3/4" round plain round steel rods 18" long across expansion joints every 18" o.c. One end shall be coated with grease to prevent a bond between the steel and the concrete. The unbonded half of each dowel shall be provided with a close-fitting metal sleeve not less than 4" long with suitable flanges to hold the end of the sleeve from the end of the bar. The dowel bars shall be held securely in place parallel to the surface and centerline of slab by metal chairs.

B. Provide scored dummy joints as indicated on Drawings. Score concrete 3/4" deep, minimum. Continue reinforcing through dummy joints.

C. Expansion joints shall be spaced in curbs at point of curvature and 24-feet on center in straight runs.

D. Provide expansion joints on 60-foot centers and where paving abuts structures. Seal expansion joints per requirements of this section of the Specifications.

3.9 CONSTRUCTION JOINTS

A. Provide construction joints whenever it is necessary to stop concreting for thirty (30) minutes or longer, except at expansion joints. Form exposed surface to well defined straight line by pouring concrete to a bulkhead.

B. Continue reinforcing through construction joints.

C. Round top edges to 1/8" radius.

3.10 FINISHING - GENERAL

A. Finish surfaces while concrete is fresh and before initial set has taken place. Concrete in which initial set has taken place shall not be reworked or vibrated.

B. Round-off all free edges of concrete to approximately 1/4" radius.

C. Consolidate surface by floating when surface water has disappeared. Check and level the surface plane to tolerance not exceeding 1/4" in 10' when tested with 10' straightedge placed on surface not less than two (2) different angles. Cut down high spots and fill all low spots. Unless otherwise indicated, uniformly slope the paving surface from defined perimeter edges and/or high points to drain and/or low points. Immediately after leveling, re-float surface to a uniform, smooth granular texture.

3.11 FINISHING ROADWAYS AND DRIVES

A. Float surface as specified above.

B. After floating apply final finish by brooming perpendicular to main traffic route.

3.12 FINISHING WALKS

A. Float consolidates as specified for plain finish above and bring to a hard steel trowel finish as defined under ACI-301, Article 11.7.3

3.13 FORM REMOVAL

A. Do not remove forms within twenty-four (24) hours after concrete has been placed. After form removal, point-up minor honeycombed areas. Remove and replace major honeycombing, as directed by the Owner.

3.14 CURING

A. Protect and cure finished concrete walks in accordance with applicable requirements. Use moist curing method for curing on all colored concrete and driveways.

3.15 REPAIRING AND PROTECTION

A. Repair or replace broken or defective paving as directed by the Architect/Owner.

B. Protect paving from damage until acceptance of the Work. Exclude traffic from surfaces for at least fourteen (14) days after placement. When construction traffic is permitted, maintain surfaces as clean as possible by removing surface stains and spillage of materials as they occur.

C. Sweep concrete paving and wash free of stains, discolorations, dirt and foreign material prior to marking operation.

## 3.16 HANDICAP/WHEELCHAIR RAMPS

A. Handicap/wheelchair ramps shall be constructed and finished with the same materials and methods as concrete sidewalks.

B. Install tactile surface pavers in all handicap ramps at their juncture with parking lot or driveway crossings, as shown on the drawings. Color selected by the Owner.

END OF SECTION

**DIVISION 4 - MASONRY (– Not included -)**

**DIVISION 5 - METALS (– Not included -)**

**DIVISION 6 - WOOD AND PLASTICS (– Not included -)**

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION (– Not included -)**

**DIVISION 8 – DOORS AND WINDOWS (– Not included -)**

**DIVISION 9 – FINISHES (– Not included -)**

**DIVISION 10 - SPECIALTIES (– Not included -)**

**DIVISION 11 - EQUIPMENT (– Not included -)**

**DIVISION 12 - FURNISHINGS (– Not included -)**

**DIVISION 13 - SPECIAL CONSTRUCTION (– Not included -)**

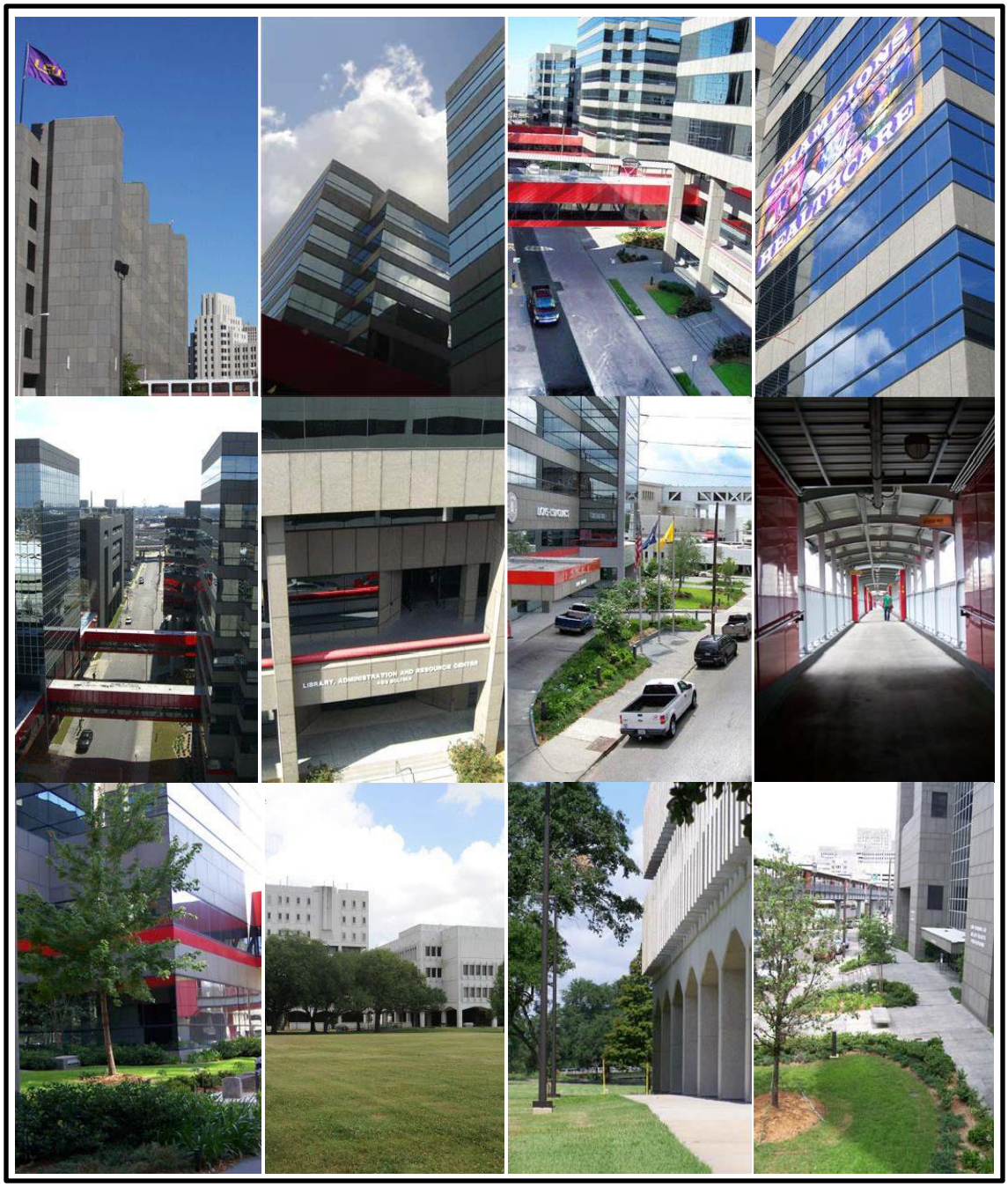
**DIVISION 14 - CONVEYING SYSTEMS (– Not included -)**

**DIVISION 15 – MECHANICAL (– Not included -)**

**DIVISION 16 – ELECTRICAL (– Not included -)**

- End of technical specifications –

# APPENDIX A




# ***Contractor Safety Guidebook***

**Louisiana State University Health Sciences Center**
**New Orleans, Louisiana**
**March 24, 2010**
***Updated July 20, 2018***

http://www.lsuhsc.edu/admin/pfm/ehs/docs/csg.pdf

LSUHSC Health Sciences Center
Contractor Safety Guidebook

I hereby acknowledge that I have received a copy of the LSUHSC Contractor Safety Guidebook.

Name: _____

Title: _____

Company: _____

Signed: _____

Date: _____

Return completed acknowledgement to the Construction Coordinator.

The Louisiana State University Health Sciences Center New Orleans (LSUHSC) is committed to providing for the protection of its personnel, students, visitors, facilities and surrounding environment through the implementation of a comprehensive safety program.

Contractors must provide safe workplaces and implement their own safety programs. This guidebook is intended to assist in coordinating LSUHSC facilities and contractor operations during construction and renovation projects.

Contractors are required to comply with all applicable Federal, State, and Local laws and also follow safe work practices for construction trades. Some of these regulations and safe work practices are outlined in this guidebook. Contractor management and supervision must thoroughly review their own work practices and workplace hazards and then provide employees all the necessary training and equipment for their safety.

**Due to the wide variety of construction operations, it is not feasible to outline every conceivable applicable regulation and work practice in this guidebook. Contractors will follow all OSHA and any other applicable regulations when conducting work at LSUHSC.**

**EMERGENCY NUMBERS: call 911 or LSUHSC Police at (504) 568-8999.**

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## I. SAFETY PROGRAM OBJECTIVES

All contractors must have a safety and health program that complies with all government regulations and is designed to protect people, property, and the environment. This guidebook is a summary of safety information, requirements, and regulations that construction contractors shall follow when conducting work on any LSUHSC campus. It is intended to assist in providing a safe, healthy and comfortable environment for employees, patients, visitors and construction workers during renovation, demolition or new construction projects.

Major objectives of a contractor's safety and health program are to:

1. Protect employees, students, visitors, property, and the environment from potential hazards.

2. Provide a safe and healthful workplace free from recognized hazards.

3. Comply with all government safety, health, and environmental standards.

4. Cooperate with building occupants and others involved in the work area to maintain a safe, healthful and comfortable workplace.

## II. BASIC SAFETY RULES

1. Vehicles must observe the posted speed limit.

2. Obey all posted warnings.

3. Smoking is prohibited on the LSUHSC campus.

4. Fighting or horseplay is prohibited on LSUHSC property.

5. Firearms are not allowed on LSUHSC property.

6. Contractors must remain in designated areas at all times and use approved travel routes into and out of the site.

7. Work areas must be maintained in an orderly manner that does not block exits or traffic through the work area. Debris shall be kept clear from work areas, passageways, and stairs, in and around buildings and other structures. Clean work areas daily of trash and dust.

8. Any operation which partially or fully blocks any walkway, sidewalk or street must be approved in advance by the Construction Coordinator.

9. Contractors will gain approval in advance from the Construction Coordinator for any operation that has the potential to cause a hazard to or create poor Indoor Air Quality (IAQ) for LSUHSC personnel. Approvals will only be granted for which an acceptable hazard/IAQ control plan has been developed.

## III. SPECIAL PROCEDURES AND PERMITS

The following special procedures are specific to LSUHSC. Although some topics listed below are covered by regulations, they received special interest in research and academic areas. The work permits and policies referenced below are to assist in coordinating contractor work activities and LSUHSC activities affecting the same systems. Failure to request and obtain approval of these work permits in advance may result in a delay in work progress, possible contract deficiencies, and may place future contracts in jeopardy.

1. **Hazard Communication and Chemical Safety** (29 CFR 1910.1200)**.**

   a. To ensure that all contractor employees understand the hazards of the chemicals they are exposed to and how to properly protect themselves, each contractor must establish and maintain an effective hazard communication program. The program must comply with 29 CFR 1910.1200 and contain:

      - A written hazard communication program
      - An inventory of chemicals
      - MSDSs for all chemicals at the site
      - Labeling of all containers, and other warnings
      - Employee training

   b. Contractors must have Safety Data Sheets (SDSs) of all hazardous products being used at the job site. These SDSs must be readily available for review by the Construction Coordinator and the Environmental Health and Safety Department.

   c. Aerosol painting is not permitted inside any LSUHSC facility.

   d. Asbestos containing materials. Upon discovery of materials that may contain asbestos (Presumed Asbestos Containing Material, PACM) the contractor will stop work immediately as to not disturb the material and contact the Construction Coordinator to restrict access to the area. The Construction Coordinator will then contact the Environmental Health and Safety Department to commence testing if required.

   e. Lead awareness. Before operations on any paint that may contain lead, the contractor must contact the Construction Coordinator. The Construction Coordinator will then contact the Environmental Health and Safety Department for testing.

   f. Silica. Crystalline silica, also called free silica, is an odorless crystalline solid that is found as a dusty air contaminant in many industrial surface materials and processes. It is the cause of the lung disease silicosis. Silica dust consists of solid particles generated by work processes such as concrete saw cutting, grinding, mixing, drilling, and crushing. It may also present a hazard when disturbing materials such as ceramic tile, rock, CMU, roofing, or similar materials.

i. When work includes concrete cutting, crushing, or other operations that mechanically abrade concrete and mortar, use of engineering and work practice controls and/or use of respiratory protection to prevent employee exposure to silica dust shall be implemented.

ii. The contractor shall establish a controlled work area whenever unprotected personnel may be exposed to airborne silica dust that can reasonably be expected to be in excess of applicable exposure limits.

g. Fluorescent light bulbs and PCB-containing ballast disposal.

i. Personnel removing fluorescent light bulbs are responsible for examining the bulb to determine if the bulb should be recycled due to mercury vapor and lead content and must remove bulbs in accordance with environmental regulations. Green end caps or green writing indicates the bulb is environmentally friendly and these bulbs can be disposed of with other construction wastes.

ii. Personnel removing fluorescent ballasts are responsible for examining the ballast to determine if it contains PCBs (Polychlorinated Biphenyls) and disposing of such ballasts in accordance with environmental regulations.

h. Plumbing work.

i. If liquid mercury is discovered in plumbing, stop work and notify the Construction Coordinator.

ii. If contractor personnel have a high risk of exposure to human blood and/or body fluids, they must be trained in bloodborne pathogen awareness and have documentation of Hepatitis B vaccinations.

2. **Hot Work, Fire Alarm Systems, and Fire Protection** (29 CFR 1926 Subpart F)**.**

a. Hot work involving the use of open flames, welding apparatus, and spark producing equipment can result in fires and explosions. Contractors must obtain written approval in accordance with LSUHSC Hot Work Permit Policy before commencing such work.

b. Contractor shall submit a Hot Work Permit application at least three working days before performing hot work (temporary operation involving open flames or producing heat and or sparks, including but not limited to grinding, cutting, brazing, soldering, torch applied roofing and welding) or any work that will create or will have the potential to create dust.

c. The Construction Coordinator will forward the Hot Work Permit to the Facility Services Electronics Shop, Environmental Health and Safety (EH&S), and University Police.

d. The Electronics Shop will review the permit and grant work authorization. If necessary, the fire panel will be temporarily disabled while hot work is occurring. The contractor is responsible for maintaining a fire watch in the areas that the fire panel has been disabled.

e. The fire watch shall be familiar with fire watch duties, as described in the Appendix G of EHS 400.07 Fire Safety Policy, and shall be trained to operate the approved fire extinguisher

f. The Electronics Shop will post the Hot Work Permit on the fire panel prior to the start of any hot work, and will remove the permit once work is complete.

g. All contractor personnel must be familiar with Appendix A of EHS 400.07 Fire Safety Policy, to ensure they know how to report a fire, and are aware of available egress routes and the building's area of refuge.

h. All work will be accomplished while ensuring the building meets all requirements of the NFPA Life Safety Code 101. Any work that temporarily alters or fully or partially blocks egress routes cannot commence without prior approval of the Construction Coordinator.

i. All combustible material shall be cleared from the hot work area. Fire resistant guards, curtains, or shields shall be used where appropriate.

j. Firefighting equipment must be conspicuously located, readily accessible at all items, must be periodically inspected, and must be maintained in operating condition.

k. Extinguishers will be provided by the contractor and placed at least every 75 feet.

l. In addition to meeting life safety requirements, the contractor shall assess all hot work activities for the potential to contribute to poor IAQ in occupied buildings. As determined necessary, the requirements of Section III.11, *Construction in Occupied Buildings*, shall be implemented. Precautions taken to control contributors to poor IAQ shall be identified in detail adequate to demonstrate effectiveness on the Hot Work Permit.

3. **Underground Utility Location.** Anyone proposing to excavate, dig, bore, tunnel, blast, or disturb the earth in any manner which may damage buried utilities is required to call LA One Call by dialing 811 48 hours prior to digging. This 48-hour notification requirement is mandated by the 1988 Louisiana Damage Prevention Law. In the event of a bona fide emergency, notification must be made directly to Facility Services, University Police and the Environmental Health and Safety Department.

4. **Utility Service Interruptions.** Before any work, involving the planned or possible interruption of utilities such as electric, water, gas, medical gas or steam services, and the contractor must submit the request for the outage to the Construction Coordinator seven days in advance. Utility outages may have to be scheduled before or after normal working hours (8:00 am to 4:30 pm) or on a weekend as to not impact LSUHSC operations.

**5. Lockout/Tagout** (29 CFR 1926.417) **and** (29 CFR 1910.147)

a. The Lockout/Tagout (LOTO) Standard (Control of Hazardous Energy) in 29 CFR 1926.417 and 29 CFR 1910.147 will be followed by all contractors. The OSHA lockout/tagout procedure requires:

- Use of locks and/or tags on isolating devices.
- Special lockout/tagout procedures for jobs requiring multiple lockout/tagout devices.
- Contractors must provide their own lockout/tagout equipment.
- All contractor employees (authorized, affected, and other employees) must be trained by the contractor (or another acceptable training source) on lockout/tagout procedures.
- Testing or positioning of machines or equipment will be performed only under special procedures per 29 CFR 1910.147 (f).

b. All contractors will have a written general lockout/tagout program prior to performing such work. Contractors must read and understand the LSUHSC Lockout Tagout Control Policy which requires the contractor to present a LOTO plan to the Construction Coordinator, who will then submit the plan to EH&S for review. Prior to commencement of the work, the contractor shall make appropriate notification to the affected LSUHSC personnel via the Construction Coordinator. The contractor shall notify the Construction Coordinator upon completion of the LOTO operation. The Construction Coordinator will then notify all affected employees that the LOTO operation is complete.

c. All contractor employees will be trained by the contractor (or another acceptable training source) concerning the lockout/tagout procedures prior to beginning work at the site. A record will be kept of all employees trained and verification (by exam or other written means) that they understand the training. The training will include the disciplinary actions which will be taken if lockout/tagout procedures are not followed.

**6. Confined Space Entry Program** (29 CFR 1910.146).

a. Confined spaces present serious potential hazards to personnel, including oxygen deficiency, toxic materials, flammable materials, and hazardous energy. Each contractor must establish and maintain an effective confined space entry procedure that complies with OSHA standard 29 CFR 1910.146 when applicable. Contractors who will perform work in confined spaces must present their written confined space program to the Construction Coordinator before commencing with such work.

b. Contractors will also comply with the LSUHSC Confined Space Policy, which requires contractors performing work in areas with confined spaces to present their Non-Permit or Permit-Required Confined Space Plan to EH&S (via the Construction Coordinator) for review at least five working days prior to commencing work. Once the confined space work is complete, the Construction Coordinator will notify all affected personnel.

c. Contractors must provide all equipment required for safe entry, including special rescue equipment and air monitoring.

7. **Cranes** (29 CFR 1926 Subpart N)**.**

   a. Notify the Construction Coordinator seven calendar days prior to any crane operations. Provide a plan to cordon off the work area to eliminate hazards to those in proximity to the work area, to include a plan for traffic control if required.

   b. Perform inspections of crane and rigging components in accordance with OSHA and the manufacturer's requirements.

   c. Rated load capacities, recommended operating speeds, and special hazards warnings or instructions must be posted on cars and personnel.

   d. Never move suspended loads directly over personnel.

8. **Accidents.** In the event of an accident, the contractor shall take immediate action to prevent further injury to personnel and/or damage to any property. All accidents (including those that cause property damage only), injuries, and/or illness must be reported to the Construction Coordinator immediately upon stabilizing the accident site. In accordance with the LSUHSC Incident and Accident Reporting and Investigation Policy, the contractor or Construction Coordinator shall also contact EH&S to conduct an accident investigation. If necessary, the contractor site supervisor shall take action or give support to University Police (UP) to secure the site, limit unnecessary access, and preserve evidence until the site is released for normal activity. The DA 3000 form will be used to document the accident.

9. **Emergency Procedures.** All employees must know, understand, and be able to follow all workplace emergency procedures pertaining to their assignment. Periodic tests, drills, audits, etc. must be conducted to verify employee understanding of these procedures.

   a. Thunderstorms can strike with little warning. Contractors will have procedures in place to ensure the job site is secured prior to inclement weather arriving.

   b. Contractors will ensure equipment and materials are properly secured so that they will not become projectiles in high winds.

   c. All contractor personnel must be familiar with Fire Safety Policy to ensure they know how to report a fire, and are aware of available egress routes and the building's area of refuge.

   d. In the event of a hurricane, the contractor will be notified when completion of securing the job site is required in accordance with LSUHSC Hurricane Preparedness Procedures.

10. **Asbestos Management** (LAC 33.III.27 and 51) and (29 CFR 1926.1101)

   a. Any disturbance of Asbestos Containing Materials (ACM) at LSUHSC facilities must be performed by a state licensed asbestos abatement contractor. All applicable work will be completed in accordance with the requirements of LAC 33.III.27 and 51 and OSHA 1926.1101.

b. All contractors performing asbestos related work shall have a general written asbestos safety program and project specific work plan prior to performing such work. The project specific work plan shall be written and executed in accordance with the project design specifications developed by the accredited project designer and requirements of the LSUHSC written asbestos management program. Contractors must read and understand the LSUHSC Asbestos Management Program which requires the contractor to present a project specific written work plan to the Construction Coordinator, who will then submit the plan to the Environmental Health and Safety department for review and subsequent approval by the project designer. The minimum required elements of the written work plan are as follows:

- On multi-employer work sites, the following provisions shall be included:
    - Ensure that the project coordinator has informed other employers' managers or safety representatives on the job site about the nature of the asbestos work prior to the commencement of work, in accordance with the work plan.
    - Discuss with the other employers' managers or safety representatives the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees are not exposed to asbestos prior to starting the job.
    - Take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on to assure that asbestos fibers do not migrate to adjacent areas.
- All OSHA Class I, II, and III asbestos activities shall be conducted within a demarcated, regulated area supervised by a competent person and accessible only by authorized personnel.
- Engineering controls and work practices to include HEPA vacuum cleaners, wet methods, and prompt clean up and disposal shall be implemented for all asbestos activities. Local exhaust ventilation equipped with HEPA filtration, enclosure/isolation, ventilation of the regulated area to move airborne contaminants toward a HEPA filtered collection device, and other approved methods shall be implemented to inhibit the spread of released fibers.
- Employees are required to decontaminate prior to leaving the work area when conducting Class I, II, III, and IV work activities. The work plan shall comply with the decontamination procedures and hygiene practices of the project design specifications.
- HEPA filtered vacuums shall be used where vacuuming methods are required. Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of by trained asbestos workers in sealed, labeled, impermeable bags or other similar containers. Dust and debris in an area containing

visibly deteriorated ACM/PACM shall be promptly cleaned up and disposed of by trained asbestos workers using proper procedures.

- The contractor's competent person shall be made to conduct frequent and regular inspections of job sites, materials, and equipment to facilitate ensuring the effective containment of the work area and potential spread of released fibers.

- Copies of LDEQ asbestos contractor/supervisor and worker accreditations for all employees with the potential to perform the subject asbestos related work duties will be made available upon request.

**11. Construction in Occupied Buildings (Sheet Metal and Air Conditioning Contractors National Association, IAQ Guidelines for Buildings Under Construction and OSHA 1926).** Poor Indoor Air Quality (IAQ) can be a disruption to the normal operations of a facility and, impact the health, comfort, well-being, and productivity of the building occupants.

a. Contractors conducting construction/renovation activities shall ensure that the IAQ experienced by LSUHSC faculty, staff, students and visitors is not adversely affected by the work being performed.

b. Potential negative contributors (contaminants) to IAQ include hazardous and non-hazardous particulates (dust and fibers), volatile organic compounds (VOCs), combustion products, biological materials, other miscellaneous contaminants (e.g., ozone, welding fumes, and cleaning compounds), and the potential odors associated with any of the contributors.

c. In addition to standard airborne contaminants, physical agents such as noise, vibration and UV light radiation are potentially negative contributors to IAQ.

d. Source activities for these contributors can include, but are not limited to, general demolition, sanding, grinding, cutting, drilling, installation and/or use of building materials (drywall, plaster, concrete, masonry, flooring, ductwork, roofing, caulks, sealants, coatings, adhesives, paints, varnishes, stains, wall coverings, fabric materials and furnishings), and welding.

e. In most construction/renovation projects, contaminants are most commonly spread from the immediate work area to the adjacent occupied areas in one or more of the following manners:

- Circulation through the HVAC system

- Movement into areas under negative pressure

- Tracking of contaminants by workers

f. An assessment of each construction/renovation activity shall be performed by the contractor to identify the potential impacts to IAQ. When the potential exists, controls must be developed and implemented prior to the start of work.

g. Since the hazards associated with construction and renovation often change as a project progresses, the contractor must conduct periodic hazard assessments during the performance of construction/renovation activities to anticipate and identify these changes and, as necessary, accordingly modify the control plan.

h. Many methods are available to maintain IAQ during construction/renovation activities. The pros, cons, and limitations of each should be considered when developing a control plan to ensure the most effective and efficient approach for a particular job. In general, the choices include:

- Containing the work area.
  - Isolate construction work areas from occupied areas
  - Maintain an adequate unoccupied buffer zone around the work areas
  - Negatively pressurize construction work areas and/or positively pressurize occupied areas to prevent migration of air contaminants
  - Relocate pollutant sources

- Modifying HVAC operation

- Reducing contaminant generation.
  - Product substitution
  - Modify work practices
  - Modify equipment operation
  - Cover exposed emission releasing surfaces
  - Local Exhaust Ventilation

- Maintaining Housekeeping.
  - Dust suppression
  - Adequate cleaning frequency
  - Efficient dust collection – wet vs. dry methods
  - Prompt clean-up of spills

- Rescheduling work hours

i. Control methods shall meet applicable regulatory requirements when hazardous/regulated materials are involved.

j. Occupant complaints related to IAQ concerns during construction may interrupt the project schedule. Complaints will be assessed by the Construction Coordinator and EH&S. Project work that is stopped due to a significant IAQ impact can't continue until an adequate resolution has been reached.

## IV. GENERAL SAFETY PROCEDURES

According to the OSHA General Duty Clause, covered under Section 5(a)(1) of the OSHA Act of 1970, each employer must furnish to all employees employment a place of employment free from recognized hazards that cause or are likely to cause death or serious physical harm to his employees. Furthermore, each employer must comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act, which are applicable to his own actions and conduct.

Contractors will conduct frequent job site inspections to ensure safety, and will consider disciplinary action for unsafe acts. LSUHSC may remove personnel not in compliance with safety standards and may halt all work if a safe work site is not maintained.

1. **General Inspections and Training** (29 CFR 1926.20) and (29 CFR 1926.21)**.**

   a. Contractors must initiate and maintain an inspection program to provide for frequent and regular self-inspections to identify existing or potential hazards of the job site, materials, and equipment by competent persons designated by the contractor. The contractor shall document the completion of inspections on a periodic and frequent basis, as determined adequate by the construction site-supervisor. The person designated to perform these inspections shall be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous and have authorization to take prompt corrective measures to eliminate them.

   b. Contractors must instruct each employee in the recognition and avoidance of unsafe conditions and in the regulations applicable to his or her work environment and to control or eliminate any hazards or other exposure to illnesses or injury.

   c. The use of any machinery, tool, material, or equipment not in compliance with OSHA standards is prohibited.

2. **Medical Services and First Aid** (29 CFR 1926.50).

   a. The contractor shall make provisions for prompt medical attention in case of employee injury prior to starting work.

   b. All emergency contact telephone numbers shall be posted at the job site in an area accessible and conspicuous to all personnel.

   c. Ensure employees are aware of their responsibility to report any injury to their supervisor immediately.

   d. Be aware of and follow the requirements for Incident/Accident Reporting and Investigation Policy (see Section IV.22, *Recordkeeping and Reporting Requirements*).

   e. A person trained to render first aid is to be available at the worksite if a medical facility is not reasonably accessible per 29 CFR 1926.50. The contractor's first aid program shall be designed to reflect the known and anticipated risks of the specific work environment.

f. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body must be provided within the work area for immediate emergency use by the contractor.

3. **Facilities, Equipment, Tools and Vehicles.** All workplace facilities equipment, tools and vehicles must be properly designed and maintained, and will comply with the applicable governmental regulations including OSHA and EPA. Proper stairs, ladders, platforms, and guardrails must be provided to ensure employee safety and compliance with OSHA regulations. All equipment tools and vehicles used must be used in accordance with manufacturers operating instructions. The contractor shall permit only designated employees who are qualified by training and/or experience to operate equipment and machinery.

4. **Education and T raining** (29 CFR 1926.21)**.** All managers, supervisors, and employees must be properly trained to recognize, evaluate, and control workplace safety and health hazards. No employee is allowed to perform a job until properly trained to perform the job safely. Specific training must be provided concerning the safety rules and procedures pertaining to the jobs being performed.

5. **Hand and Power Tools** (29 CFR 1926 Subpart I) **and** (29 CFR 1926.404)**.**

   a. Electric power operated tools shall either be of the approved double insulated type or grounded in accordance with 29 CFR 1926 Subpart K.

   b. The contractor shall use either ground-fault circuit interrupters as specified by 29 CFR 1926.404 (b) (1) (ii) or have an assured equipment grounding program as specified by 29 CFR 1926.404 (b) (1) (iii).

   c. Extension cords used for portable power tools shall be ground fault (GFCI) protected unless the cord is plugged into a ground fault protected outlet.

   d. Only authorized and properly trained employees may use power tools. All tools must be properly guarded.

   e. Power tools shall be disconnected at the end of each workday.

   f. Powder actuated tools require certified operators and warning signs posted in all areas affected by the noise of the nail gun.

   g. Wrenches must not be used when the jaws are sprung to the point that slippage occurs.

   h. Impact tools must be kept free of mushroomed heads.

   i. The wooden handles of tools must be kept free of splinters or cracks and must be kept tight in the tool.

6. **Personal Protective Equipment (PPE)** (29 CFR 1926 Subpart E). Appropriate PPE must be worn during all operations where there is an exposure to hazardous conditions or where the need is indicated for using such equipment to reduce the hazard to the employees.

a. General.

i. The contractor shall ensure that any PPE required (including employee-owned PPE) is provided, used, and maintained in a compliant condition.

ii. Personal Protective Equipment shall be stored in a manner to prevent PPE from damage, dust, sunlight, chemical contamination, or extreme temperatures.

iii. The contractor shall document that all employees have received and understood the PPE training provided.

b. Eye and Face Protection (29 CFR 1926.102).

i. Eye and face protection must be provided when machines or operations present potential eye or face injury. This protective equipment must meet the requirement of ANSI Z87.1-1991, "Practice for Occupational and Education Eye and Face Protection."

ii. Employees whose vision requires the use of corrective lenses in spectacles, when required to wear eye protection, shall be protected by goggles or spectacles in accordance with 29 CFR 1926.102 (a) (3).

iii. Employees involved in welding operations must be furnished with filter lenses or plates of at least the proper shade number.

iv. Employees exposed to laser beams must be provided with suitable laser safety goggles that will protect for the specific wavelength of the laser and be optical density adequate for the laser involved.

c. Head Protection (29 CFR 1926.100) . Head protective equipment (hard hats/helmets) must be worn in areas where there is a possible danger of head injuries from impact, flying or falling objects, or electrical shock and burns. Hard hats/helmets must meet the performance requirements of ANSI Z89.1, "Standard for Industrial Protective Helmets."

d. Foot Protection (29 CFR 1910.136) . The contractor shall ensure that each effected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

e. Hearing Protection (29 CFR 1926.101).

i. Feasible engineering or administrative controls must be used to protect employees against sound levels/duration in excess of those shown in 29 CFR 1926.52 , Permissible Noise Exposures, or hearing protective devices must be provided and used.

ii. In all cases where the sound levels exceed the values shown in safety and health regulations, a hearing conservation program must be administered.

iii. All employees operating equipment with sound levels exceeding levels exceeding 85 decibels (acoustic) (dBA) shall use hearing protection. Hearing protectors shall attenuate the employee's noise exposure to a level below the noise exposure limit of 85 dBA 8-hr time weighted average (TWA).

iv. A combination of both earmuffs and plugs shall be used where noise levels equal or exceed 100 dBA 8-hr TWA and any exposure equal to or greater than 105 dBA.

v. The contractor shall affix appropriate warning signs on the perimeter and control area entry point for workers and surrounding area employees who may pass near the worksite when noise levels reach the action level greater than 82 dBA .

vi. Earmuffs and/or earplugs shall be provided in accordance with 29 CFR 1910.95. Such equipment shall be issued for the exclusive use of each employee and shall not be traded or shared.

vii. Plain cotton ear plugs are not acceptable for hearing protection.

f. Respiratory Protection (29 CFR 1910.134).

i. Exposure to toxic gases, vapors, fumes, dusts, and mists at a concentration above the permissible exposure limit specified in the MSDS shall be avoided. When engineering or administrative controls are not effective in controlling toxic substances below threshold concentrations, appropriate respiratory protective devices will be provided and must be used.

ii. Employees required to use respiratory protective devices must be thoroughly trained in their use.

iii. Where respirator use is required, contractors will have a written respirator protection program that includes respirator training, fit-testing and medical qualification documentation.

**7. Electrical (29 CFR 1926.400) and (29 CFR 1910.331, 332, 333).**

a. It is very important that each contractor establish and maintain an effective safety-related work practices program. References for such a program include OSHA standards 29 CFR 1910.331 to 1910.333, Electrical Safety-Related Work Practices, and CFR 1926 Subpart K, Electrical.

b. Training must be documented for all employees who face a risk of electric shock from working on, near, or with electrical circuits which are not reduced to a safe level by the electrical installation requirements of 29 CFR 1910.303 through 308.

c. Only qualified persons are permitted to work on or near energized conductors or parts and then only under special procedures that ensure proper employee protection.

d. Take precautions when working near overhead power lines. When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact can't come closer to any unguarded, energized overhead line than the following distances:

   - For voltages to ground 50kV or below – 10 ft.

   - For voltages to ground over 50 kV- 10 ft plus 4 inches for every 10kV over 50 kV.

e. Equipment must not be operated closer than 10 feet to overhead energized power lines unless specific procedures are followed by qualified persons using appropriate protection equipment.

f. Extension cords used with portable electric tools must be the 3-wire type, and must be protected from damage. Splices must have soldered wire connections with insulation equal to the original. Worn or frayed cords must not be used.

g. Bulbs on temporary lights must be equipped with guards or deeply recessed in the reflector. Temporary lights must not be suspended by their electric cords unless designed for suspension.

h. Receptacles for attachments plugs must be of the approved concealed contact type. Where different voltages, frequencies, or types of current are supplied, receptacles must be of such designs that attachment plugs are not interchangeable.

i. Each disconnecting means of motors and appliances and each service feeder or branch circuit at the point where it originates must be legibly marked to indicate its purpose, unless located and arranged so the purpose is evident.

j. Cable passing through work areas must be covered or elevated to protect it from damage which would create a hazard to employees.

k. Boxes for disconnecting means must be securely and rigidly fastened to the surface upon which they are mounted and fitted with covers.

l. All extension cords and cord and plug connected equipment must be protected by an assigned equipment grounding conductor program.

m. No employer must permit an employee to work in proximity to any part of an electric power circuit that he may contact, unless the employee is protected against electric shock by de-energizing the circuit and grounding it or by guarding it by effective insulation or other means.

n. In work areas where the exact location of underground electric power lines is unknown, workers using jackhammers, bars, or other hand tools which may contact an energized line must be provided with insulated protective gloves.

**8. Fall Protection** (29 CFR 1926.500).

a. Fall protection must be provided to protect personnel from accidental falls associated with elevated work platforms. Contractors will develop a plan for all work 6 feet or more above the adjacent level using a passive (e.g., guardrails, nets, covers) and/or active (i.e., personal fall arrest system) and be in compliance with 29 CFR 1926 Subpart M, Fall Protection.

b. The top edges of guardrails shall be 39 to 45 inches above the working level. When conditions warrant, the height of the top edge may exceed 45 inches if requirements of 29 CFR 1926 Subpart M are met. There must be a midrail located between the top rail and the working surface. Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.

c. Personal Fall Arrest Systems shall comply with the provisions set forth in 29 CFR 1926.502(d)**:**

- Anchorages used for the attachment of fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached.

- Harnesses must be used as part of a Personal Fall Arrest System - - effective January 1, 1998, body belts are not acceptable per OSHA.

- Lifelines should be protected against being cut or abraded.

- Personal Fall Arrest Systems shall be inspected prior to each use for wear, damage, and other deterioration; and defective components shall be removed from service.

**9. Flammable and Combustible Liquids** (29 CFR 1926 Subpart F)**.**

a. Flammable and combustible liquids must only be stored in approved containers and in appropriate quantities for the job site use. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet.

b. Stored containers shall be sealed or covered. Leaking containers will be removed from the storage area.

c. Wiping rags, drop cloths, paint brushes, and rollers shall be stored in covered metal containers at the end of each working day.

d. Conspicuous and legible signs prohibiting smoking must be posted in service and refueling areas.

e. Flammable liquids must be dispensed through grounded and bonded containers.

**10. Welding, Cutting and Heating** (29 CFR 1926.350).

a. Only employees properly trained and certified to operate welding and torch equipment shall operate such equipment.

b. Proper precautions (isolating welding and cutting, removing fire hazards from the vicinity, providing a fire watch, etc.) for fire prevention must be taken where welding or other "hot work" is being done. No welding, cutting or heating will be done where the application of flammable paints or the presence of any other flammable compounds, or heavy dust concentration creates a fire hazard.

c. Prior to any torch cutting/welding on any painted surface, the coating shall be removed a minimum of 4 inches in each direction from the cut/weld point or shall comply with the personal protective equipment requirements of OSHA standard 29 CFR 1926.62.

d. Arc welding and cutting operations must be shielded by noncombustible or flameproof shields to protect persons from direct arc rays. Visual barrier screen are required for arc-welding operations.

e. When electrode holders are to be left unattended, electrodes must be removed and the holder must be placed or protected so that it cannot make electrical contact with employees or conducting objects.

f. All arc welding and cutting cables must be completely insulated and be capable of handling the maximum current requirements for the job. There must be no repairs or splices within 10 feet of the electrode holder except where splices are insulated equal to the insulation of the cable. Defective cables must be repaired or replaced.

g. Fuel gas and oxygen hoses must be easily distinguishable and must not be interchangeable. Hoses must be inspected at the beginning of each shift and must be repaired or replaced if defective.

h. General mechanical or local exhaust ventilation or air line respirators must be provided, as required, when welding, cutting, or heating:

- Zinc, lead, cadmium, mercury, or beryllium-bearing materials in enclosed spaces.
- Stainless steel with inert-gas equipment.
- In confined spaces.
- Where an unusual condition can cause an unsafe accumulation of contaminants.

i. Proper eye protective equipment must be provided when appropriate.

**11. Housekeeping** (29 CFR 1926.25 and 1926.100)**.**

a. Good housekeeping practices shall be observed at all times.

b. Form and scrap lumber protruding with nails and all other debris must be kept clear from all work areas.

c. Combustible scrap and debris must be removed at regular intervals.

d. The contractor must assess his work areas to ensure that no overhead hazards exist that endanger the safety of contractor employees, LSUHSC employees, students and visitors and the general public. Where identified action shall be taken to eliminate overhead hazards. Where the hazard cannot be eliminated, the contractor shall work with the Construction Coordinator to implement appropriate controls.

e. Employees working in areas where there is a possible danger of head injury from impact or from falling or flying objects shall be protected by protective helmets. Helmets for the protection of employees against impact and penetration of falling and flying objects shall meet the specifications contained in American National Standards Institute, Z89.1-1969, *Safety Requirements for Industrial Head Protection*.

f. Containers must be provided for collection and separation of all refuse. Only approved, marked containers shall be used for disposal of wastes in accordance with applicable regulations. Covers must be provided on containers used for flammable or harmful substances.

g. Wastes must be disposed of daily.

h. Lay down areas must be orderly and free from tripping hazards.

**12. Storage** (29 CFR 1926.250).

a. All materials stored in tiers must be secured to prevent sliding, falling, or collapse.

b. Aisles and passageways must be kept clear and in good repair.

c. Storage of materials must not obstruct exits or hallways, block access to fire extinguishers, or interfere with the operation of the building's fire suppression systems.

d. Materials must be stored properly in accordance with their fire characteristics.

**13. Ladders** (29 CFR 1926.1053) **and** (29 CFR 1910 Subpart D)**.**

a. A stairway or ladder will be provided for all personal points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment or personal hoist is provided.

b. The use of ladders with broken or missing rungs or steps, broken or split side rails, or with other faulty or defective construction is prohibited. Ladders will be routinely inspected, and when defects are discovered they must immediately be withdrawn from service.

c. Portable ladders must be placed on a substantial base, have clear access at top and bottom, extend a minimum of 36 inches above the landing, or where not practical, be provided with grab rails and be secured against movement while in use.

d. Portable metal ladders must not be used for electrical work or where they may contact electrical conductors.

e. Ladders placed in any location where they can be displaced by workplace activities or traffic, such as in passageways, doors, or driveways shall be secured to prevent accidental displacement, or a barricade shall be used to keep the activities or traffic away from the ladder.

f. Each employee shall use at least one hand to grasp the ladder when progressing up/down the ladder. An employee shall not carry any object or load that could cause the employee to lose balance and fall.

**14. Flaggers** (29 CFR 1926 Subpart G).

a. When signs, signals and barricades do not provide necessary protection on or adjacent to a highway or street, flaggers or other appropriate traffic controls must be provided.

b. Signaling by flaggers and the use of flaggers, including warning garments worn by flaggers shall conform to part VI of the Manual on Uniform Traffic Control Devices.

**15. Motor Vehicles and Mechanized Equipment** (29 CFR 1926 Subpart O)**.**

a. Observe posted speed limits, give pedestrians the right of way, and yield to emergency vehicles.

b. All vehicles in use must be checked at the beginning of each shift to assure that all parts, equipment and accessories that affect safe operation are in proper operating condition and free from defects. All defects will be corrected before the vehicle is placed in service.

c. No person must use any motor vehicle, earth moving or compacting equipment having an obstructed view to the rear unless the vehicle has a reverse signal alarm distinguishable from the surrounding noise level or the vehicle is backed up only when an observer signals that it is safe to do so.

d. Heavy machinery, equipment, or parts thereof which are suspended or held aloft must be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

**16. Mobile Scaffolds** (29 CFR 1926.452(w))**.**

a. A climbing ladder or stairway shall be provided for proper access and egress, and shall be located that its use will not have a tendency to tip the scaffold.

b. Scaffolds will be capable of supporting at least four times the design workload.

c. The maximum work level height shall not exceed four times the minimum or least base dimensions of the scaffold.

d. All work levels ten feet or higher above the ground or floor shall have a guardrail 2 by 4 inch nominal or the equivalent installed no less than 36 inches or more than 42 inches high, with a mid-rail, when required, of 1 by 4 inch nominal lumber or equivalent. Furthermore, the platform will have a standard (4 inch nominal) toeboard.

e. There must be a screen with maximum ½-inch openings between the toe board and the guardrail, where the persons are required to work or pass under the scaffold.

f. The minimum platform width for any work level shall not be less than 20 inches.

g. All scaffold casters shall be provided with a positive wheel/or swivel lock to prevent movement.

h. All scaffold planking shall be 2 inch (nominal) scaffold grade minimum 1,500f (stress grade) construction grade lumber or equivalent.

i. Employees are not permitted to ride on mobile scaffolds unless conditions permit per 29 CFR 1926.452 (w) (6).

**17. Pneumatic Power Tools** (29 CFR 1926.302(b)).

a. Pneumatic power tools must be secured to the hose or whip in a positive manner to prevent accidental disconnection.

b. Safety clips or retainers must be securely installed and maintained on pneumatic impact tools to prevent attachments from being accidentally expelled.

c. The manufacturer's safe operating pressure for all fittings must not be exceeded.

d. All hoses exceeding ½-inch inside diameter must have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.

**18. Compressed Air** (29 CFR 1910.242). Compressed air used for cleaning purposes must not exceed 30 psi and then only with effective chip guarding and personal protective equipment.

**19. Compressed Gas Cylinders** (29 CFR 1910 Subpart Q)**.**

a. Valve protection caps must be in place when compressed gas cylinders are transported, moved, or stored.

b. Cylinder valves must be closed when work is finished and when cylinders are empty or moved.

c. Compressed gas cylinders must be secured in an upright position at all times, except if necessary for short periods of time when cylinders are actually being hoisted or carried.

d. Cylinders must be kept at safe distances or shielded from welding or cutting operations. Cylinders must be placed where they cannot become part of an electrical circuit.

e. Oxygen and fuel gas regulators must be in proper working order while in use.

f. Applicable technical portions of American National Standards Institute, Z49.1, Safety in Welding and Cutting, must be followed.

**20. Excavations and Trenches** (29 CFR 1926 Subpart P).

a. A daily inspection of excavations, the adjacent areas, and protective systems will be performed by a competent person.

b. Protective systems in excavations will be in accordance with 29 CFR Part 1926.652. Trenches more than five feet deep require shoring or sloping. Excavations less than five feet deep are allowed if examination by a competent person provides no indication of potential cave in.

c. Substantial barricades to prevent persons from falling into an open trench must be maintained around the perimeter of the trench. This is especially important at the end of the workday for trenches that must remain open overnight. Construction tape or other passive devices are not adequate.

d. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are four feet or more in depth so as to require no more than 25 feet of lateral travel for personnel.

**21. Vehicle-Mounted Elevated & Rotating Work Platforms (e.g., JLGs)** (29 CFR 1910.67)**.**

a. A harness shall be worn and lanyard attached to the boom or basket.

b. Only trained persons will operate an aerial lift.

c. Personnel shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

d. Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition.

e. Boom and basket load limits specified by the manufacturer shall not be exceeded.

f. An aerial lift truck may not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation in accordance with the provisions of 29 CFR 1910.67 (b).

g. Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position, except as provided in 29 CFR 1910.67 (c) (2).

**22. Performing Work in Parking Garages and on Streets**. OSHA interpretation letter #20080829-8611 of Aug 5, 2009 states that "Road construction traffic poses an obvious and well-recognized hazard to highway/road construction work zone employees. OSHA standards require such employees to wear high visibility garments in two specific circumstances: when they work as flaggers and when they are exposed to public vehicular traffic in the vicinity of excavations. However, other construction workers in highway/road construction work zones are also exposed to the danger of being struck by the vehicles working near them. For such workers, section 5 (a) (1) of the OSH Act, 29 U. S. C. Section 654 (a) (1), also known as the General Duty Clause, requires similar protection." Accordingly, personnel working in the parking garages (to include construction, maintenance/repair, and inspections (e.g., inspection of fire extinguishers, testing of fire alarm systems)), on or adjacent to streets, or otherwise exposed to vehicular traffic shall wear, as a minimum, high visibility safety vests.

**23. Recordkeeping and Reporting Requirements** (29 CFR Part 1904). Contractors will report all injuries and illnesses (including those that result in days away from work, restricted work, transfer to another job, medical treatment, loss of consciousness, or a significant injury or illness diagnosed by a physician or healthcare professional) immediately to the Construction Coordinator, who will notify the Environmental Health and Safety Department. If the accident results in the death of an employee or in the hospitalization of three or more employees, the contractor is required to verbally report the accident within eight hours to the nearest OSHA office or the national OSHA hotline at (800) 321-OSHA (6742). LSUHSC is required to report such accidents to the State of Louisiana Office of Risk Management at 225-342-8529.

a. Injury and Illness Records. Contractors must keep injury and illness records for each establishment. An establishment is a single physical location where business is conducted or where services or industrial operations are performed.

b. OSHA Recordkeeping Forms. Recordkeeping forms must be maintained for five years at the establishment and must be available for inspection by representatives of OSHA, HHS, BLS or the designated state agency.

# ASBESTOS ABATEMENT SPECIFICATION & SCOPE OF WORK

# CALS BUILDING - FORMER POWER PLANT/MECHANICAL OUTBUILDING, CORNER OF GRAVIER & S. PRIEUR STREETS, NEW ORLEANS, LA 70112

## PART 1 - GENERAL

### 1.1 PROJECT/WORK IDENTIFICATION

A. The Louisiana State University Health Sciences Center (OWNER) through its ENVIRONMENTAL CONSULTANT (Materials Management Group, Inc.) prepared this scope of work to conduct asbestos abatement/removal (WORK) for the CALS Building, Former Power Plant/Mechanical Outbuilding, Corner of Gravier & S. Prieur Streets, New Orleans, LA 70112 (Site). WORK shall be conducted on the interior and exterior of the building and includes the following asbestos containing materials (ACM) and estimates:

a. ACM Various TSI Piping Types

| LOCATION | DESCRIPTION OF ACM TSI | APPROXIMATE QUANTITY |
|---|---|---|
| Floor 1 | 6-inch elbow (Beige) | ~8 elbows (~1 linear ft per elbow) |
| | 6-inch elbow (Light Blue) | ~8 elbows (~1 linear ft per elbow) |
| | 6-inch elbow (Blue) | ~8 elbows (~1 linear ft per elbow) |
| | 1-inch elbow (Green) | ~3 elbows (~1 linear ft per elbow) |
| | 6-inch elbow (Red) | ~10 elbows (~1 linear ft per elbow) |

b. ACM - Miscellaneous Building Materials

| LOCATION | DESCRIPTION OF MISC. ACM BUILDING MATERIALS | APPROXIMATE QUANTITY |
|---|---|---|
| Floors 1 & 2 (Interior) | Resilient Caulking (White) | ~2 sq ft |

c. ACM Roof System Components

| LOCATION | ACM ROOF SYSTEM COMPONENTS | APPROXIMATE QUANTITY |
|---|---|---|
| Exterior - Roof | Flashing Tar (Black) | ~10,000 sq ft |

B. The materials subject to abatement/removal under this scope of work were identified as "asbestos-containing materials" (ACM) in the *Suspected ACM Testing Report, CALS Building Former Power Plant/Mechanical Outbuilding* authored by Materials Management Group, Inc. and dated April 17, 2026.

C. A copy of the *Suspected ACM Testing Report, CALS Building Former Power Plant/Mechanical Outbuilding* is included in Appendix A. Based on the available information, all abatement/removal WORK described in this *Specification* document must be conducted in accordance with the rules and regulations contained in LAC 33.III Chapter 27. All ACM shall be handled as a Regulated ACM (RACM); notification to the Louisiana Department of Environmental Quality (LDEQ) should be sent and the acquisitions of ADVFs prior to the start of abatement work are required.

D. It shall be the CONTRACTOR'S responsibility to visit the Site and determine conditions that exist and appropriate measures to be taken to implement the WORK described in this *Specification* document prior to the start of the project. The quantity and location descriptions of ACM to be abated under this *Specification* document are approximate and should be used for reference only; it is the CONTRACTOR'S responsibility to verify the final scope of abatement work with the OWNER prior to the start of that work.

E. Once WORK is complete, each WORK area will be cleared according to the requirements of LAC 33.III Chapter 27 and/or 40 CFR 763 Subpart E, Appendix A. Per LAC 33.III Chapter 27. 2717.J.7, "in the case of a demolition of a school or state building where occupants will not reenter the building, clearance sampling is not required."

## 1.2 DESCRIPTION OF THE ABATEMENT WORK

A. WORK includes the removal and disposal of ACM located in specific interior areas of Floors 1 and 2, as well as exterior areas associated with existing roofing systems.

   a. Suspected ACM sampling and analytical laboratory information is included in Appendix A.

B. It is the responsibility of the CONTRACTOR to locate and validate materials subject to the WORK described in this specification prior to submitting his/her proposal.

C. Per LAC 33.III Chapter 27, WORK areas located throughout the Site will be remediated according to size, classification(s) of ACM present, and condition of ACM.

D. It shall be the CONTRACTOR'S responsibility to visit the Site and determine the conditions that exist and the appropriate measures to be taken to implement the WORK described in these specification documents. In the event that the CONTRACTOR discovers suspect unknown, damaged, delaminated, friable, and/or hazardous ACM not identified in Appendices A and B, they shall notify the ENVIRONMENTAL CONSULTANT of the discovery and not proceed with WORK in that area until instructed to do so.

E. The CONTRACTOR shall perform the WORK in accordance with all applicable federal, state, and local regulations and these specification documents. WORK hours are at the discretion of the CONTRACTOR, but shall not take place prior to 0700 and not later than 1900 hours Monday through Friday without prior written authorization from the OWNER.

F. The CONTRACTOR is required to perform and document personnel air monitoring as required by the Occupational Safety and Health Administration (OSHA). OSHA monitoring will be conducted each and every day of the project regardless of results. Failure to perform said monitoring shall be grounds for termination of the contract. The ENVIRONMENTAL CONSULTANT will be conducting ambient air monitoring of the areas surrounding the WORK areas in order to verify that air quality outside of containment structures is not compromised.

G. ACM abatement/removal techniques allowed for this project include but are not limited to full negative pressure enclosure, mini-enclosures, glove bagging, removal of ACM substantially intact, critical barrier operations, and/or "regulated areas" as required by applicable federal, state, and local regulations.

H. The OWNER shall furnish all required utilities, including but not limited to electricity and water to the Site. The CONTRACTOR shall be responsible for maintaining appropriate connections and shall be responsible for any damage to the OWNER'S property and/or facility.

I. If the OWNER or ENVIRONMENTAL CONSULTANT presents a written "stop work" order or gives verbal instructions to STOP, immediately and automatically stop all WORK except emergency or corrective action, as necessary or applicable. Do not recommence WORK until authorized by the OWNER or ENVIRONMENTAL CONSULTANT.

J. If at any time, the CONTRACTOR encounters suspect ACM not accounted for in the specification documents, the CONTRACTOR shall notify the ENVIRONMENTAL CONSULTANT. At that point in time, sampling and analysis will be conducted prior to the CONTRACTOR disturbing the suspect material. The ENVIRONMENTAL CONSULTANT will inform the CONTRACTOR of the results and provide instruction on how to proceed. Do not disturb the suspect material until instructed by the ENVIRONMENTAL CONSULTANT.

K. The CONTRACTOR shall perform the WORK in accordance with applicable federal, state, and local regulations and these specifications

## 1.3 POTENTIAL ASBESTOS HAZARDS

Disturbance or dislocation of ACM may cause asbestos fibers to be released into the atmosphere thereby creating a potential health hazard to abatement personnel, other trades, supervisory personnel, building occupants, and/or other persons within a certain proximity of the WORK area(s). The CONTRACTOR shall apprise all workers, supervisory personnel, subcontractors, and consultants who will be at the job Site of the seriousness of the hazard and proper work procedures which must be followed.

Wherein the performance of the WORK, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of identified ACM, the CONTRACTOR shall take appropriate measures as necessary to protect individuals from the potential hazards of exposure to airborne asbestos fibers. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state, and local agencies.

## 1.4 STOP WORK

If the OWNER or ENVIRONMENTAL CONSULTANT presents a written “stop work” order or gives verbal instructions to STOP, pending a written order, immediately and automatically stop all WORK except for emergency response or corrective action, as necessary or applicable. Do not recommence WORK until authorized in writing by the OWNER or ENVIRONMENTAL CONSULTANT.

## 1.5 ASBESTOS-CONTAINING MATERIALS (ACM)

Suspected ACM sampling and analytical laboratory information is included in Appendix A. If suspected unknown/damaged/friable/hazardous ACM, other than those listed in this specification, are identified during abatement by the CONTRACTOR, he/she must notify the OWNER and/or ENVIRONMENTAL CONSULTANT. At that point in time, sampling and analysis will be conducted prior to the CONTRACTOR disturbing the suspect material. The ENVIRONMENTAL CONSULTANT will inform the CONTRACTOR of the results and provide instruction on how to proceed. Do not disturb the suspect material until instructed by the OWNER and/or ENVIRONMENTAL CONSULTANT.

## 1.6 CONTRACTOR USE OF PREMISES

A. The CONTRACTOR shall limit his use of the premises to the WORK indicated. The CONTRACTOR’S personnel must enter and leave the site in street clothes. Personal Protective Equipment (PPE) must be restricted to the confines of the WORK and decontamination (decon) areas.

B. The CONTRACTOR shall confine operations to the bounds of the property.

C. Keep existing driveways and entrances serving the premises clear and available to the OWNER at all times. Do not use these areas for parking or storage of materials.

D. Do not unreasonably encumber the Site with materials or equipment. Confine stockpiling of materials and location of storage trailers to areas permitted by the OWNER. If additional storage is necessary contact the OWNER to obtain additional space.

E. Do not leave vehicles/equipment unattended with the motor running/ignition key in place or accessible to unauthorized persons.

F. Smoking is not permitted inside the facilities at any time. Open fires are not permitted inside the facilities at any time. The CONTRACTOR shall establish smoking areas outside of the facilities and shall maintain those areas free of refuse, including, but not limited to cigarette butts and other trash, at the sole discretion of the OWNER.

## 1.7 OWNER OCCUPANCY

Other trades may be on Site during implementation of the WORK. If other trades mobilize to the Site, WORK areas must be appropriately isolated from areas which may be subject to generally occupancy by non-abatement personnel and shall be under control of the CONTRACTOR during the course of the WORK. Cooperate fully with the OWNER during WORK operations to minimize conflicts.

## 1.8 DEFINITIONS

Definitions contained in this Section are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

**Accredited or Accreditation** (when referring to a person or laboratory): A person or laboratory accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act (TSCA) and by the Louisiana Department of Environmental Quality (LDEQ) under the provisions of LAC 33:III.Chapter 27, Appendix A—Agent Accreditation Plan.

**Adequately Wet:** Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet. Once contained, water droplets formed inside disposal containers will be sufficient evidence of being adequately wet.

**Air Monitoring:** The process of measuring the fiber content of a specific volume of air.

**Air Monitoring Group:** An entity providing professional services for obtaining and analyzing airborne fiber concentrations in the workplace. Representatives must have at least a valid Contractor/Supervisor Certification from the LDEQ.

**Amended Water:** Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.

**Asbestos:** The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.

**Asbestos-Containing Materials (ACM):** Any material containing more than 1% by weight of asbestos of any type or mixture of types.

**Asbestos-Containing Waste Material:** Any material which is, or is suspected of being, or any material contaminated with an ACM which is to be removed from a work area for disposal.

**Asbestos Debris:** Pieces of ACM that can be identified by color, texture, or composition; or dust, if the dust is determined by an accredited inspector to be ACM.

**Authorized Visitor:** The OWNER, OWNER'S REPRESENTATIVE, testing lab personnel, emergency personnel, or a representative of any federal, state and local regulatory or other agency having authority over the project.

**Barrier:** Any surface that seals off the work area to inhibit the movement of fibers.

**Breathing Zone:** A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.

**Category I Nonfriable Asbestos-Containing Materials:** Asbestos-containing packings, gaskets, resilient floor covering and asphalt roofing products containing more than one percent asbestos as determined by using the method specified in Appendix A, Subpart F, 40 Code of Federal Regulations Part 763, Section 1, Polarized Light Microscopy (PLM).

**Category II Nonfriable Asbestos-Containing Materials:** Any material, excluding Category I Nonfriable ACM, containing more than one percent asbestos as determined by using the method specified (PLM); that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Certified Industrial Hygienist (C.I.H.):** An individual certified in Comprehensive Practice by the American Board of Industrial Hygiene.

**Cutting:** To penetrate with a sharp-edged instrument, including sawing, but not including shearing, slicing, or punching.

**Demolition:** The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.

**DEQ Identification Number:** The accreditation number supplied by the administrative authority which authorizes a contractor/supervisor to manage an asbestos demolition or renovation project which involves regulated ACM.

**Disposal Bag:** A properly labeled 6 mil thick leak-tight plastic bag used for transporting asbestos waste from work site and to disposal site.

**Encapsulant:** A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.

**Encapsulation:** Treatment of ACM, with an encapsulant.

**Enclosure**: Construction of an air-tight, impermeable, permanent barrier around ACM to control the release of asbestos fibers into the air.

**Facility:** Any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site.

**Filter:** A media component used in respirators to remove solid or liquid particles from the inspired air.

**Friable Asbestos Material:** Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

**Glove Bag:** A sack (typically constructed of 6 mil transparent poly (poly) or polyvinylchloride plastic) with inward projecting longsleeve gloves, which are designed to enclose an object from which an ACM is to be removed.

**HEPA Filter:** A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.

**Negative Pressure Respirator:** A respirator in which the air pressure inside the inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

**Personal Monitoring:** Sampling of the asbestos fiber concentrations within the breathing zone of an employee.

**Pressure Differential and Ventilation System:** A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with the inside of the Work Area at a lower pressure than any adjacent area, and which cleans recirculated air or generates a constant air flow from adjacent areas into the Work Area.

**Protection Factor:** The ratio of the ambient concentration of an airborne substance to the concentration inside the respirator at the breathing zone of the wearer. A measure of the degree of protection provided by a respirator to the wearer.

**Respirator:** A device designed to protect the wearer from the inhalation of harmful atmospheres.

**Surfactant:** A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

**Time Weighted Average (TWA):** The average concentration of a contaminant in air during a specific time period.

**Visible Emissions:** Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

**Work Area:** The area where asbestos-related work/removal operations are performed defined and/or isolated to prevent the spread of ACM dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 Code of Federal Regulations 1926.

## 1.9 CODES, REGULATIONS, AND STANDARDS

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith. Make available for review at the site one copy of all applicable federal, state, county and city regulations governing the abatement work, including but not limited to:

A. OSHA: Occupational Safety and Health Administration

1. Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 58 of the Code of Federal Regulations (CFR).
2. Respiratory Protection Title 29, Part 1910, Section 134 of the CFR
3. Construction Industry Title 29, Part 1926, of the CFR
4. Access to Employee Exposure and Medical Records Title 29, Part 1910, Section 2 of the CFR
5. Hazard Communication Title 29, Part 1910, Section 1200 of the CFR.
6. Specifications for Accident Prevention Signs and Tags Title 29, Part 1910, Section 145 of the CFR.

B. DOT: U. S. Department of Transportation

1. Hazardous Substances Title 29, Part 171 and 172 of the CFR.
2. HM-181 of the CFR 100-199 effective October 1, 1993.

C. EPA: United States Environmental Protection Agency

1. Asbestos Abatement Projects; Worker Protection Rule Title 40 Part 763, Sub-part G of the CFR.
2. Asbestos Hazard Emergency Response Act (AHERA) ACM in Schools Final Rule & Notice Title 40, Part 763, Sub-part E of the CFR.
3. Training Requirements of (AHERA) Regulation ACM in Schools Final Rule & Notice Title 40, Part 763, Sub-part E, Appendix C of the CFR.
4. Training Requirements of the Asbestos Model Accreditation Plan (MAP) in 40 CFR 763, Appendix C to Subpart E.
5. National Emission Standard for Hazardous Air Pollutants (NESHAP) Emission Standard for Asbestos Title 40, Part 61, Sub-part A, and Sub-part M (Revised Sub-part B) of the CFR.

D. LDEQ: Louisiana Department of Environmental Quality

1. An annual "Industrial Waste Hauler Permit" for ACM is required for transportation of ACM waste to disposal site.
2. CONTRACTOR and all abatement workers to be accredited by applicable federal, state, and local agencies and have current certificates in their possession.
3. Written notification ten days prior to the removal of asbestos to the LDEQ and obtain the corresponding Asbestos Disposal Verification Form (ADVF), where applicable for the project. This form will be kept on site until such time as the asbestos waste is hauled to the disposal site.
4. LAC.33.III Chapter 27
5. LAC 33.III.Chapter 51

E. Standards:

1. American National Standards Institute (ANSI)
   - Fundamentals Governing the Design and Operation of Local Exhaust Systems Publication Z9.2-79
   - Practices for Respiratory Protection Publication Z88.2-80
2. American Society for Testing and Materials (ASTM)
   - Safety and Health Requirements Relating to Occupational Exposure to Asbestos Standard E 849-82
   - Specification for Encapsulants for Friable Asbestos Containing Building Materials Proposal P-189

F. EPA Guidance Documents

1. Asbestos-Containing Materials in School Buildings - A Guidance Document. Part 1 & 2. (Orange Books) EPA C00090 (out of print)
2. Guidance for Controlling ACM in Buildings (Purple Book) EPA 560/5-85-024 Friable ACM in Schools: Identification and Notification Rule (40 CFR Part 763)
3. Evaluation of the EPA Asbestos-in-Schools Identification and Notification Rule. EPA 560/5-84-005.
4. Asbestos in Buildings: National Survey of Friable ACM. EPA 560/5-84-006.

5. Asbestos in Buildings: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018.
6. Asbestos Waste Management Guidance. EPA 530-SW-85-007.
7. Asbestos Fact Book. EPA Office of Public Affairs. Asbestos in Buildings. Simplified Sampling Scheme for Friable Surfacing Materials.
8. Commercial Laboratories with Polarized Light Microscopy Capabilities for bulk asbestos identification.
9. A Guide to Respiratory Protection for the Asbestos Abatement Industry. EPA-560-OPTS-86-001

## 1.10 PROJECT COORDINATION

A. CONTRACTOR'S Administrative and Supervisory Personnel

1. Superintendent: Provide a full-time Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for personnel, disposal procedures, etc. This person shall be the CONTRACTOR'S representative responsible for compliance with applicable federal, state, and local regulations, and these specifications. The Superintendent shall meet the definition of the Competent Person as defined in the OSHA asbestos standards.

2. Experience and Training: The Superintendent must have completed a course by a recognized Environmental Protection Agency (EPA) Training Center or equivalent course in asbestos abatement supervision. The Superintendent shall be well versed in project management and have had a minimum of two (2) years on-the-job experience in asbestos abatement procedures.

3. Competent Person: The Superintendent shall be a Competent Person as required by OSHA in 29 Coder of Federal Regulations (CFR) 1926.

4. Accreditation: The Superintendent shall be accredited as an Asbestos Abatement Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C, to include holding a current certificate as "Contractor Supervisor". Evidence of said accreditation shall be in the form of an LDEQ accreditation certificate, a copy of which must be on site at all times.

B. Project Meetings

OWNER and/or ENVIRONMENTAL CONSULTANT will hold meetings prior to the start of the WORK and periodically throughout the duration of the WORK. Each entity involved in planning, coordination, or performance of WORK shall be properly represented at the pre-construction meeting. Emergency operations meetings may be held during the course of the WORK if deemed necessary by the OWNER and/or CONTRACTOR.

C. Daily Log

The CONTRACTOR shall maintain in the Decon Unit or Job Trailer a Daily Log documenting the following items by dates and times:

1. Meetings (purpose, attendees, brief discussion).

2. Visitations (authorized and unauthorized).
3. Personnel, by name, entering and leaving the work area.
4. Special or unusual events (barrier breeching, equipment failures, accidents).
5. Air monitoring tests and test results.
6. Documentation of CONTRACTOR'S completion of the following:
   a. Inspection of WORK area preparation prior to start of removal and daily thereafter.
   b. Removal of any sheet plastic barriers.
7. CONTRACTOR'S inspections prior to lock down, encapsulation, enclosure, or any other operation that will conceal the condition of ACM or the substrate from which such materials have been removed.
8. Removal of waste materials from WORK area, decon of equipment (list items), CONTRACTOR'S final inspection/final air test analysis.

Submit copies of the completed log to the ENVIRONMENTAL CONSULTANT at final closeout of project as a project close-out submittal or as direct by the OWNER at the Pre-Construction Meeting.

D. Special Reports:

Except as otherwise indicated, submit special reports directly to the OWNER within one (1) day of occurrence requiring special report, with a copy provided to others affected by the occurrence. Should the event require immediate attention by the OWNER, immediately contact the ENVIRONMENTAL CONSULTANT and provide verbal notification of the event.

1. Reporting Unusual Events: When an event of unusual nature occurs at the site (examples: failure of differential pressure system (DPS), rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by CONTRACTOR'S personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise ENVIRONMENTAL CONSULTANT in advance at the earliest possible date and time.

2. Reporting Accidents: Prepare and submit reports of ALL accidents anywhere WORK is in progress, record/document data and actions; comply with industry standards. For this purpose, an accident is defined to include events where personal injury is sustained, property loss is sustained, or where the event posed a significant threat of loss or personal injury.

3. Report Discovered Conditions: When an unusual condition of the facility is discovered during the WORK, prepare and submit a special report indicating the condition discovered.

E. Contingency Plan

1. Prepare a contingency plan for emergencies including fire, accident, power failure, pressure differential system failure, supplied air system failure, or any other event that may require modification or abridgement of decon or work area isolation procedures. Include in plan specific procedures for decon or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

2. In the clean room of Personnel Decon Unit, post telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, and telephone company.

F. Notification

1. The OWNER will notify other entities at the job site of the nature of the asbestos abatement activities, location of ACM, requirements relative to asbestos set forth in these specifications and applicable regulations, as necessary or applicable.

2. The CONTRACTOR shall notify federal, state, and local regulatory agencies in writing immediately upon contract award and a minimum of 10 days in advance of any asbestos related work, as necessary or applicable. Notifications shall be made by the CONTRACTOR as required by USEPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M) and/or LAC 33.III Chapter 27. Submit copies of notifications and documentation to the OWNER and/or ENVIRONMENTAL CONSULTANT. If a project consists of multi-phases, with distinct start and stop dates, these shall be declared on the EPA Notice or individual notices shall be filed for each phase.

3. The CONTRACTOR shall notify emergency service agencies including fire, ambulance, police, or other agencies that may serve the WORK site in case of an emergency. Notification is to include methods of entering WORK area, emergency entry/exit locations, modifications to fire notification/fighting equipment, and other information needed by agencies.

4. Any individual at the job site may notify emergency service agencies if necessary without effect on this Contract or the Contract Sum. The OWNER must also be notified immediately of all accidents.

G. Documentation

Before the start of WORK, the CONTRACTOR shall maintain the following information in the Decon Unit or Job Trailer for review by the OWNER and/or ENVIRONMENTAL CONSULTANT. No WORK shall begin until the following are reviewed and deposited in an accessible location at the job site.

1. Current licenses and permits as required by applicable federal, state, or local jurisdictions for the removal, transporting, disposal or other regulated activity relative to the WORK of this contract.
2. Contingency Plan: For emergency actions.
3. Telephone numbers and location of emergency services.
4. Notification sent to emergency service agencies.
5. Superintendent(s) Contact Information.
6. Evidence in form of training certificate of accreditation of Superintendent(s) as an asbestos abatement supervisor.
7. List of the CONTRACTOR'S principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

8. Copies of this list will be maintained in the project meeting room, the temporary field office, and each temporary telephone.

## 1.11 SUBMITTALS

A. Pre-Construction Documentation Submittals

1. Prepare written notification and obtain applicable licenses and permits as required by federal, state, and local regulations prior to the start of the WORK. Include copies of notifications, licenses, permits, etc. with pre-construction documentation package.

2. Submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the plan, the location and layout of decon areas, the sequencing of WORK, interface of trades, methods used to assure the safety of occupants and visitors, disposal plan (including identity of waste hauler), location of approved disposal site, and a detailed description of the methods to control the release of asbestos fibers, as applicable. Describe in detail the proposed design of the differential pressure system (where applicable), method of removal to prohibit visible emissions, and packaging of asbestos debris. The plan must be reviewed and commented by the ENVIRONMENTAL CONSULTANT prior to commencement of WORK.

3. Submit a contingency plan for emergencies including fire, accident, power failure, differential pressure system failure, or other event that may require modification or abridgement of decon or work area isolation procedures. Include specific procedures for decon or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

4. Submit documentation that each and every contractor or subcontractor employee to be utilized on the project has had instructions on the hazards of asbestos exposure, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures regarding asbestos removal.

5. Submit documentation that each worker to be utilized on the project by the CONTRACTOR is actively involved in a company employee respiratory protection program, has had appropriate training in respiratory protection, and is actively involved in a company employee medical surveillance program.

6. For each aforementioned employee, submit written opinion from physician who conducted medical examination within the last 12 months as part of compliance with OSHA medical surveillance requirements.

7. Copy of the CONTRACTOR'S Asbestos Handling License.

8. Submit complete information relative to the following:

   a. Names of supervisory personnel and their qualifications and training.
   b. A description of all special equipment, techniques, etc. to be used for the WORK.
   c. Proposed progress schedule for the WORK.
   d. Certification that the differential pressure filtration system meets requirements of the Contract Documents.

9. Submit manufacturer's literature and written information for all materials and equipment, including NFPA test report of flame resistant materials, and safety data sheets for all chemical-content supplies. CONTRACTOR shall not change materials or equipment without approval of a new submittal to the ENVIRONMENTAL CONSULTANT.

B. Submittals Following Initiation of the WORK:

1. Physicians statement, asbestos abatement training documentation and respirator training certificates, and applicable licenses and registrations for all new employees hired during the course of the project, prior to the first day of work on the project for each employee.

2. Submit copies of the preceding week's daily logs to the OWNER and/or ENVIRONMENTAL CONSULTANT at progress meetings.

C. Post-Job Submittals to the ENVIRONMENTAL CONSULTANT:

1. Documentation of employee personnel air monitoring results relative to OSHA respiratory protection level compliance.
2. Copies of all daily logs and disposal receipts not previously submitted.

D. Submittal Preparation

Place a permanent label or title block on each submittal for identification. Provide the following information on the label for proper processing and recording of action taken:

Project Name
Date
Name and address of the OWNER'S REPRESENTATIVE
Name and address of CONTRACTOR

E. Submittal Transmittal

Package each submittal appropriately for transmittal and handling. Transmit each submittal from CONTRACTOR to the OWNER and/or ENVIRONMENTAL CONSULTANT. Submittals received from sources other than the CONTRACTOR will be returned without action.

F. Schedule

1. Provide proposed detailed schedule including work dates, work shift time, number of employees, dates of start and completion including dates of preparation work, removal, and final inspection dates.

2. Coordinate each element on the schedule with the OWNER and/or ENVIRONMENTAL CONSULTANT; include minor elements involved in the sequence of work. Show each activity in sequence. Indicate graphically, sequences necessary for completion of related portions of the work.

3. Coordinate the CONTRACTOR'S work schedule with subcontractors, progress reports, payment requests, and other schedules.

4. Phasing: Provide notations on the schedule to show how the sequence of WORK will progress.

5. Work Stages: Indicate important stages of work for each major portion of the work.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Caulking

High-grade rubber base caulk for masonry and/or for other materials.

B. Encapsulant

Product shall be rated as acceptable for use intended when field tested in accordance with ASTM Proposed Specification P-189 “Specification for Encapsulants for Friable Asbestos Containing Building Materials." Use only materials that have a flame spread index of 25 or less when dry, when tested in accordance with ASTM E-84.

C. Glove-Bag

6 mil (0.15 mm) thick, 5 ft x 5 ft, transparent polyethylene or polyvinylchloride plastic with long sleeve gloves, designated inlets for HEPA vacuum attachment, and storage pouch.

D. Impermeable Waste-Disposal Containers

Suitable to receive and retain any asbestos-containing or contaminated material until disposal at an approved site. The containers shall be labeled in accordance with OSHA Regulation 29 CFR 1910.1001 and 29 CFR 1926.1101. Containers must be both water-tight and air-tight.

E. Plastic Sheeting

Product Standard PS 17-69 and OSHA Regulation 29 CFR 1926.1101; Polyethylene plastic sheeting material 6 mil thickness for covering floors and walls, providing air locks, and sealing doors and windows; supply in appropriate widths to minimize seams. Must be flame-resistant material and must meet test criteria in NFPA 701. Reinforced sheeting is required for applications subject to wear and tear.

F. Surfactant (Wetting Agent)

50% polyoxyethylene ester and 50% polyoxyethylene ether, or approved equal, shall be mixed with water to provide a concentration of 2 ml surfactant to 1 liters of water, or manufacturer's recommended concentration.

G. Tape

Glass fiber or other tape capable of sealing joints of adjacent sheets of plastic sheeting and for attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions, including use of amended water. Minimum tape width shall be 2 inches.

H. Warning Labels and Signs

As required by OSHA regulations 29 CFR 1910.1001 and 1926.58.

I. Waste Water Filters

Discharged liquids shall pass through a primary filter and the output shall be particles 20 microns or smaller. The secondary filter shall have output particles 5 microns or smaller.

## 2.2 EQUIPMENT

A. Air Filtration Units

Shall be factory-sealed and equipped with HEPA filters (final), pre-filters, instrumentation to monitor pressure differential, and safety and warning devices.

1. Provide units with electrical components approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL).

2. Access to the units for replacement of all air filters shall be from the intake end. Provide units with pre-filters, and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps. The filter media shall be completely sealed on all edges with a structurally rigid frame with a continuous rubber gasket.

3. HEPA Filters: Provide units equipped with HEPA filters. Filters shall be individually tested and certified by the manufacturer.

4. Pre-filters: Provide a two-stage pre-filtration to extend the life of the primary HEPA filter. The first-stage pre-filter is a low-efficiency type effective for particles 100 micrometers and larger. The second-stage (or intermediate) filter has a medium efficiency effective for particles down to 5 micrometers.

5. Instrumentation: Provide units equipped with a magnehelic gauge or manometer to measure the pressure drop across filters and to indicate when filters have become loaded and need to be changed. A table indicating the usable air-handling capacity for various static pressure readings on the magnehelic gauge affixed near the gauge for reference, or the magnehelic reading indicating at what point the filters should be changed, noting cubic feet per minute (CFM) air delivery at that point. Provide an elapsed time meter to show the total accumulated hours of operation.

6. Safety and Warning Devices: Provide units with the following safety and warning devices:

a. Warning lights to indicate normal operation, too high a pressure drop across the filters (i.e., filter overloading), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge)

b. GFCIs.

c. Audible alarm if unit shuts down due to operation of safety systems.

d. Electrical overload protection sized for the equipment. The motor, fan, fan housing, and cabinet are to be grounded.

B. Respirators and Respirator Systems

1. Product Data: Must possess NIOSH and MSHA approval for each component in an assembly and/or for entire assembly.

**PART 3 - EXECUTION**

**3.1 TEMPORARY FACILITIES (IF APPLICABLE)**

A. Before the start of WORK, the CONTRACTOR shall provide documentation containing the following to the OWNER and/or ENVIRONMENTAL CONSULTANT for review and comment, if applicable.

1. Scaffolding: Information in sufficient detail to indicate compliance with applicable worker safety regulations or other requirements.

2. Hot water heater: Manufacturers name, model number, size in gallons, heating capacity, power requirements.

3. Decontamination Unit Sub-panel: Product data.

4. Ground Fault Circuit Interrupters (GFCI): Product data

B. Scaffolding

1. Provide all scaffolding, ladders and/or staging, etc. as necessary to accomplish the WORK. The type, erection, and use of all scaffolding and ladders shall comply with all applicable OSHA provisions.

2. Equip rungs of all metal ladders, etc. with an abrasive non-slip surface.

3. Provide a nonskid surface on all scaffold surfaces subject to foot traffic.

C. Water Services

1. Water Hoses: Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system into each work area and to each Decon Unit. Provide fittings as required to allow for connection to temporary

hydrants/spouts, as well as temporary water heater, branch piping, showers, shut-off nozzles and equipment.

2. Hot Water Heater: Provide UL rated 40 gallon (or greater) electric water heater to supply hot water for the decon shower. Activate from 30 amp circuit breaker located within the Decon Unit subpanel. Provide with relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Wiring of the heater shall be in compliance with NEMA, NECA, and UL standards. Where water is not available, CONTRACTOR shall furnish portable washing facilities.

3. Hot Water: Hot water shall be supplied by the CONTRACTOR to the decon shower at a minimum temperature of 100°F, where feasible, or as acceptable by workers.

4. Maintain hose connections and outlet valves in leakproof condition. Where finish work below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize possible water damage. Drain water promptly.

D. Electrical Services

1. Ground Fault Protection: Equip all circuits entering WORK area with ground fault circuit interrupters (GFCI). Locate GFCIs exterior to WORK area so all circuits are protected prior to entering WORK area. Provide circuit breaker type GFCI equipped with test button and reset switch for all circuits to be used for any purpose in work area, decon units, exterior, or as otherwise required by national electrical code, OSHA or other authority. Locate electrical panel exterior to WORK area.

2. Electrical Power Cords: Use only grounded extension cords; use "hard-service" cords where exposed to abrasion/ traffic. Use single lengths or waterproof connectors to connect lengths of cords, if single lengths will not reach areas of WORK.

3. Temporary Electrical Panel: Connect temporary panel to temporary power pole or provide generator, as necessary to supply sufficient power to conduct specified work activities.

E. Temporary Lighting (IF APPLICABLE)

1. Provide general service incandescent/fluorescent lamps of wattage required for adequate illumination. Protect lamps with guard cages/tempered glass enclosures, where fixtures are exposed to breakage by work. Provide vapor tight fixtures in work area and decon units. Provide exterior fixtures where exposed to the weather or moisture.

2. One 200-watt incandescent lamp per 1000 square feet of floor area, uniformly distributed, for general construction lighting, or equivalent illumination. In corridors and similar areas provide one 100-watt incandescent lamp every 50 feet. In stairways and at ladder runs, provide one lamp minimum per story, located to illuminate each landing/flight. Provide sufficient temporary lighting to ensure proper workmanship and safety; by combined use of daylight, general lighting, and portable plug-in task lighting.

3. Provide lighting in areas where work is being performed as required to supply a 100 foot candle minimum light level.

F. First Aid

First Aid supplies must comply with governing regulations and recognized recommendations within the construction industry.

G. Sanitary Facilities

Sanitary facilities must be supplied by the CONTRACTOR at the job.

H. Fire Extinguishers

Fire Extinguishers must comply with the applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguishers." Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each WORK area in Equipment Room and one outside WORK area in Clean Room.

## 3.2 TEMPORARY ENCLOSURES

The general condition of the Site will lend itself to the construction of enclosures in most interior WORK areas. Where feasible, friable materials will be removed in temporary enclosures as indicated below; glovebags may be used to abate ACM-TSI. ACM roofing system component (e.g. roofing tar) removal may be accomplished in regulated areas utilizing critical barriers as described in the appropriate section. The CONTRACTOR will be required to utilize HEPA equipped Differential Pressure equipment in regulated areas in an effort to control airborne fibers and provide air movement to assist in worker comfort. In general, the CONTRACTOR is expected to:

A. Completely isolate interior WORK areas >3 $ft^2$ from other parts of the Site so as to prevent ACM dust/debris from passing beyond the isolation area. Should areas beyond the WORK area(s) become contaminated as a consequence of the WORK, clean those areas. Perform such required cleaning or decon at no additional cost to OWNER.

B. Place all tools, scaffolding, staging, etc. necessary for the WORK in the area to be isolated prior to completion of isolation.

C. Remove all movable items designated uncontaminated, if necessary or applicable. Remove uncontaminated equipment, and/or supplies from the WORK area(s) before commencing work, or completely cover with two layers of poly sheeting, at least 6 mil in thickness, securely taped in place with duct tape. Such equipment shall be considered outside the WORK area unless covering is breached.

C. Inspection Windows

Install inspection windows in locations convenient for the OWNER, ENVIRONMENTAL CONSULTANT, and/or regulatory authorities to observe WORK activities in the containment area.

E. Emergency Exits

Provide emergency exits and emergency lighting as set forth below:

1. Emergency Exits: At each existing exit door from an isolated WORK area, provide the following means for emergency exiting.
2. Arrange exit door so it is secure from outside the WORK area but permits exiting from the WORK area.
3. Mark outline of door on Primary and Critical Barriers with luminescent paint at least 1" wide. Hang a razor knife on a string beside outline. Arrange Critical and Primary barriers so they can be easily cut with one pass of razor knife. Paint words "EMERGENCY EXIT" with luminescent paint in letters at least one foot high and 2" thick.

F. Critical Barriers

1. Provide Sheet Plastic barriers at least 6 mil in thickness as required to seal openings completely from the WORK area(s) into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape or spray cement.

2. Provide Pressure Differential System.

3. Scaffolding: If fixed scaffolding is to be used, HEPA vacuum and wet clean area prior to scaffolding installation.

4. Remove all general construction items which cover the surface of the work as required to prevent interference with the WORK. Clean and decontaminate all such materials, before start of work.

5. Clean all surfaces in WORK area(s) with a HEPA filtered vacuum or wet wiping prior to installation of primary barrier.

G. Primary Barrier

1. Protect surfaces in the WORK area(s) from contamination from asbestos-containing debris, slurry, or high airborne fiber levels by covering with a primary barrier as described below.

2. Cover equipment with one layer of 6 mil sheet plastic.

3. Tape over any cracks that are larger than 1/16 inch.

4. Protect surfaces in the WORK area(s) with two (2) layers of 6 mil poly sheeting on floor and walls, or as otherwise directed in writing by the ENVIRONMENTAL CONSULTANT. Perform WORK in the following sequence.

5. Cover Floor of WORK area(s) with two layers of clear poly sheeting, each 6 mil in thickness, turned up walls at least 12 inches. Form a sharp right angle bend at junction of floor and wall.

6. Cover all walls in WORK area(s) including "Critical Barrier" sheet plastic barriers with one layer of poly, at least 6 mil in thickness, mechanically supported and sealed with duct tape or spray-glue in the same manner as "Critical Barrier." Tape all joints with duct tape

or as otherwise indicated on the Contract Documents or in writing by ENVIRONMENTAL CONSULTANT.

7. Remove and replace poly sheeting which has been damaged by removal operations or where seal failed. Remove affected sheeting and wipe down entire area. Install new poly sheeting only when area is completely dry.

H. Secondary Barrier

Utilize a secondary layer of plastic as a drop cloth to protect the primary layer from debris generated by the asbestos abatement work.

I. Regulated Area

Where construction of containment is not feasible (such as exterior areas or elevated areas associated with existing roofing systems), a “regulated area” will be established by placing a barricade encompassing an area not less than 25 feet in each direction around the WORK area(s), if applicable. The barricade will be monitored at all times during the course of abatement activities by a CONTRACTOR'S representative to prevent entrance into the regulated area by unauthorized personnel.

J. Maintenance of Containment Barrier and Enclosures

1. Ensure that the containment barrier, decontamination enclosure rooms, and other sealed doors, vents, etc., and plastic linings are effectively sealed and taped for the duration of the abatement WORK.

2. Repair damaged barriers and remedy defects immediately upon discovery. Visually inspect enclosure at the beginning of each WORK period.

3. Damaged or deteriorating materials shall not be reused and shall be removed from the premises. Material that becomes exposed to and contaminated with asbestos shall be decontaminated or disposed of in accordance with the applicable regulations and special requirements.

4. Clean debris and residue from inside of the decontamination enclosure system on a daily basis. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.

5. Maintain floors in the clean room and airlocks as dry as possible to minimize slips and trips. Damp wipe all surfaces twice after each shift change with a disinfectant solution.

## 3.3 DIFFERENTIAL PRESSURE SYSTEM

A. Pressure Differential Isolation

1. Isolate the WORK area(s) from all adjacent areas or systems of the facility, with a pressure differential that will cause a movement of air from outside to inside at any breach in the physical isolation of the WORK area(s).

2. Relative Pressure in WORK area(s): Continuously maintain the WORK area(s) at an air pressure that is lower than that in surrounding space in the facility outside of the WORK area. This pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of 0.02 inches of water.

3. Accomplish the pressure differential by exhausting a sufficient number of HEPA filtered fan units from the WORK area(s). The number of units required will depend on machine characteristics, the seal at barriers, and required air circulation. The number of units will increase with increased make-up air or leaks into the WORK area(s). Determine the number of units required for pressure isolation by the following procedure:

    a. Determining the Air Circulation Requirements: Provide a fully operational air circulation system supplying a minimum of the following air circulation rate of four (4) air changes per hour.
    b. Determine Number of Units needed to achieve required air circulation by determining the volume in cubic feet (CF) of the work area by multiplying floor area by ceiling height. Determine total air circulation requirement in CF/minute (CFM) for the WORK area by dividing this volume by the air change rate and multiplying by 60.
    c. Air Circulation Required in CFM = Volume of work area (cu. ft.) X # of air changes per hour 60 (minutes per hour).
    d. Add one (1) unit as a backup in case of equipment failure or machine shutdown for filter changing.

B. Exhaust System

1. Pressure differential isolation and air circulation in the WORK area(s) are to be accomplished by an exhaust system as described below. Exhaust units from the WORK area(s) to meet air circulation requirements.

2. Location of HEPA Filtered Fan Units: Locate fan unit(s) so that makeup air enters WORK area primarily through decon facilities and traverses WORK area(s) as much as possible. This may be accomplished by positioning the HEPA filtered fan unit(s) at a maximum distance from the worker access opening or other makeup air sources.

3. Place end of unit and intake duct or its exhaust duct through an opening in the plastic barrier or wall covering. Seal plastic around the unit or duct with tape. Vent to the outside of WORK area and to the furthest point feasible from any source of makeup air to the containment area.

4. Decontamination Units: Due to the nature of the WORK, workers will be allowed to double suit and utilize dry decon procedures when leaving the immediate WORK area. Workers must then be transported directly to a centralized decon unit and proceed through proper decon procedures.

5. Supplemental Makeup Air Inlets: Provide where required for proper air flow through the WORK area in location approved by the OWNER by making openings in the plastic sheeting that allow air from outside the enclosure into the WORK area(s).

C. Recirculation System:

1. Location of Fan Units: Locate HEPA filtered fan units so that air is circulated through all parts of the WORK area(s), and so that required pressure is maintained at all parts of WORK area(s) geometry.

2. Pressure Differential Isolation: Continuously maintain the pressure differential required for the WORK area(s).

3. Air Circulation: Continuously maintain air circulation in Decontamination Units at same level as required for WORK area(s).

4. Electrical: Each unit shall be serviced by a dedicated circuit.

5. Testing the System: Test pressure differential system before any ACM is wetted or removed. After a WORK area has been prepared, the decon facility set up, and the fan unit(s) installed, start the unit(s) (one at a time). Demonstrate operation and testing of pressure differential system to the ENVIRONMENTAL CONSULTANT. Demonstration will include, but not be limited to, the following:

    a. Plastic barriers/sheeting move slightly in toward WORK area; curtains of decon units move slightly in toward WORK area.
    b. There is a noticeable movement of air through the Decontamination Unit.
    c. Use smoke tube or applicable equivalent to demonstrate air movement from Clean Room through Shower Room to Equipment Room.
    d. Use smoke tubes or applicable equivalent to demonstrate a definite motion of air across all areas in which WORK is to be performed.
    e. Use a differential pressure meter or manometer to demonstrate the required pressure differential at every barrier separating the WORK area from the balance of the building, equipment, ductwork or outside.

6. Use of System During Abatement Operations

    a. Start fan units before beginning WORK (before any ACM is disturbed). After abatement work has begun, run units continuously to maintain a constant pressure differential and air circulation until decon of the WORK area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop.
    b. Start abatement work at a location farthest from the units and proceed toward them. If an electric failure occurs, immediately stop all abatement work and do not resume until power is restored and fan units are operating again.
    c. At completion of abatement work, allow fan units to run to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the WORK area with clean makeup air.

7. Dismantling the System: When a final inspection and results of final air tests indicate that the area has been decontaminated, exhaust units may be removed from the WORK area. Before removal, remove and properly dispose of pre-filter, and seal intake to machine with 6-mil poly to prevent environmental contamination from the filters.

## 3.4 WORKER/EQUIPMENT DECONTAMINATION AND WASTE LOAD-OUT ENCLOSURES

A. Worker/equipment decontamination enclosures shall be provided at each location where workers shall enter or exit the abatement WORK area.

B. The CONTRACTOR shall construct a worker/equipment decontamination enclosure consisting of at least a clean room, a shower room, and an equipment room, each separated by 3 feet air locks. Narrower air locks may be built if approved by the ENVIRONMENTAL CONSULTANT.

1. All rooms shall be constructed of or fully lined with 6 mil thick polyethylene sheeting and suitable framing to make them as air-tight as possible. Where joining separate sheets of polyethylene is necessary, the two sheets of polyethylene shall be over-lapped at least 6 inches and adhered with an unbroken line of tape in such a manner to prohibit air movement. Joint tape shall then be used to further seal the joint on the other side of the containment barrier so that both loose edges of the overlap are completely sealed.

2. Doorways will consist of three 3 sheets of 6 mil polyethylene from ceiling to floor. The width of these polyethylene sheets shall be sufficient to prevent air movement through the doorways when closed. These doorways shall be the only source of make-up air for the HEPA negative air filtration unit under normal circumstances, unless other sources are specifically approved by the ENVIRONMENTAL CONSULTANT.

3. Provide GFCI protection for all electrical equipment.

4. Provide temporary lighting inside the decontamination enclosure facility.

C. The Clean Room shall have a curtained doorway leading to the outside of the abatement work area, and an airlock leading to the Shower Room. The Clean Room shall be of sufficient size to accommodate at least one worker, and a supply of clean disposable coveralls and storage facilities for street clothing, and uncontaminated equipment.

D. The Shower Room shall have two airlocks, one adjacent to the clean room and one adjacent to the equipment room. The Shower Room shall provide hot and cold running water and soap and towels. It should have adequate space for a shower stall. Waste water from the shower shall be discharged through a water filtration unit efficient to 5 microns, then to a sanitary sewer. Shower Room shall have opaque walls.

1. Shower Stall: Provide leak tight shower enclosure unit with integrated drain pan fabricated from fiberglass or other durable waterproof material. Equip Shower Stall with hose bibs for hot and cold water. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the abatement work area. Provide splash proof entrances. Provide back flow prevention device and vacuum breaker, where required. Connect drain to a reservoir, pump water from reservoir through filters to a drain. Mount filters inside Shower Stall in manner that allows for access for filters to be changed from inside the shower. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan. Provide temporary extensions of existing (if available and authorized for CONTRACTOR use by OWNER) hot and cold water and drainage, as necessary for a complete and operable shower.

2. Filtered Waste Water Drainage: Provide cascaded disposable HEPA filter units on drain lines from showers or any other fluid source carrying ACM. Connect so that discharged water passes primary filter and output of primary (particles 20 microns and smaller) filter passes through secondary (particles 5 microns and smaller) filter.

3. Sump Pump: Provide totally submersible waterproof sump pump with integral float switch. Provide unit sized to pump 2 times the flow capacity of all showers or hoses supplying water to the sump, through the filters specified herein when they are loaded to the extent that replacement is required. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump. Adjust float switch so that a minimum of 3 inch remains between top of liquid and top of sump pan.

E. The Equipment Room shall have two airlocks, one adjacent to the abatement work area and one adjacent to the Shower Room. The room shall be of sufficient size so as to accommodate at least one worker to change clothes, and temporarily house any equipment which the CONTRACTOR wishes to store when not in use. The area shall have facilities for decontaminating material and equipment, and a container lined with 6 mil polyethylene bag for collection of disposable coveralls and foot coverings.

F. Waste Load-Out Enclosure: Asbestos-contaminated waste that has been containerized shall be transported out of the abatement WORK area(s) either through the personnel/equipment decontamination enclosure or through a separate waste load-out enclosure. If a separate enclosure is used, it shall be built with two airlocks, with curtained doorways: one to the abatement WORK area(s) and one to an uncontaminated area outside the abatement WORK area(s).

## 3.5 CONTROL ACCESS

A. Construct Personnel Decon Unit as specified. Permit access to the WORK area only through the Decon, where applicable. All other means of access shall be closed off and sealed and warning signs displayed on the clean side of the sealed access.

B. Isolate the WORK area to prevent entry by unauthorized personnel into controlled areas. Accomplish isolation by the following:

D. Provide Warning Signs at each area leading to WORK area. Outside critical barriers, post an approximately 20 inch by 14 inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

**DANGER**
**ASBESTOS**
**CANCER AND LUNG DISEASE HAZARD**

**RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED**
**IN THIS AREA**

E. No eating, drinking, smoking, or chewing gum is permitted within the abatement WORK area. The CONTRACTOR shall designate a "break area" where these activities, except for smoking,

are permitted. Smoking is prohibited inside the facilities. The CONTRACTOR must have any designated exterior "smoking" areas approved by the OWNER or OWNER'S REPRESENTATIVE prior to the start of WORK.

F. Workers and Visitors shall be fully protected with respirators and protective clothing during any WORK which may disturb asbestos-containing materials and result in fiber release. Full protection is not required during pre-abatement inspections of the containment, while WORK is not being conducted.

## 3.6 ABATEMENT WORK AREA ENTRY AND EXIT PROCEDURES

A. Each time the abatement WORK area(s) are entered, remove all street clothes in the Clean Room of the Decontamination Enclosure and put on new disposable coveralls, new head cover, and a clean respirator. Proceed through the Shower Room to the Equipment Room and put on work boots.

B. Each time an abatement WORK area is exited, the following procedures shall be followed:

1. Before leaving the regulated area, employees and authorized visitors shall remove all gross contamination and debris from their protective clothing.

2. Personnel exiting the regulated area shall remove their protective clothing and equipment (except respirators) in the Equipment Room and deposit the clothing in labeled impermeable bags or containers.

3. Personnel shall remove their respirators in the Shower Room, washing and rinsing them.

4. Personnel shall shower thoroughly before entering the Clean Room.

5. After showering, employees shall enter the Clean room before changing into street clothes.

## 3.7 PERSONAL PROTECTION

A. Protective Clothing and Equipment

Provide workers with sufficient sets of protective full body clothing, to include full body coveralls with hood, boots (for workers) and footwear coverings (for workers and visitors), and gloves. Provide eye protection and hard hats as required by applicable safety regulations. Contaminated non-disposal clothing and footwear shall be left in the Equipment Room until the end of the asbestos abatement work, at which time such items shall be disposed of as asbestos waste, or shall be thoroughly cleaned of all asbestos or asbestos-containing material. Provide storage facilities for visitors and workers for removed street clothing in the clean room.

1. Boots: Provide workers non-skid type work boots with protective shields as required by OSHA. Paint uppers of boots with red waterproof enamel paint as a permanent marking that the boots have been exposed to ACM abatement work areas. These boots are to be handled as asbestos-contaminated materials.

2. Hard Hats: Provide hard hats that meet ANSI Z89.1 for use where work is overhead, scaffolding is being used, or as otherwise required by OSHA. Label hats with same warning labels as required for ACM disposal bags.

3. Goggles: Provide goggles that meet ANSI Z87.1 as required by OSHA.

4. Gloves: Provide disposable work gloves for use in the abatement work area.

5. Coveralls with Hood: Provide disposable coveralls with hoods for use in the abatement work area.

6. Respirators: Provide workers with personally issued and marked respirator equipment approved by NIOSH/MSHA and, in accordance with these specifications, suitable for the asbestos exposure level in the abatement WORK area. Where respirators with disposable filters are employed, provide sufficient filters for replacement as necessary by the abatement worker, or as required by the applicable regulation. Authorized visitors must provide their own respirators, with fresh filters or cartridges as necessary, to enter the abatement WORK area. These are minimum requirements.

**3.8 RESPIRATORY PROTECTION**

A. The CONTRACTOR shall select respirators from among those jointly approved as being acceptable for protection by the MSHA and the NIOSH under the provisions of 30 CFR Part 11.

B. The CONTRACTOR shall select and provide respirators, at no cost to the employee and shall ensure that the employee uses the respirator provided.

C. Instruct and train each worker involved in asbestos abatement or maintenance and repair of asbestos-containing materials in proper respiratory use and require that each worker always wear in the abatement WORK area(s) respirator, properly fitted on the face. The respirator shall be worn from the start of any operation which may cause airborne asbestos fibers until the abatement WORK area(s) is completely decontaminated.

D. Allow an individual to use only those respirators for which training and fit-testing have been provided. Require that each time an air-purifying respirator is put on it be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z88.2.

E. For all jobs that involve the removal of thermal system insulation (TSI) or surfacing materials (OSHA definition of Class I work) the employer shall provide respirator protection in accordance with 29 CFR 1926.1101 (h) Table 1 - Respiratory Protection for Asbestos Fibers. This level of respiratory protection shall be maintained until the employer can produce a negative exposure assessment.

F. For all other abatement work, use respiratory protection appropriate for the fiber level encountered in the abatement WORK area(s) or as required for other toxic or oxygen-deficient situations encountered. The level of respiratory protection which supplies an airborne fiber level inside the respirator, at the breathing zone of the wearer, at or below the permissible exposure limit (PEL) is the minimum level of protection allowed (Table 1, Respiratory Protection for

Asbestos Fibers, 29 CFR 1926.1101). Do not use single-use, disposable, or quarter-face respirators.

G. Authorized visitors are responsible for providing their own respirator and replacement filters and cartridges and for having been previously and properly trained fit-tested, for the respirator used.

H. For use with air-purifying respirators, provide, at a minimum, HEPA type filters certified by NIOSH and MSHA for protection against asbestos fibers. In addition, a chemical cartridge may be added, if required for protection against chemicals used on this job.

I. For use with powered air purifying respirators, supply a sufficient quantity of HEPA filters approved for asbestos, so workers can change filters at any time that flow through the face piece decreases to the level at which the manufacturer recommends filter replacement.

**3.9 AIR MONITORING**

A. The ENVIRONMENTAL CONSULTANT will conduct ambient air monitoring to verify that the Site beyond the WORK area(s) and the outside environment remains uncontaminated during the course of asbestos abatement WORK. The OWNER and/or ENVIRONMENTAL CONSTULTANT will not be performing air monitoring to meet CONTRACTOR'S OSHA requirements for personal sampling or any other purpose. The CONTRACTOR is responsible to conduct air monitoring required by OSHA for CONTRACTOR personnel.

B. Analytical Methods:

The following methods will be used by the ENVIRONMENTAL CONSULTANT in analyzing filters used to collect baseline and ambient air samples.

1. Phase Contrast Microscopy (PCM) - will be performed using the OSHA Reference Method, Appendix A to 29 CFR 1926.1101, or NIOSH Method 7400.

C. Schedule of Air Samples:

1. Before the Start of WORK: The ENVIRONMENTAL CONSULTANT will secure the following air samples to establish a baseline before start of WORK.

2. Baseline: An action level expressed in fibers per cubic centimeter which is 25 % greater than the largest of the following:

   a. Average of the PCM samples collected outside each WORK area
   b. 0.1 fibers per cubic centimeter

3. Daily: Area samples will be collected by the ENVIRONMENTAL CONSULTANT in areas and at times during the WORK as deemed necessary by the OWNER or as specified in the Contract Documents. Daily samples will be analyzed by the ENVIRONMENTAL CONSULTANT by Phase Contrast Microscopy (PCM).

D Stop Action

If any ambient air sample taken outside of the abatement WORK area(s) exceeds 0.1 f/cc by PCM, immediately and automatically stop all WORK except corrective action. The ENVIRONMENTAL CONSULTANT and the abatement CONTRACTOR will determine the source of the high reading. The CONTRACTOR will correct the condition, as appropriate.

E. Abatement WORK Area Final Clearance Levels:

1. The ENVIRONMENTAL CONSULTANT will collect relevant clearance air samples in all WORK area(s) as required by the rules and regulations contained in LAC 33.III Chapter 27, as necessary or applicable.

    a. Per LAC 33.III Chapter 27. 2717.J.7, "in the case of a demolition of a school or state building where occupants will not reenter the building, clearance sampling is not required."

2. WORK area(s) will NOT be considered "clear" until air sampling results meet the requirements outlined in LAC 33.III Chapter 27. ACM abatement WORK area(s) greater than 3 $ft^2$ will be subject to Transmission Electron Microscopy (TEM) clearance air sampling using the aggressive air sampling methodology outlined in 40 CFR 763 Subpart E, Appendix

3. Analysis of clearance air sampling using TEM will be performed according to the rules and regulations contained in 40 CFR Part 763, Subpart E, Appendix A, as necessary or applicable.

F. CONTRACTOR'S Air Monitoring

1. Air monitoring required by OSHA is to be conducted by the CONTRACTOR. OSHA monitoring will be conducted for the duration of the project, on a daily basis, with results provided to the OWNER and/or ENVIRONMENTAL CONSULTANT at the completion of the project, or upon request.

## 3.10 REMOVAL OF ASBESTOS-CONTAINING MATERIALS

A. Preparation

1. Coordinate sequence of WORK with the OWNER and/or ENVIRONMENTAL CONSULTANT in order to properly segregate WORK areas from areas that must remain fully or partially occupied or operational, or in which other special considerations are required.

2. WORK Area(s)

    a. Construct worker and equipment decon units as specified.
    b. Completely separate the abatement WORK area(s) from other portions of the building, and the outside, by sealing all openings (windows, doorways, elevator openings, corridor entrances, drains, ducts, grill, diffusers, skylights, etc.) with barriers of 6 mil polyethylene sheeting and tape, or by sealing cracks leading out of the abatement WORK area(s). CONTRACTOR shall caulk the joints and seal holes in that portion of the walls, ceiling, and floor inside the abatement WORK

area(s) that could allow airborne asbestos fibers to be carried into adjoining spaces, or the exterior. Note in particular where pipes, conduit, and ductwork penetrate walls, ceilings and floor. Doorways and corridors which will not be used for passage during work must be sealed with 3/8 inch plywood, wood framing and plastic sheeting with tape.

c. All heating, ventilating, and air conditioning (HVAC) components that are in, supply or pass through the abatement WORK area(s) shall be shut down. During asbestos removal and until job completion, elevators, exhaust fans, and HVAC vents and intakes will be key locked to not operate in the abatement WORK area(s).

c. Isolate the WORK area(s), until acceptance by the ENVIRONMENTAL CONSULTANT of final air tests results, by construction of barrier partitions, critical barriers, primary barriers, and secondary barriers, or regulated areas.

d. Perform special procedures, approved in advance by the OWNER and/or ENVIRONMENTAL CONSULTANT necessary to provide exhaust of HEPA fan units.

e. Place each isolated WORK area under differential pressure as specified.

f. Ensure that all barriers and plastic enclosures remain effectively sealed and taped for the duration of asbestos removal and subsequent cleaning. Repair damaged barriers and remedy defects immediately upon discovery. Visually inspect enclosures at the beginning of each WORK period. Use smoke methods or acceptable equivalent to test effectiveness of barriers.

g. Maintain emergency and fire exits from the work areas, or establish alternative exits satisfactory to fire officials.

B. Removal of Asbestos-Containing Materials (ACM) – General Procedures

1. Thoroughly wet ACM to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray of Amended Water (AW) or Removal Encapsulant (RE). Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for AW/RE to penetrate material thoroughly. If AW is used, spray material repeatedly during the work process to maintain a wet condition. If a RE is used, apply in accordance with manufacturer's instructions. Perforate outer covering of installation which has been painted and/or jacketed to allow penetration, or use injection equipment to wet under the covering.

2. Mist WORK area continuously with amended water whenever necessary to reduce airborne fiber levels.

3. Remove saturated ACM in small sections from all predetermined WORK areas. Do not allow materials to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Twist neck of bags, bend over and seal with minimum three wraps of duct tape. Clean outside and move to Wash Down Station adjacent to Material Decon Unit.

4. Evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing.

5. Pipe Insulation/Elbows: Spray with a mist of AW/RE. Allow AW/RE to saturate material to substrate. If a RE is used, use in strict accordance with manufacturer's instructions. Cut bands holding pipe insulation, slit jackets at seams, remove and hand-place in a

disposal bag. Remove job-molded fitting insulation in chunks and hand place in a disposal bag. Do not drop to floor. Remove any residue on pipe or fitting with stiff bristle nylon handbrush. In locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-ACM, remove fibrous material 6" from the point where it contacts the ACM.

6. Active Electrical Equipment: Do not wet materials in the vicinity of active electrical equipment. Dry remove any ACM in the vicinity of active electrical equipment.
    - Restrict Access: Maintain existing access restrictions to areas with electrical equipment. Allow access to area only to qualified tradespersons with experience in installation/repair of involved equipment.

7. Warning Signs: Post warning signs at the entry point to active electrical equipment as required by OSHA or other regulations.

8. Personnel: Work on active electrical equipment is to be performed by qualified tradespersons with prior experience in the installation or repair of the involved equipment. Restrict access to electrical equipment.

9. Electrical Isolation: Cover exposed conductors with a minimum 1/8" thick neoprene blanket draped over the conductor and surrounding area.

10. Protective Equipment: Provide workers working on or in the vicinity of active electrical with appropriate protective equipment including insulating gloves, boots, and non-conductive tools.

11. Work Procedures: Perform removal work by using localized control of material release procedure and utilizing local ventilation and collection system.

12. Hot Equipment: Do not wet materials on hot piping or equipment. Dry remove any ACM on hot equipment.

13. Restrict Access: Maintain existing access restrictions to areas with hot equipment. Provide railing or other barriers to prevent accidental contact. Allow access only to qualified tradespersons with prior experience with the type of equipment involved.

14. Pipe Insulation: HEPA vacuum surface of pipe insulation. Cut bands holding preformed pipe insulation, slit jackets at seams while holding HEPA vacuum under cut, remove and hand-place in a disposal bag. Remove job-molded fitting insulation in chunks, using nozzle of HEPA vacuum to collect debris generated, and hand-place in a disposal bag. Do not drop to floor. Remove any residue on pipe or fitting with wire brush. Brushing toward the nozzle of a HEPA vacuum. In locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-asbestos-containing fibrous material, remove fibrous material 6" from the point where it contacts the asbestos-containing insulation. Use a two worker crew for work, with one worker removing material and one worker holding the nozzle of a HEPA vacuum in the location of disturbance.

15. Gross removal of dust and debris from contaminated material, material containers, and equipment shall be accomplished in the containment barrier before removal to the

equipment decontamination room for wet sponging before leaving the abatement work Site.

C. Prohibited Work Practices

The following methods shall NOT be used for WORK related to or disturbing asbestos, regardless of exposure level:

1. High-speed abrasive disc saws that are not equipped with point of cut ventilation or enclosures with HEPA-filtered exhaust air.

2. Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

3. Dry sweeping, shoveling or other dry cleanup of dust and debris containing ACM.

4. Employee rotation as a means of reducing employee exposure to asbestos.

## 3.11 REMOVAL OF ACM BY GLOVE-BAG REMOVAL METHOD (IF APPLICABLE)

A. Check pipe where the removal will be performed. Wrap pipe in 6 mil plastic and "candy-stripe" with duct tape. Place one layer of duct tape around undamaged pipe at each end where the glove bag will be attached.

B. Slit top of the glove bag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two inches longer than the pipe diameter).

C. Place necessary tools into pouch located inside glove bag. This will usually include: bone saw, utility knife, rags, scrub brush, wire cutters, tin snips and pre-wetted cloth.

D. Place one strip of duct tape along the edge of the open top slit of glove bag for reinforcement.

E. Place the glove bag around section of pipe to be worked on and staple top together through reinforcing duct tape. Next, duct tape the ends of glove bag to pipe itself, where previously covered with plastic or duct tape.

F. Use smoke tube and aspirator bulb to test seal. Place tube into water sleeve squeezing bulb and filling bag with visible smoke. Remove smoke tube and twist water sleeve closed. While holding the sleeve tightly, gently squeeze glove bag and look for smoke leaking, (especially at the top/ends of the glove bag). If leaks are found, tape closed and re-test.

G. Insert wand from garden sprayer through water sleeve. Tape water sleeve tightly around the wand to prevent leakage.

H. Attach the nozzle from a HEPA vacuum to be utilized to maintain a differential pressure. A flap of HEPA cartridge may by utilized to allow makeup air to flow into the evacuated glovebag during the removal procedure.

I. Thoroughly wet material to be removed with amended water or removal encapsulant and allow to soak in. Wet adequately to penetrate and soak material through to substrate.

J. One person places his hands into the long-sleeved gloves while the second person directs garden sprayer at the material to be removed.

K. Turn on the vacuum system prior to beginning the removal process to evacuate and filter out airborne fibers released during the process. The vacuum should be operated throughout the removal process.

L. Use bone saw to cut insulation at each end of the section to be removed. Throughout this process, spray amended water or removal encapsulate on the cutting area to keep dust to a minimum.

M. Remove insulation using putty knives. Place in bottom of bag without dropping.

N. Rinse all tools with water inside the bag and place back into pouch.

O. Using scrub brush, rags, and water, scrub and wipe down the exposed pipe.

P. Remove water wand from water sleeve and seal the opening with duct tape. Evacuate as much air as possible from the bag.

Q. Remove the vacuum nozzle, twist sleeve closed and seal with duct tape.

R. From outside the bag, place tools in the hand of one glove and pull glove out, inverting the sleeve. Twist the sleeve between the glovebag and tools and place duct tape over twisted portion. Cut the "tool bag" from the glove bag, cutting through the taped section. Tools may then be placed directly into next glove bag without cleaning. The tools can be placed in a bucket of water, opened underwater, and tools cleaned and dried. Discard rags and scrub brush with asbestos waste.

S. With removed insulation in the bottom of the bag, twist the bag several times and tape it to keep the material in the bottom during removal of the glove bag from the pipe.

T. Slip a 6 mil disposal bag over the glove bag (still attached to the pipe). Remove tape or cut bag and open the top of the glove bag and fold it down into disposal bag.

U. Clean all surfaces in the work area(s) using disposable cloths. When these surfaces have dried, clean with a HEPA vacuum.

V. Seal exposed ends of remaining pipe insulation.

W. Remove disposable suits and place these into bag with waste.

X. Collapse the bag with a HEPA vacuum twist top of bag, seal with at least 3 wraps of duct tape, bend over and seal again with at least 3 wraps of duct tape.

Y. If the glove bag is accidentally cut open, duct tape from inside the bag shall be used to seal the opening. If the glove bag should rupture during abatement, the drop cloth sheeting beneath the bag shall be used to contain the bag by bringing the edges together, twisting, taping and folding

over in gooseneck fashion and taping again. The area around and under this cloth shall be cleaned with a HEPA vacuum.

## 3.12 REMOVAL OF ACM BY MINI ENCLOSURE (IF APPLICABLE)

A. A small walk-in enclosure which accommodates no more than two persons may be used if the disturbance or removal can be completely contained by the enclosure.

B. Specifications:

1. The fabricated or job-made enclosure shall be constructed of 0.15 mm plastic or equivalent.

2. The enclosure shall be placed under negative pressure by means of a HEPA filtered vacuum or similar ventilation unit.

C. Work Practices:

1. Before use, the mini-enclosure shall be inspected for leaks and smoke tested to detect breaches, and breaches sealed.

2. Before reuse, the interior shall be completely washed with amended water and HEPA-vacuumed.

3. During use air movement shall be directed away from the employee’s breathing zone within the mini-enclosure.

## 3.13 REMOVAL OF ASBESTOS CONTAINING VINYL ASBESTOS TILE (VAT) AND MASTIC (AS NECESSAR OR APPLICABLE)

A. Full containment barriers, with pressure differential ventilation units, shall be used. Dispose as ACM.

B. Removal of asbestos-containing floor tile and mastic shall be performed in accordance with the procedure outlined below:

1. Prepare abatement WORK area(s) as previously specified for the abatement WORK.

2. Spray areas of asbestos-containing material with amended water using spray equipment capable of providing a "mist" application to reduce the release of fibers. Wet the material sufficiently to maintain dust control. Spray the asbestos-containing material repeatedly during work process to maintain wet condition but do not use excessive amounts of water.

3. Do not break the individual tiles to remove them. Gently pry up a corner of the tile with a broad blade putty knife and slip the knife between the tile and the substrate while cutting the mastic bond.

4. If the mastic is especially tenacious, use a heat gun to loosen the bond between the tile and the substrate and to make the tile more pliable.

5. Non-toxic organic solvents may be used to remove mastic.

6. Continuously use a HEPA vacuum around the individual tiles that are being removed. Do not allow any dust or debris to accumulate on the floor or other surfaces of the abatement WORK area(s).

7. Do not allow dislodged tiles to dry out. As it is removed, place the material in sealable plastic bags of 0.15 mm minimum thickness. Place sealed asbestos debris in second 0.15 mm plastic bag, appropriately labeled, and remove from abatement WORK area(s).

8. After removal of asbestos-containing material, wet-clean all surfaces in the abatement WORK area(s) to remove residual accumulated material. Continue wet-cleaning until surfaces are visibly free of material.

## 3.14 REMOVAL OF ASBESTOS CONTAINING GYPSUM WALLBOARD JOINT COMPOUND

A. All critical barriers, including ventilation openings supply and exhaust, lighting fixtures, clocks, doorways, windows, speaker, and other openings into the abatement work area shall be individually sealed with 6 mil plastic sheeting and tape. Elevator doors, fire extinguisher cabinets and all other penetrations in the floor wall, or ceiling shall be sealed in the abatement work area(s).

B. Prepare worker/equipment decontamination and waste load-out enclosure as previously specified.

C. Isolate the abatement work area(s) by constructing a temporary double layered 6 mil polyethylene/stud wall.

D. Cover the floor of the abatement work area(s) with 2 layers of 6 mil polyethylene sheeting turned up at walls at least 24 inches.

E. Wet the asbestos-containing materials with amended water to minimize fiber and dust release during removal. Use amended water sparingly to eliminate standing water and to prevent water from traveling on the floor.

F. Remove the gypsum wallboard and joint compound in small sections. Do not allow the material to dry out. As it is removed, place the material in sealable plastic bags of 6 mil minimum thickness. Place sealed debris in a second 6 mil plastic bag, and remove from the work area(s).

G. Carefully lower the material to the floor without dropping or throwing.

H. After removal of the material, HEPA vacuum and wet-clean all surfaces in the abatement work area(s) to remove residual accumulated material. Continue cleaning until the surfaces are visibly free of material.

## 3.15 REMOVAL OF ASBESTOS-CONTAINING MISCELLANEOUS MATERIALS – INCLUDING ASBESTOS-CONTAINING ROOFING MATERIAL

A. Develop a daily removal plan indicating the amount of material that will be removed during the abatement working day.

B. Establish a regulated area by posting necessary barricades and warning signs to isolate the abatement work area.

C. Prior to commencing work, establish a regulated area by covering the surface with plastic sheeting a minimum of 15 feet from the panels being removed.

D. At all times, keep the materials misted with water.

E. Remove the materials individually and minimize breakage.

F. Gently place the materials in bags or wrap the materials in two layers of 6 mil plastic sheeting.

G. Collect and dispose of any debris that falls on the plastic sheeting as asbestos-containing material.

H. Wet-clean all surfaces of the structure which secured the materials to remove residual ACM.

I. Wet wipe the plastic sheeting prior to disestablishing the regulated area and dispose of the sheeting as contaminated waste.

**3.16 PROJECT DECONTAMINATION**

A. Provide general clean-up of abatement WORK area(s) concurrent with the removal of all asbestos-containing materials. Do not permit accumulation of debris on workspace floor.

B. Do not perform dry dusting or dry sweeping.

C. Maintain the minimum required pressure differential of 0.50 mm of water inside the abatement WORK area(s) enclosure at all times, and until the ENVIRONMENTAL CONSULTANT authorizes the CONTRACTOR to remove the enclosure.

D. During decontamination of automatic sprinkler and smoke detectors, care must be taken in the wiping down of the sprinkler heads and smoke detectors so as not to damage them.

E. Initial Phase Cleanup Sequence

1. Remove all visible accumulations of asbestos-containing material and debris.

2. Wet clean and HEPA-vacuum all surfaces in the abatement WORK area(s).

3. Clean all equipment (excluding that which will be needed for further cleaning phases) used in the abatement WORK area(s) and remove from abatement WORK area(s) via the decontamination enclosure.

4. Remove the top layer (secondary barrier) of plastic sheeting, change all air filtration system pre-filters, and proceed with the second cleaning.

5. Replace all HEPA-filters and pre-filters in air filtration air machines with clean filters. Clean all air filtration machines.

6. Notify ENVIRONMENTAL CONSULTANT for observation of cleaning to determine completeness. Plastic sheeting surfaces will be considered clean when free from dust, dirt, residue, film, or discoloration resultant from abatement operations or other activities subordinate to these operations.

7. Perform no activity in abatement WORK area(s) for at least 12 hours in order to allow settlement of airborne fibers. No reduction in this settling period will be allowed.

F. Secondary Phase Cleanup Sequence

1. Wet clean and HEPA-vacuum all surfaces in abatement WORK area(s) at least one more time.

2. Notify ENVIRONMENTAL CONSULTANT for observation to determine completeness of cleaning.

3. ENVIRONMENTAL CONSULTANT will perform a visual observation of the abatement WORK area(s) in general accordance with ASTM 1368, *Standard Practice for Visual Inspection of Asbestos Abatement Projects.*

4. If visual clearance is not attained, then subsequent re-cleaning will be required. This sequence will continue until visual clearance is attained.

5. When visual clearance has been obtained, the plastic barriers down to the critical barriers may be removed.

G. Final Air Clearance Testing.

1. ENVIRONMENTAL CONSULTANT will test for the final air clearance levels when isolated/contained WORK areas have passed visual clearance, as necessary or applicable. Final clearance air testing shall be performed using aggressive air sampling techniques and analyzed using the methodologies outlined in 40 CFR 763 Subpart E, Appendix A.

2. If a given WORK area fails the initial visual inspection and/or aggressive clearance air testing, re-clean and continue to clean at CONTRACTOR'S expense until all relevant clearance standards have been met.

3. Per LAC 33.III Chapter 27. 2717.J.7, “in the case of a demolition of a school or state building where occupants will not reenter the building, clearance sampling is not required.”

H. Consider abatement WORK areas and all other decontaminated and cleaned areas “clean” when:

1. All phases of clean-up have been completed and level of cleanliness is approved by the ENVIRONMENTAL CONSULTANT.

2. All TEM clearance air samples obtained using the aggressive air sampling techniques and analyzed using the methodologies outlined in 40 CFR 763 Subpart E, Appendix have met the clearance air standards outlined in LAC 33.III Chapter 27, as necessary or applicable.

I. After a given WORK area passes final air clearance, dismantle Decontamination Enclosure Systems and thoroughly HEPA-vacuum and wet clean immediate areas.

J. Dispose of debris from removal operation, used cleaning materials, unsalvageable materials used for sturdy barriers, and any other remaining materials. Consider the materials to be contaminated, and dispose of accordingly.

**3.17 CONTAINMENT BARRIER REMOVAL**

A. Following WORK area final visual inspection and/or clearance testing, leave pressure differential units running as long as feasible during containment barrier removal.

B. Equipment, machinery, scaffolding, tools, etc., within the abatement WORK area(s) shall not be removed without first being thoroughly cleaned with amended water or in the case of delicate items susceptible to rust, an acceptable substitute.

C. After the abatement WORK area is found to be in compliance, the remaining sealed areas and exits are unsealed and the plastic sheeting, tape, and any other trash and debris are disposed of in sealable plastic bags and treated as asbestos waste. The ENVIRONMENTAL CONSULTANT will conduct a final walkthrough and document results.

D. Before removal from the abatement WORK area, remove and properly dispose of pre-filter, decontaminate exterior of machine and seal intake to the machine with 6 mil polyethylene to prevent environmental contamination from the filters.

E. The CONTRACTOR shall patch and paint and repair all damaged areas and restore them to their original, pre-contract condition.

**3.18 WASTE DISPOSAL**

A. Asbestos-contaminated waste that has been containerized shall be transported out of the abatement WORK area either through the personnel/equipment decontamination enclosure or through a separate waste load-out enclosure.

B. Water not disposed of with the asbestos-containing materials shall be filtered to remove asbestos fibers and debris before disposal into sanitary sewer.

C. Do not store containerized materials outside of the abatement WORK area. Take containers from the abatement WORK area directly to a sealed truck or dumpster.

D. Bulk and containerized asbestos waste shall be packed, labeled, and transported according to DOT Regulations 49 CFR 173.216 and 49 CFR 173.240. All removed ACM, plastic sheeting, tape, cleaning material, clothing, and all other disposable material or items used in the abatement work area shall be packed into double bagged sealable 6 mil plastic bags or double containerized with one bag and one drum. The bags shall be marked with the labels required by OSHA 29 CFR 1910.1001 and/or 1910.1200, and 1926.1101.

E. Minimum labeling required:

First Label:

**CAUTION**
**CONTAINS ASBESTOS FIBERS**
**AVOID OPENING OR BREAKING CONTAINER**
**BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH**

Second Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA"s Hazard Communication standard:

**DANGER**
**CONTAINS ASBESTOS FIBERS**
**AVOID CREATING DUST**
**CANCER AND LUNG DISEASE HAZARD**
**BREATHING AIRBORNE ASBESTOS, TREMOLITE,**
**ANTHOPHYLLITE, OR ACTINOLITE FIBERS IS**
**HAZARDOUS TO YOUR HEALTH**

Third Label: Provide in accordance with U. S. DOT regulation on hazardous waste marking HM-181 found in 49 CFR parts 100-199 effective October 1, 1993 defining asbestos as a hazardous waste. Requires labeling of each bag or waste container with **Asbestos NA 2212, RQ**. Must have a class 9 label with the asbestos ID number 2212 in an orange rectangular or white square on point display on all four sides of the containers.

F. All waste is to be hauled away by a waste hauler with all required licenses from all state and local authorities with jurisdiction.

G. Load all asbestos-containing waste material in approved disposal bags.

H. Protect interior of transport vehicle with Critical and Primary Barriers.

I. Carefully load containerized waste in fully enclosed dumpsters or trucks for transport. Exercise care before and during transport, to ensure that no unauthorized persons have access to the material.

J. Do not store containerized materials outside of the WORK area(s). Take containers from the WORK area directly to a sealed truck or dumpster.

K. Retain receipts from landfill or processor for materials disposed of.

L. At completion of hauling and disposal of each load submit copy of waste manifest, chain of custody form, and landfill receipt to the OWNER or ENVIRONMENTAL CONSULTANT.

**END OF SECTION**

# Appendix A

**Suspected ACM Testing Report (April 17, 2026)**

**CALS Building – Former Power Plant/Mechanical Outbuilding**
**Corner of Gravier & S. Prieur Streets, New Orleans, LA 70112**

**April 17, 2026**

# Suspected Asbestos-Containing Materials (ACM) Testing Report

## CALS Building Former Power Plant/Mechanical Outbuilding
## Corner of Gravier Street & S. Prieur Street
## New Orleans, LA 70112

## (MMG Job #: 4476 LSU)



**Prepared for:**

**Mr. Darren Burkett, CIH, CSP, CHMM, MSPH**
**Executive Director, Environmental Health & Safety**
**LSU Health Sciences Center, New Orleans, LA**

**By:**

**Materials Management Group, Inc.**
**2401 Westbend Parkway, Suite 3010**
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Appendix C: Chain of Custody Forms

Appendix D: Laboratory Results

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# 1.0 Executive Summary

Representatives of the Louisiana State University – Health Sciences Center (LSU HSC) engaged Materials Management Group, Inc. (MMG) to perform an asbestos-containing materials (ACM) investigation of the former CALS Power Plant/Mechanical Outbuilding located at the corner of Gravier Street and South Prier Street, New Orleans, LA 70112 (CALS Mechanical Outbuilding).

The purpose of MMG's investigation was to identify and document the presence, location, and estimated quantity of asbestos-containing materials (ACM) prior to potential demolition, renovation, and/or refurbishment of the CALS Mechanical Outbuilding.

Per LAC 33:III.5151, asbestos-containing materials (ACM) and asbestos-containing building materials (ACBM) are defined as "any material or product which contains more than 1 percent asbestos as determined by using the method specified in appendix E, subpart E, 40 CFR 763, Section 1, polarized light microscopy."

**Summary of Suspected ACM Bulk Materials Sample Analysis**

Prior to laboratory analysis, suspected ACM bulk materials samples collected by MMG's LDEQ-accredited Asbestos Inspectors throughout the CALS Mechanical Outbuilding were separated by EMSL technicians so that each substrate could be analyzed individually for asbestos content, whenever possible.

Forty-seven (47) suspected ACM bulk materials samples were collected by duly-accredited MMG personnel on March 9, 2026; fifty-two (52) individual suspected asbestos-containing materials (ACM) were analyzed by EMSL Analytical, Inc. located at 18369 Petroleum Drive, Baton Rouge, LA 70809 on March 11, 2026. See also Appendix C for sample descriptions and sample chain of custody documentation.

Seven (7) individual suspected asbestos-containing materials collected from the CALS Mechanical Outbuilding tested positive for asbestos content greater than 1% as determined by using the method specified in appendix E, subpart E, 40 CFR 763, Section 1, polarized light microscopy. Photographs of building materials which tested positive for ACM are included in Appendix A; a copy of the analytical laboratory report produced by EMSL Analytical, Inc. is included in Appendix D.

**Conclusions and Recommendations**

Per LAC 33.III Chapter 51, the notification and regulatory requirements outlined in 33.III.5151.F – Emission Standard for Demolition, Renovation, Asbestos-Contaminated Debris Activities, Response Actions, and Major Fiber Releases apply if, in a facility being renovated or demolished:

> *[T]he combined amount of regulated asbestos-containing material [RACM] to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is: (a) at least 60 linear feet on pipes; (b) at least 64 square feet on other facility components; or (c) at least 27 cubic feet off facility components where the length or area could not be measured previously.*

If the facility being renovated, abated, and/or demolished is part of a "school" facility as defined in LAC 33.III.2703, additional regulatory requirements, outlined in LAC 33.III Chapter 27 – Asbestos-Containing Materials (ACM) in School and State Buildings may also apply.

Contractors conducting ACM/ACBM removal, abatement, and/or response actions at the CALS Mechanical Outbuilding should be appropriately accredited by the Louisiana Department of Environmental Quality (LDEQ) and the Louisiana Board of Contractors. All applicable procedures for asbestos emission control, abatement air monitoring, and/or post-abatement clearance air testing outlined in LAC.33.III.2717 and/or LAC 33.III.5151.F3 should be used; asbestos contaminated waste material (ACWM) generated by ACM abatement, removal, and/or response action at the facility should be disposed of in accordance with LAC 33.III.5151.J.

If suspect ACM/ACBMs that are **not** clearly identified in this *Suspected ACM Testing Report* are encountered during abatement, renovation, demolition, and/or construction activities at the CALS Mechanical Outbuilding, they should be sampled to determine asbestos content. Untested suspected ACM/ACBM must be assumed to contain greater than 1% asbestos by weight and treated/removed/disposed of as ACM/ACBM in accordance with LAC 33.III Chapter 27 and/or LAC 33.III Chapter 51 until appropriate confirmatory testing can be performed.

**Please note** – due to on-Site conditions and confined space entry hazards, no suspected ACM bulk sampling of insulation materials located on or immediately to active "hot" lines, on or immediately adjacent to active electrical panels/lines, or inside boiler and heat exchangers was conducted. Materials meeting these descriptions should be assumed to contain asbestos and handled accordingly until additional confirmatory testing can be performed.

## 2.0 Suspected ACM/ACBM Assessment and Bulk Sampling Activities

### 2.1 Asbestos Inspector Information

All ACM/ACBM assessment and bulk sampling activities were performed by Mr. Jeff Camus, Mr. Justin Crochet, and Ms. Sue-Claire Lichtveld of

MMG. Mr. Camus, Ms. Lichtveld, and Mr. Crochet are accredited by the Louisiana Department of Environmental Quality (LDEQ) as ACM Inspectors and Asbestos Contractor Supervisors. See the table below for the relevant certification information. See also Appendix E for a copy of all certifications.

**Credentials for MMG Personnel Performing the ACM Inspection**

| Name | Certification | Certification Number | Expiration Date |
|---|---|---|---|
| **Justin Crochet** | LDEQ ACM Inspector | JI184257 | June 21, 2026 |
| | LDEQ Asbestos Contractor Supervisor | JS184257 | July 7, 2026 |
| **Jeff Camus** | LDEQ ACM Inspector | JI182306 | June 21, 2026 |
| | LDEQ Asbestos Contractor Supervisor | JS182306 | July 7, 2026 |
| **Sue-Claire Lichtveld** | LDEQ ACM Inspector | JI210196 | June 17, 2026 |
| | LDEQ Asbestos Contractor Supervisor | MS210196 | March 7, 2027 |

## 2.2 Field Investigation and Suspected ACM Bulk Materials Sampling Activities

Field investigation and suspected ACM/ACBM bulk materials sampling activities were conducted on March 9, 2026 by appropriately accredited members of the MMG staff. MMG was not provided with an independent map or property assessment of the CALS Mechanical Outbuilding prior to suspect ACM/ACBM sampling activities. Suspected ACM/ACBM bulk materials sampling locations and sampled materials were chosen to be representative of various locations, mechanical systems, and interior/exterior building materials which may be disturbed or made friable during any demolition, redevelopment, and/or refurbishment activities.

2.3 Bulk Sample Analysis

MMG personnel took a total of forty-seven (47) interior and exterior suspected ACM/ACBM bulk materials samples throughout the CALS Mechanical Outbuilding on March 9, 2026. Samples were sent to EMSL Analytical Inc., located at 18369 Petroleum Drive, Baton Rouge, LA 70809 (EMSL) for analysis by polarized light microscopy (PLM) using dispersion staining techniques. Samples were analyzed by EMSL on March 11, 2026. Prior to laboratory analysis, suspected ACM bulk materials samples collected by MMG which contained more than one suspect material (resilient silicone caulking still attached to exterior stucco, for example) were separated by EMSL technicians so that each substrate could be analyzed individually for asbestos content, whenever possible.

Forty-seven (47) suspected ACM bulk materials samples were collected from the CALS Mechanical Outbuilding by MMG on March 9, 2026; fifty-two (52) individual suspected asbestos-containing materials (ACM) were analyzed by EMSL Analytical, Inc. on March 11, 2026.

Please refer to Appendix E for copies of the certifications for EMSL Analytical Laboratories.

2.4 Bulk Sampling Results

Of the 52 suspected ACM/ACBMs analyzed by EMSL Analytical, Inc. on March 11, 2026, seven (7) individual suspect materials returned analytical results over the designated threshold for “asbestos-containing materials” or “asbestos-containing building materials.” Per LAC 33.III Chapter 51, “ACM/ACBM” is defined as “any material or product which contains more than 1 percent (>1%) asbestos as determined by using the method specified in appendix E, subpart E, 40 CRF part 763, section 1, polarized light microscopy.”

A summary of samples/suspect materials which **met** the regulatory definition of “ACM/ACBM” is included in Table 2.4.1.

Table 2.4.2 includes a summary of sample/suspect materials which **did not** meet the regulatory definition of ACM/ACBM.

A complete copy of the analytical laboratory report and results provided to MMG by EMSL is included in Appendix D. Laboratory chain of custody forms are attached in Appendix C.

**Table 2.4.1**

**Summary of ACM/ACBMs Identified at the CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-13** | 6-inch elbow – Beige | FL 1—A-Side Wall | Black/Yellow Fibrous Heterogeneous | 8% Chrysotile |
| **BA-14** | 6-inch elbow – Lt Blue | FL 1—A-Side Wall | Black/Yellow Fibrous Heterogeneous | 8% Chrysotile |
| **BA-15** | 6-inch elbow – Blue | FL 1—A-Side Wall | Black/Yellow Non-Fibrous Homogeneous | 8% Chrysotile |
| **BA-16** | White Caulk | FL 1—A-Side Wall; Cabinet | Black/Yellow Non-Fibrous Homogeneous | 3% Chrysotile |
| **BA-26** | 1-inch elbow – Green | FL 1—D-Side Wall | Tan/White Fibrous Heterogeneous | 15% Chrysotile |
| **BA-28** | 6-inch elbow – Red | FL 1—A/D-Side Wall | Brown/Red/Black Fibrous Heterogeneous | 8% Chrysotile |
| **BA-36** | Flashing Tar | Roof B-Side | Black Non-Fibrous Homogeneous | 15% Chrysotile |

*__A__ – S. Prieur Street Side; **B** – Gravier Street Side; **C** – S. Johnson Street Side; **D** – Tulane Avenue Side

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-01** | Concrete | FL 1—Center | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-02** | 6-inch TSI Run – Green | FL 1—Center | White/Yellow Fibrous Heterogeneous | None Detected |
| **BA-03** | 6-inch TSI Elbow - Green | FL 1—Center | White/Yellow Fibrous Heterogeneous | None Detected |
| **BA-04** | Grey Cloth Wrap | FL 1—Center | Gray/White Fibrous Heterogeneous | None Detected |
| **BA-05** | "FSB Wrap" – Large Elbow | FL 1—Center | White/Silver/Yellow Fibrous Heterogeneous | None Detected |
| **BA-06** | "FSB Wrap" – Large TSI Run | FL 1—Center | White/Silver Fibrous Homogeneous | None Detected |
| **BA-07** | 4-inch TSI – Metal Wrapped | FL 1—Center | Brown/Silver Fibrous Heterogeneous | None Detected |
| **BA-08** | 6-inch TSI - White | FL 1—A-Side Wall | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-09** | 6-inch TSI - Beige | FL 1—A-Side Wall | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-10** | 6-inch TSI – Lt. Blue | FL 1—A-Side Wall | Blue/Yellow Fibrous Heterogeneous | None Detected |
| **BA-11** | 6-inch TSI – Blue | FL 1—A-Side Wall | Blue/Yellow Fibrous Heterogeneous | None Detected |
| **BA-12** | 6-inch Elbow - White | FL 1—A-Side Wall | Yellow Non-Fibrous Homogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-17** | 6-inch TSI - Grey | FL 1—A/B-Side Wall | Grey/Yellow Fibrous Heterogeneous | None Detected |
| **BA-18** | 10-inch TSI - White | FL 1—B-Side Wall | Grey/Yellow Fibrous Heterogeneous | None Detected |
| **BA-19** | 10-inch TSI - Joint | FL 1—B-Side | White/Black Fibrous Heterogeneous | None Detected |
| **BA-20** | Plaster | FL 1—C-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-21 Cinderblock** | Cinderblock & Mortar | Electrical Rm | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-21 Mortar** | Cinderblock & Mortar | Electrical Rm | Gray Fibrous Homogeneous | None Detected |
| **BA-22** | 4-inch TSI - White | FL 1—Center | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-23** | 4-inch TSI Elbow - White | FL 1—Center | White Fibrous Heterogeneous | None Detected |
| **BA-24** | 4-inch TSI - Black | FL 1—B-Side | Pink Non-Fibrous Homogeneous | None Detected |
| **BA-25** | Fan Caulk | FL 1—D-Side Wall | Gray/Tan Non-Fibrous Homogeneous | None Detected |
| **BA-27** | 6-inch TSI - Red | FL 1—A/D-Side Wall | Brown/White/Black Fibrous Heterogeneous | None Detected |
| **BA-29** | Duct TSI & Tape | Electrical Rm | Brown/White Fibrous Heterogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-30** | Cloth Wrap - White | FL 2—A-Side Wall | White Fibrous Homogeneous | None Detected |
| **BA-31** | 12-inch Joint - White | FL 2—A-Side Wall | White/Black Fibrous Heterogeneous | None Detected |
| **BA-32** | Grey Cloth Jacket | FL 2—A-Side | White Fibrous Heterogeneous | None Detected |
| **BA-33** | 12-inch TSI - Blue | FL 2—B-Side | Brown/White/Blue Fibrous Heterogeneous | None Detected |
| **BA-34 Joint Compound** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | White Non-Fibrous Homogeneous | None Detected |
| **BA-34 Joint Tape** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | Brown Fibrous Homogeneous | None Detected |
| **BA-34 Sheetrock** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-35** | Roof Material | Roof B-Side | Black Fibrous Homogeneous | None Detected |
| **BA-37** | Flashing | Roof B-Side | Black Fibrous Homogeneous | None Detected |
| **BA-38** | White Roof Rubber | Roof Center | Grey/White Fibrous Heterogeneous | None Detected |
| **BA-39** | White Flashing Caulk | Roof B-Side | Grey Non-Fibrous Homogeneous | None Detected |
| **BA-40** | Exterior Window Caulking | Exterior D-Side | Grey/Tan Non-Fibrous Homogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-41 Brick** | Exterior Brick & Mortar | Exterior D-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-41 Mortar** | Exterior Brick & Mortar | Exterior D-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-42** | Exterior White Fan Caulking | Exterior D-Side | White Non-Fibrous Homogeneous | None Detected |
| **BA-43** | Expansion Joint | FL 2—Fan Rm | Black Fibrous Homogeneous | None Detected |
| **BA-44** | Exterior Base Tar | Exterior A-Side | Black Fibrous Homogeneous | None Detected |
| **BA-45** | Exterior Plaster | Exterior C-Side | White Non-Fibrous Homogeneous | None Detected |
| **BA-46** | Exterior Concrete | Exterior C-Side | Gray/Black Non-Fibrous Heterogeneous | None Detected |
| **BA-47 Brick** | Exterior Brick & Mortar | Exterior C-Side | Red Non-Fibrous Homogeneous | None Detected |
| **BA-47 Mortar** | Exterior Brick & Mortar | Exterior C-Side | Grey Non-Fibrous Homogeneous | None Detected |

*__A__ – S. Prieur Street Side; **B** – Gravier Street Side; **C** – S. Johnson Street Side; **D** – Tulane Avenue Side

## 3.0 Conclusions and Recommendations

Estimated quantities of ACM/ACBM identified on the interior and/or exterior of the CALS Mechanical Outbuilding are summarized in Table 3.1 below.

**Table 3.1**

**Approximate Quantities of ACM/ACBM – CALS Mechanical Outbuilding**
**Corner of Gravier Street & South Prieur Street, New Orleans, LA**

| Sample # | Sample Description | Sample Location | Asbestos Content | Estimated Quantity of ACM/ACBM |
|---|---|---|---|---|
| **BA-13** | 6-inch elbow – Beige | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-14** | 6-inch elbow – Lt Blue | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-15** | 6-inch elbow – Blue | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-16** | White Caulk | FL 1—A-Side Wall; Cabinet | 3% Chrysotile | 2 sq ft |
| **BA-26** | 1-inch elbow – Green | FL 1—D-Side Wall | 15% Chrysotile | 1 linear ft |
| **BA-28** | 6-inch elbow – Red | FL 1—A/D-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-36** | Flashing Tar | Roof B-Side | 15% Chrysotile | 10,000 sq ft |

Per LAC 33.III Chapter 51, the notification and regulatory requirements outlined in 33.III.5151.F – Emission Standard for Demolition, Renovation, Asbestos-Contaminated Debris Activities, Response Actions, and Major Fiber Releases apply if, in a facility being renovated or demolished:

> *[T]he combined amount of regulated asbestos-containing material [RACM] to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is: (a) at least 60 linear feet on pipes; (b) at least 64 square feet on other facility components; or (c) at least 27 cubic feet off facility components where the length or area could not be measured previously.*

If the facility being renovated, abated, and/or demolished is part of a “school” facility as defined in LAC 33.III.2703, additional regulatory requirements, outlined in LAC 33.III Chapter 27 – Asbestos-Containing Materials (ACM) in School and State Buildings may also apply.

Contractors conducting ACM/ACBM removal, abatement, and/or response actions at the CALS Mechanical Outbuilding should be appropriately accredited by the Louisiana Department of Environmental Quality (LDEQ) and the Louisiana Board of Contractors. All applicable procedures for asbestos emission control, abatement air monitoring, and/or post-abatement clearance air testing outlined in LAC.33.III.2717 and/or LAC 33.III.5151.F3 should be used; asbestos contaminated waste material (ACWM) generated by ACM abatement, removal, and/or response action at the facility should be disposed of in accordance with LAC 33.III.5151.J.

If suspect ACM/ACBMs that are not clearly identified in this *Suspected ACM Testing Report* are encountered during abatement, renovation, demolition, and/or construction activities at the CALS Mechanical Outbuilding, they should be sampled to determine asbestos content. Untested suspected ACM/ACBM **must** be assumed to contain greater than 1% asbestos by weight and treated/removed/disposed of as ACM/ACBM in accordance with LAC 33.III Chapter 27 and/or LAC 33.III Chapter 51 until appropriate confirmatory testing can be performed.

**Please note** – due to on-Site conditions and confined space entry hazards, no suspected ACM bulk sampling of insulation materials located on or immediately to active “hot” lines, on or immediately adjacent to active electrical panels/lines, or inside boiler and heat exchangers was conducted. Materials meeting these descriptions should be assumed to contain asbestos and handled accordingly until additional confirmatory testing can be performed.

## 4.0 Signatures



Ms. Braelin Carter, MSPH
Operations Manager and Environmental Health Scientist
LDEQ AI No. 193973

**Appendices**
Appendix A: Photographs

Appendix B: Maps and Figures

Appendix C: Chain of Custody Forms

Appendix D: Laboratory Results

Appendix E: Certifications and Accreditations

## Appendix A: Photographs



**Photograph #1**
Sample: BA-01 (Concrete)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #2**
Sample: BA-02 (6in Green TSI)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #3**
Sample: BA-03 (6in Green Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #4**
Sample: BA-04 (Grey Cloth Wrap)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #5**
Sample: BA-05 (“FSB” Wrap, Large Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #6**
Sample: BA-06 (Large “FSB” Wrap)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #7**
Sample: BA-07 (4in TSI, Metal Wrapped)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #8**
Sample: BA-08 (6in White TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #9**
Sample: BA-09 (6in Beige TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #10**
Sample: BA-10 (6in Light Blue TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #11**
Sample: BA-11 (6in Blue TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #12**
Sample: BA-12 (6in White Elbow)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #13**
Sample: BA-13 (6in Beige Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #14**
Sample: BA-14 (6in Light Blue Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #15**
Sample: BA-15 (6in Blue Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #16**
Sample: BA-16 (White Caulk)
Location: FL 1—A-Side Wall
Results: **Contains 3% Crysotile**



**Photograph #17**
Sample: BA-17 (6in Grey TSI)
Location: FL 1—A/B-Side Wall
Results: No ACM Detected



**Photograph #18**
Sample: BA-18 (10in White TSI)
Location: FL 1—B-Side Wall
Results: No ACM Detected



**Photograph #19**
Sample: BA-19 (10in TSI Joint)
Location: FL 1—B-Side
Results: No ACM Detected



**Photograph #20**
Sample: BA-20 (Plaster)
Location: FL 1—C-Side
Results: No ACM Detected



**Photograph #21**
Sample: BA-21 (Cinderblock + Mortar)
Location: Electrical Rm
Results: No ACM Detected



**Photograph #22**
Sample: BA-22 (4in White TSI)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #23**
Sample: BA-23 (4in White Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #24**
Sample: BA-24 (4in Black TSI)
Location: FL 1—B-Side
Results: No ACM Detected



**Photograph #25**
Sample: BA-25 (Fan Caulk)
Location: FL 1—D-Side Wall
Results: No ACM Detected



**Photograph #26**
Sample: BA-26 (1in Green Elbow)
Location: FL 1—D-Side Wall
Results: **Contains 15% Crysotile**



**Photograph #27**
Sample: BA-27, 28 (6in Red TSI + Elbow)
Location: FL 1—A/D-Side Wall
Results: **Contains 8% Crysotile (BA-28)**



**Photograph #28**
Sample: BA-29 (Duct TSI + Tape)
Location: Electrical Rm
Results: No ACM Detected



**Photograph #29**
Sample: BA-30 (White Cloth Wrap)
Location: FL 2—A-Side Wall
Results: No ACM Detected



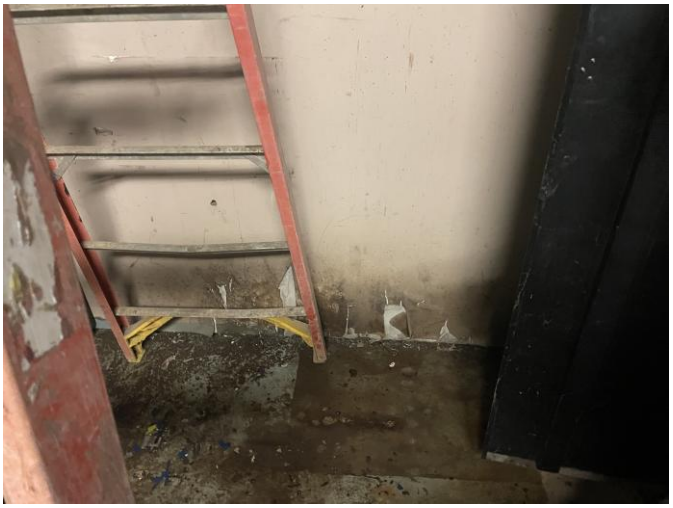
**Photograph #30**
Sample: BA-31 (12in White Joint)
Location: FL 2—A-Side Wall
Results: No ACM Detected



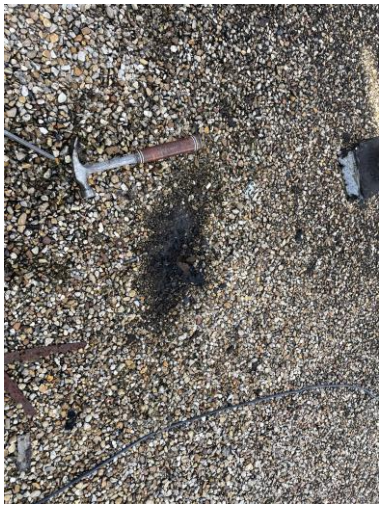
**Photograph #31**
Sample: BA-32 (Grey Cloth Jacket)
Location: FL 2—A-Side Wall
Results: No ACM Detected



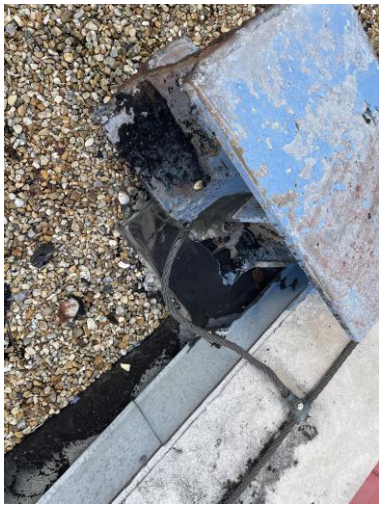
**Photograph #32**
Sample: BA-33 (12in Blue TSI)
Location: FL 2—B-Side Wall
Results: No ACM Detected



**Photograph #33**
Sample: BA-34 (Sheetrock, Tape, + Mud)
Location: FL 2—B-Side Wall
Results: No ACM Detected



**Photograph #34**
Sample: BA-35 (Roof)
Location: Roof B-Side
Results: No ACM Detected



**Photograph #35**
Sample: BA-36 (Flashing Tar)
Location: Roof B-Side
Results: **Contains 8% Crysotile**



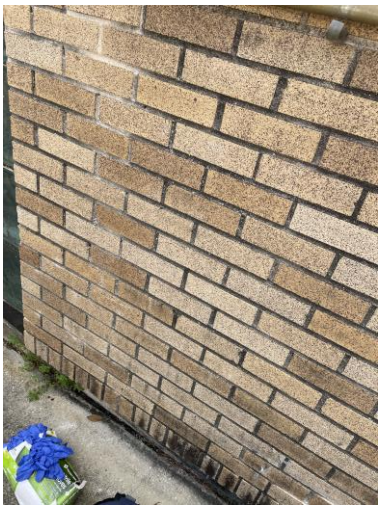
**Photograph #36**
Sample: BA-37 (Flashing)
Location: Roof B-Side
Results: No ACM Detected



**Photograph #37**
Sample: BA-38 (White Roof Rubber)
Location: Roof Center
Results: No ACM Detected



**Photograph #38**
Sample: BA-40 (Exterior Window Caulk)
Location: Exterior D-Side
Results: No ACM Detected



**Photograph #39**
Sample: BA-41 (Brick + Mortar)
Location: Exterior D-Side
Results: No ACM Detected



**Photograph #40**
Sample: BA-42 (White Fan Caulk)
Location: Exterior D-Side
Results: No ACM Detected



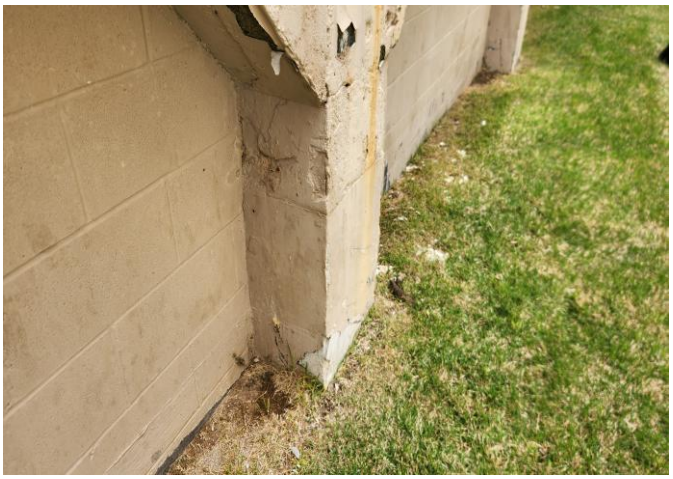
**Photograph #41**
Sample: BA-43 (Expansion Joint)
Location: FL 2—Fan Rm
Results: No ACM Detected



**Photograph #42**
Sample: BA-44 (Base Tar)
Location: Exterior A-Side
Results: No ACM Detected



**Photograph #43**
Sample: BA-45 (Plaster)
Location: Exterior C-Side
Results: No ACM Detected



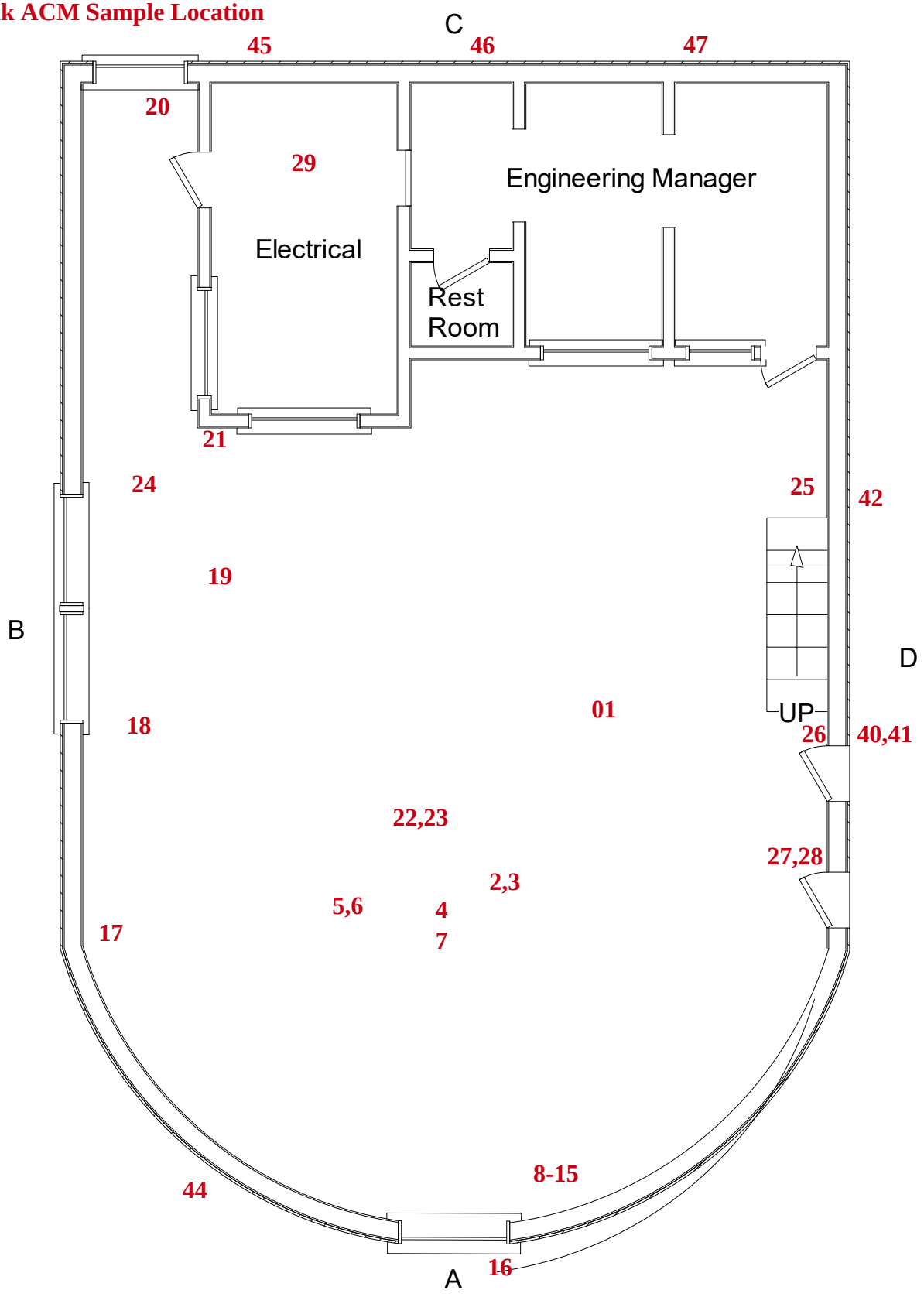
**Photograph #44**
Sample: BA-46 (Conrete)
Location: Exterior C-Side
Results: No ACM Detected



**Photograph #45**
Sample: BA-47 (Brick + Mortar)
Location: Exterior C-Side
Results: No ACM Detected

## Appendix B: Maps and Figures

**Bulk ACM Sample Location**




| DIRECTION | N |
|---|---|
| LEGEND | Interior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A |
| | Exterior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A |
| SCALE | Not To Scale |

| | | | | |
|---|---|---|---|---|
| DRAWN BY: JHC | Date:5/4/2026 | 4476LSU | **SITE DIAGRAM**<br>Gravier & S. Prieur St.,<br>New Orleans, LA. 70112 | MATERIALS MANAGEMENT GROUP, INC. |
| | | | **FIGURE 1**<br>First Floor | 2401 WESTBEND PKWY., SUITE 3010<br>NEW ORLEANS, LOUISIANA 70114<br>PHONE: 504-368-0568 FAX: 504-368-8403 |

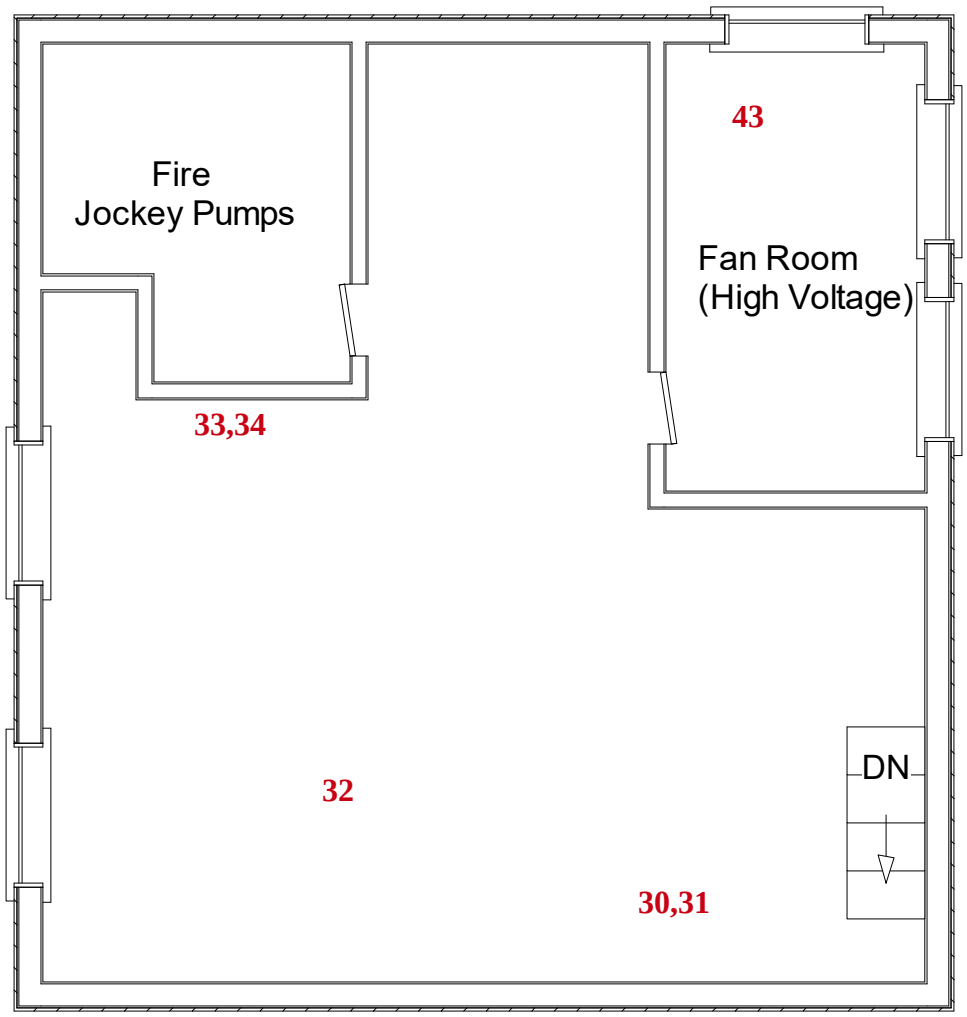
**Bulk ACM Sampling Location**

C

B

D

A




| DIRECTION | N |
|---|---|
| LEGEND | Interior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A<br><br>Exterior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A |
| SCALE | Not To Scale |

| | | | | |
|---|---|---|---|---|
| DRAWN BY: JHC | Date:5/4/2026 | 4476LSU | **SITE DIAGRAM**<br>Gravier & S. Prieur St.,<br>New Orleans, LA. 70112 | MATERIALS MANAGEMENT GROUP, INC. |
| | | | **FIGURE 2**<br>Second Floor | 2401 WESTBEND PKWY., SUITE 3010<br>NEW ORLEANS, LOUISIANA 70114<br>PHONE: 504-368-0568 FAX: 504-368-8403 |

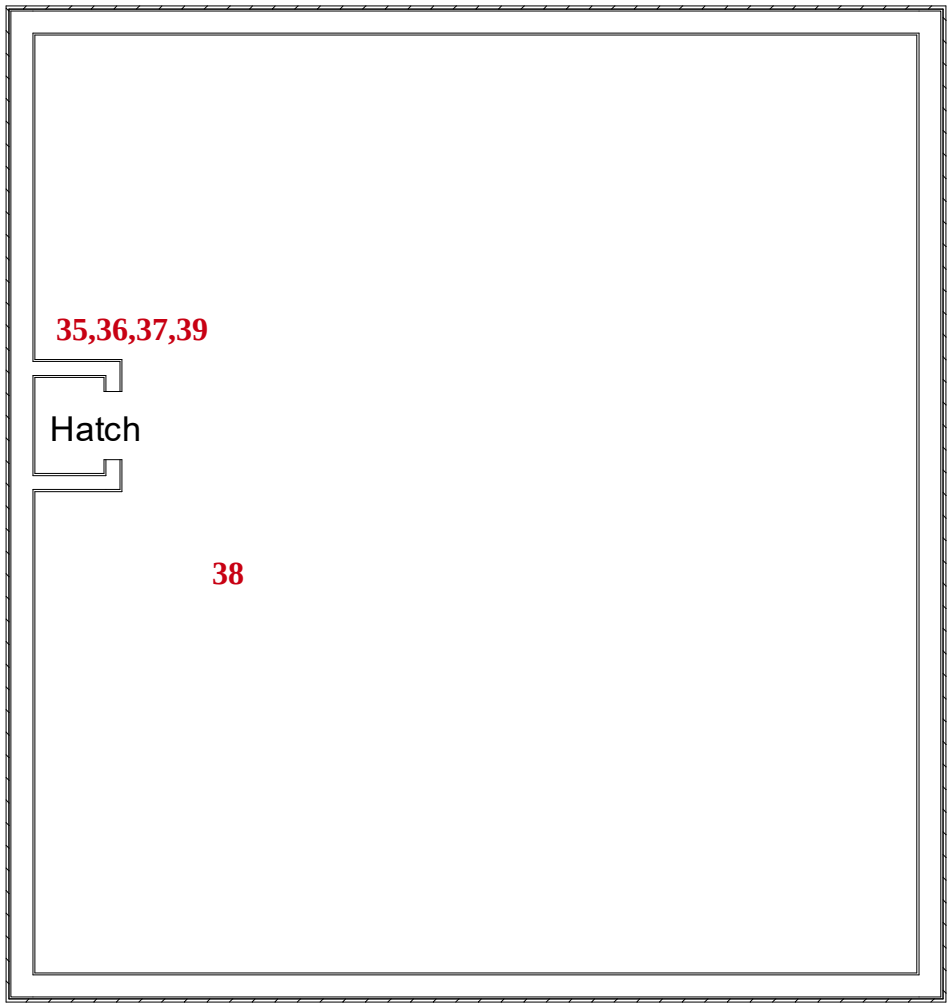
**Bulk ACM Sampling Location**

C

B

D

A




| DIRECTION | N |
|---|---|
| LEGEND | Exterior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A |
| | Interior Walls<br>A: Wall Facing Street Side for the Address<br>B: Wall to the Left of A<br>C: Wall Opposite A<br>D: Wall to the Right of A |
| SCALE | Not To Scale |

| | | | | |
|---|---|---|---|---|
| DRAWN BY: JHC | Date:5/4/2026 | 4476LSU | **SITE DIAGRAM**<br>Gravier & S. Prieur St.,<br>New Orleans, LA. 70112 | MATERIALS MANAGEMENT GROUP, INC. |
| | | | **FIGURE 3**<br>Roof | 2401 WESTBEND PKWY., SUITE 3010<br>NEW ORLEANS, LOUISIANA 70114<br>PHONE: 504-368-0568 FAX: 504-368-8403 |

## Appendix C: Chain of Custody Forms

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsbLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

| Customer Information | | Billing Information | |
|---|---|---|---|
| Customer ID: | MATM50 | Billing ID: | MATM50 |
| Company Name: | Materials Management Group, Inc. | Company Name: | Materials Management Group, Inc. |
| Contact Name: | Mia Barrios | Billing Contact: | Mia Barrios |
| Street Address: | 2401 Westbend Parkway, #3010 | Street Address: | 2401 Westbend Parkway, #3010 |
| City, State, Zip: | New Orleans, LA 70114 | City, State, Zip: | New Orleans, LA 70114 |
| Country: | | Country: | |
| Phone: | 504-368-0568 | Phone: | 504-368-0568 |
| Email(s) for Report: | miab@mmgnola.com | Email(s) for Invoice: | miab@mmgnola.com |

**Project Information**

Project Name/No: 4476 LSU
Purchase Order: 4476 LSU
EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: LA
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: Jeff Cairns
Sampled By Signature:
No. of Samples in Shipment: 47

**Turn-Around-Time (TAT)**

☐ 3 Hour ☐ 4-4.5 Hour AHERA ONLY ☐ 8 Hour ☐ 24 Hour ☑ 32 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

TEM Air 3-4 Hour, please call ahead to schedule, 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

**Test Selection**

PCM Air
- ☐ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.3um ☐ 0.45um

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-01 | Concrete | | 3-9-26 |
| 02 | 6 in TSI - Green | | |
| 03 | 6 in elbow - Green | | |
| 04 | Grey Cloth wrap | | |
| 05 | "FSB wrap" Large elbow | | |
| 06 | Large TSI "FSB wrap" | | |
| 07 | 4 in TSI - Metal wrapped | | |
| 08 | 6 in TSI - White | | |

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

1926 0172 3419

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: | Date/Time: 3-9-26 1200 | Received by: | Date/Time: 3/10/26 10:10am |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R13 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-09 | 6in TSI - Beige | | |
| 10 | " - Lt Blue | | |
| 11 | " - Blue | | |
| 12 | 6in elbow - white | | |
| 13 | \| Beige | | |
| 14 | \| Lt Blue | | |
| 15 | L Blue | | |
| 16 | White Caulk | | |
| 17 | 6in TSI Grey | | |
| 18 | 10in TSI white | | |
| 19 | 10in TSI joint | | |
| 20 | plaster | | |
| 21 | Cinderblock + Mortar | | |
| 22 | 4in TSI - white | | |
| 23 | 4in elbow white | | |
| 24 | 4in TSI black | | |
| 25 | Fan Caulk | | |
| 26 | 1in elbow - Green | | |
| 27 | 6in TSI - Red | | |
| 28 | 6in elbow - Red | | |
| 29 | Duct TSI + tape | | |
| 30 | cloth wrap - white | | |
| 31 | 12in Joint - white | | |
| 32 | Grey cloth Jacket | | |
| 33 | 12in TSI - Blue | | |

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: | Date/Time: 3-9-26 1700 | Received by: | Date/Time: 3/10/26 10:10Am |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R16 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-34 | Sheetrock, tape, mud | | |
| 35 | roof | | |
| 36 | Flashing tar | | |
| 37 | Flashing | | |
| 38 | white roof rubber | | |
| 39 | White Flashing Caulk | | |
| 40 | Ext Window Caulk | | |
| 41 | Ext Brick + Mortar | | |
| 42 | Ext white Fan Caulk | | |
| 43 | Xpansion Joint | | |
| 44 | Ext Base tar | | |
| 45 | Plaster | | |
| 46 | concrete | | |
| 47 | Brick + Mortar | | |
| 48 | | | |
| | | | |
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| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: MMG | Date/Time: 3-9-26 1700 | Received by: | Date/Time: 3/10/26 10:10AM |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R18 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature )

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

# Appendix D: Analytical Laboratory Results

# EMSL Analytical, Inc.

**18369 Petroleum Drive Baton Rouge, LA 70809**

Tel/Fax: (225) 755-1920 / (225) 755-1989

http://www.EMSL.com / batonrougelab@emsl.com


| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

| | | | |
|---|---|---|---|
| **Attention:** | Paul Lo | **Phone:** | (504) 368-0568 |
| | MMG/Materials Management Group, Inc. | **Fax:** | (504) 368-8409 |
| | 2401 Westbend Parkway | **Received Date:** | 03/10/2026 10:10 AM |
| | Suite 3010 | **Analysis Date:** | 03/11/2026 |
| | New Orleans, LA 70114 | **Collected Date:** | 03/09/2026 |
| **Project:** | 4476LSU | | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-01<br>*252600785-0001* | concrete | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-02<br>*252600785-0002* | 6in TSI - Green | White/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-03<br>*252600785-0003* | 6in elbow - Green | White/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-04<br>*252600785-0004* | Grey cloth wrap | Gray/White<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-05<br>*252600785-0005* | "FSB wrap" Large elbow | White/Silver/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-06<br>*252600785-0006* | Large TSI "FSB Wrap" | White/Silver<br>Fibrous<br>Homogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-07<br>*252600785-0007* | 4in TSI - Metal wrapped | Brown/Silver<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>65% Glass | 10% Non-fibrous (Other) | None Detected |
| BA-08<br>*252600785-0008* | 6in TSI - White | Tan/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-09<br>*252600785-0009* | 6in TSI - Beige | Tan/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-10<br>*252600785-0010* | 6in TSI - Lt Blue | Blue/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-11<br>*252600785-0011* | 6in TSI - Blue | Blue/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-12<br>*252600785-0012* | 6in elbow - White | Yellow<br>Non-Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| BA-13<br>*252600785-0013* | 6in elbow - Beige | Black/Yellow<br>Fibrous<br>Heterogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-14<br>*252600785-0014* | 6in elbow - Lt Blue | Black/Yellow<br>Fibrous<br>Heterogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-15<br>*252600785-0015* | 6in elbow - Blue | Black/Yellow<br>Non-Fibrous<br>Homogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-16<br>*252600785-0016* | White Caulk | Black/Yellow<br>Non-Fibrous<br>Homogeneous | | 97% Non-fibrous (Other) | **3% Chrysotile** |

Initial report from: 03/12/2026 16:39:54

**EMSL Analytical, Inc.**
**18369 Petroleum Drive Baton Rouge, LA 70809**
Tel/Fax: (225) 755-1920 / (225) 755-1989
http://www.EMSL.com / batonrougelab@emsl.com

| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-17<br>*252600785-0017* | 6in TSI Grey | Gray/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-18<br>*252600785-0018* | 10in TSI White | Gray/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-19<br>*252600785-0019* | 10in TSI joint | White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose | 75% Non-fibrous (Other) | None Detected |
| BA-20<br>*252600785-0020* | plaster | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-21-Cinder Block<br>*252600785-0021* | Cinderblock + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-21-Mortar<br>*252600785-0021A* | Cinderblock + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-22<br>*252600785-0022* | 4in TSI - White | Tan/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-23<br>*252600785-0023* | 4in elbow white | White<br>Fibrous<br>Heterogeneous | 60% Glass | 40% Non-fibrous (Other) | None Detected |
| BA-24<br>*252600785-0024* | 4in TSI black | Pink<br>Non-Fibrous<br>Homogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-25<br>*252600785-0025* | Fan Caulk | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-26<br>*252600785-0026* | 1in elbow - Green | Tan/White<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 15% Non-fibrous (Other) | **15% Chrysotile** |
| BA-27<br>*252600785-0027* | 6in TSI - Red | Brown/White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 30% Non-fibrous (Other) | None Detected |
| BA-28<br>*252600785-0028* | 6in elbow - Red | Brown/Red/Black<br>Fibrous<br>Heterogeneous | 65% Glass | 27% Non-fibrous (Other) | **8% Chrysotile** |
| BA-29<br>*252600785-0029* | Duct TSI + tape | Brown/White<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 30% Non-fibrous (Other) | None Detected |
| BA-30<br>*252600785-0030* | Cloth wrap - white | White<br>Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| BA-31<br>*252600785-0031* | 12in Joint - white | White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose | 75% Non-fibrous (Other) | None Detected |
| BA-32<br>*252600785-0032* | Grey cloth Jacket | White<br>Fibrous<br>Heterogeneous | 20% Cellulose<br>75% Glass | 5% Non-fibrous (Other) | None Detected |
| BA-33<br>*252600785-0033* | 12in TSI - Blue | Brown/White/Blue<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-34-Joint Compound<br>*252600785-0034* | Sheetrock, tape + Mud | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

Initial report from: 03/12/2026 16:39:54

**EMSL Analytical, Inc.**
**18369 Petroleum Drive Baton Rouge, LA 70809**
Tel/Fax: (225) 755-1920 / (225) 755-1989
http://www.EMSL.com / batonrougelab@emsl.com

| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-34-Tape<br>*252600785-0034A* | Sheetrock, tape + Mud | Brown<br>Fibrous<br>Homogeneous | 98% Cellulose | 2% Non-fibrous (Other) | None Detected |
| BA-34-Sheetrock<br>*252600785-0034B* | Sheetrock, tape + Mud | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-35<br>*252600785-0035* | roof | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-36<br>*252600785-0036* | Flashing tar | Black<br>Non-Fibrous<br>Homogeneous | | 85% Non-fibrous (Other) | **15% Chrysotile** |
| BA-37<br>*252600785-0037* | Flashing | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-38<br>*252600785-0038* | white roof rubber | Gray/White<br>Fibrous<br>Heterogeneous | 45% Glass | 55% Non-fibrous (Other) | None Detected |
| BA-39<br>*252600785-0039* | White Flashing Caulk | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-40<br>*252600785-0040* | Ext Window Caulk | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-41-Brick<br>*252600785-0041* | Ext Brick + Mortar | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-41-Mortar<br>*252600785-0041A* | Ext Brick + Mortar | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-42<br>*252600785-0042* | Ext White Fan Caulk | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-43<br>*252600785-0043* | Xpansion Joint | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-44<br>*252600785-0044* | Ext Base tar | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-45<br>*252600785-0045* | Ext Plaster | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-46<br>*252600785-0046* | Ext concrete | Gray/Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-47-Brick<br>*252600785-0047* | Ext Brick + Mortar | Red<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-47-Mortar<br>*252600785-0047A* | Ext Brick + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

Initial report from: 03/12/2026 16:39:54

**EMSL Analytical, Inc.**
**18369 Petroleum Drive Baton Rouge, LA 70809**
Tel/Fax: (225) 755-1920 / (225) 755-1989
http://www.EMSL.com / batonrougelab@emsl.com

| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

Analyst(s)

*Brett Fairchild (25)*
*Bailey Gunter (27)*

Martiana Beach, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Baton Rouge, LA NVLAP Lab Code 200375-0, LELAP 01950, TX 300238

Initial report from: 03/12/2026 16:39:54

## Appendix E: Certifications and Accreditations

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Jeffrey P Camus*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI182306

**AI No.** 182306

**Date of Issuance** June 20, 2025

**Expiration** June 21, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Justin H Crochet*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI184257 **AI No.** 184257

**Date of Issuance** June 20, 2025 **Expiration** June 21, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Sue F Lichtveld*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI210196 **AI No.** 210196

**Date of Issuance** July 1, 2025 **Expiration** June 17, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA
## DEPARTMENT OF ENVIRONMENTAL QUALITY

**Is hereby granting a Louisiana Environmental Laboratory Accreditation to**

## EMSL Analytical Inc
## 18369 Petroleum Dr
## Baton Rouge, Louisiana 70809

**Agency Interest No. 205208**
**Activity No. ACC20250002**

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Tonya Landry
Administrator
Public Participation and Permit Support Division

**Issued Date:** 5/27/2025

**Effective Date:** July 1, 2025
**Expiration Date:** June 30, 2026
**Certificate Number:** 01950

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2025

EMSL Analytical Inc
AI Number: 205208
Activity No. ACC20250002
Expiration Date: June 30, 2026

18369 Petroleum Dr, Baton Rouge, Louisiana 70809

**Certificate Number: 01950**

## Air Emissions

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|
| 1075 - Lead | NIOSH 7082, Rev 2 | 90012230 | State | A2LA |
| 1520 - Asbestos | 40 CFR Part 763, Subpart E, Appendix A (Mandatory TEM) | 3726 | ISO 17025 | NVLAP |
| 3379 - Fungal - Direct Examination (Air) | EMSL Micro-SOP-201 | 5276 | State | A2LA |

## Non Potable Water

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|

## Solid Chemical Materials

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|
| 1075 - Lead | EPA 3050 | 10135203 | NLLAP | A2LA |
| 1075 - Lead | EPA 7000 | 10157401 | NLLAP | A2LA |
| 1520 - Asbestos | EPA 600/R-93/116 | 10294583 | ISO 17025 | NVLAP |
| 1818 - Asbestos in Bulk Insulation | 40 CFR 763, Subpart E, Appendix E (Section 1.PLM) | 3853 | ISO 17025 | NVLAP |
| 3377 - Fungal - Direct Examination (Bulk) | EMSL Micro-SOP-200 | 5277 | State | A2LA |
| 3378 - Fungal - Direct Examination (Surface) | EMSL Micro-SOP-200 | 5277 | State | A2LA |

## Biological Tissue

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|

**April 17, 2026**

# Suspected Asbestos-Containing Materials (ACM) Testing Report

## CALS Building Former Power Plant/Mechanical Outbuilding
## Corner of Gravier Street & S. Prieur Street
## New Orleans, LA 70112

## (MMG Job #: 4476 LSU)



**Prepared for:**

**Mr. Darren Burkett, CIH, CSP, CHMM, MSPH**
**Executive Director, Environmental Health & Safety**
**LSU Health Sciences Center, New Orleans, LA**

**By:**

**Materials Management Group, Inc.**
**2401 Westbend Parkway, Suite 3010**
**New Orleans, LA 70114**

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## Appendices

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Appendix B: Maps and Figures

Appendix C: Chain of Custody Forms

Appendix D: Laboratory Results

Appendix E: Certifications and Accreditations

# 1.0 Executive Summary

Representatives of the Louisiana State University – Health Sciences Center (LSU HSC) engaged Materials Management Group, Inc. (MMG) to perform an asbestos-containing materials (ACM) investigation of the former CALS Power Plant/Mechanical Outbuilding located at the corner of Gravier Street and South Prier Street, New Orleans, LA 70112 (CALS Mechanical Outbuilding).

The purpose of MMG's investigation was to identify and document the presence, location, and estimated quantity of asbestos-containing materials (ACM) prior to potential demolition, renovation, and/or refurbishment of the CALS Mechanical Outbuilding.

Per LAC 33:III.5151, asbestos-containing materials (ACM) and asbestos-containing building materials (ACBM) are defined as "any material or product which contains more than 1 percent asbestos as determined by using the method specified in appendix E, subpart E, 40 CFR 763, Section 1, polarized light microscopy."

**Summary of Suspected ACM Bulk Materials Sample Analysis**

Prior to laboratory analysis, suspected ACM bulk materials samples collected by MMG's LDEQ-accredited Asbestos Inspectors throughout the CALS Mechanical Outbuilding were separated by EMSL technicians so that each substrate could be analyzed individually for asbestos content, whenever possible.

Forty-seven (47) suspected ACM bulk materials samples were collected by duly-accredited MMG personnel on March 9, 2026; fifty-two (52) individual suspected asbestos-containing materials (ACM) were analyzed by EMSL Analytical, Inc. located at 18369 Petroleum Drive, Baton Rouge, LA 70809 on March 11, 2026. See also Appendix C for sample descriptions and sample chain of custody documentation.

Seven (7) individual suspected asbestos-containing materials collected from the CALS Mechanical Outbuilding tested positive for asbestos content greater than 1% as determined by using the method specified in appendix E, subpart E, 40 CFR 763, Section 1, polarized light microscopy. Photographs of building materials which tested positive for ACM are included in Appendix A; a copy of the analytical laboratory report produced by EMSL Analytical, Inc. is included in Appendix D.

**Conclusions and Recommendations**

Per LAC 33.III Chapter 51, the notification and regulatory requirements outlined in 33.III.5151.F – Emission Standard for Demolition, Renovation, Asbestos-Contaminated Debris Activities, Response Actions, and Major Fiber Releases apply if, in a facility being renovated or demolished:

> *[T]he combined amount of regulated asbestos-containing material [RACM] to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is: (a) at least 60 linear feet on pipes; (b) at least 64 square feet on other facility components; or (c) at least 27 cubic feet off facility components where the length or area could not be measured previously.*

If the facility being renovated, abated, and/or demolished is part of a "school" facility as defined in LAC 33.III.2703, additional regulatory requirements, outlined in LAC 33.III Chapter 27 – Asbestos-Containing Materials (ACM) in School and State Buildings may also apply.

Contractors conducting ACM/ACBM removal, abatement, and/or response actions at the CALS Mechanical Outbuilding should be appropriately accredited by the Louisiana Department of Environmental Quality (LDEQ) and the Louisiana Board of Contractors. All applicable procedures for asbestos emission control, abatement air monitoring, and/or post-abatement clearance air testing outlined in LAC.33.III.2717 and/or LAC 33.III.5151.F3 should be used; asbestos contaminated waste material (ACWM) generated by ACM abatement, removal, and/or response action at the facility should be disposed of in accordance with LAC 33.III.5151.J.

If suspect ACM/ACBMs that are **not** clearly identified in this *Suspected ACM Testing Report* are encountered during abatement, renovation, demolition, and/or construction activities at the CALS Mechanical Outbuilding, they should be sampled to determine asbestos content. Untested suspected ACM/ACBM must be assumed to contain greater than 1% asbestos by weight and treated/removed/disposed of as ACM/ACBM in accordance with LAC 33.III Chapter 27 and/or LAC 33.III Chapter 51 until appropriate confirmatory testing can be performed.

**Please note** – due to on-Site conditions and confined space entry hazards, no suspected ACM bulk sampling of insulation materials located on or immediately to active "hot" lines, on or immediately adjacent to active electrical panels/lines, or inside boiler and heat exchangers was conducted. Materials meeting these descriptions should be assumed to contain asbestos and handled accordingly until additional confirmatory testing can be performed.

## 2.0 Suspected ACM/ACBM Assessment and Bulk Sampling Activities

### 2.1 Asbestos Inspector Information

All ACM/ACBM assessment and bulk sampling activities were performed by Mr. Jeff Camus, Mr. Justin Crochet, and Ms. Sue-Claire Lichtveld of

MMG. Mr. Camus, Ms. Lichtveld, and Mr. Crochet are accredited by the Louisiana Department of Environmental Quality (LDEQ) as ACM Inspectors and Asbestos Contractor Supervisors. See the table below for the relevant certification information. See also Appendix E for a copy of all certifications.

**Credentials for MMG Personnel Performing the ACM Inspection**

| Name | Certification | Certification Number | Expiration Date |
|---|---|---|---|
| **Justin Crochet** | LDEQ ACM Inspector | JI184257 | June 21, 2026 |
| | LDEQ Asbestos Contractor Supervisor | JS184257 | July 7, 2026 |
| **Jeff Camus** | LDEQ ACM Inspector | JI182306 | June 21, 2026 |
| | LDEQ Asbestos Contractor Supervisor | JS182306 | July 7, 2026 |
| **Sue-Claire Lichtveld** | LDEQ ACM Inspector | JI210196 | June 17, 2026 |
| | LDEQ Asbestos Contractor Supervisor | MS210196 | March 7, 2027 |

## 2.2 Field Investigation and Suspected ACM Bulk Materials Sampling Activities

Field investigation and suspected ACM/ACBM bulk materials sampling activities were conducted on March 9, 2026 by appropriately accredited members of the MMG staff. MMG was not provided with an independent map or property assessment of the CALS Mechanical Outbuilding prior to suspect ACM/ACBM sampling activities. Suspected ACM/ACBM bulk materials sampling locations and sampled materials were chosen to be representative of various locations, mechanical systems, and interior/exterior building materials which may be disturbed or made friable during any demolition, redevelopment, and/or refurbishment activities.

2.3 Bulk Sample Analysis

MMG personnel took a total of forty-seven (47) interior and exterior suspected ACM/ACBM bulk materials samples throughout the CALS Mechanical Outbuilding on March 9, 2026. Samples were sent to EMSL Analytical Inc., located at 18369 Petroleum Drive, Baton Rouge, LA 70809 (EMSL) for analysis by polarized light microscopy (PLM) using dispersion staining techniques. Samples were analyzed by EMSL on March 11, 2026. Prior to laboratory analysis, suspected ACM bulk materials samples collected by MMG which contained more than one suspect material (resilient silicone caulking still attached to exterior stucco, for example) were separated by EMSL technicians so that each substrate could be analyzed individually for asbestos content, whenever possible.

Forty-seven (47) suspected ACM bulk materials samples were collected from the CALS Mechanical Outbuilding by MMG on March 9, 2026; fifty-two (52) individual suspected asbestos-containing materials (ACM) were analyzed by EMSL Analytical, Inc. on March 11, 2026.

Please refer to Appendix E for copies of the certifications for EMSL Analytical Laboratories.

2.4 Bulk Sampling Results

Of the 52 suspected ACM/ACBMs analyzed by EMSL Analytical, Inc. on March 11, 2026, seven (7) individual suspect materials returned analytical results over the designated threshold for “asbestos-containing materials” or “asbestos-containing building materials.” Per LAC 33.III Chapter 51, “ACM/ACBM” is defined as “any material or product which contains more than 1 percent (>1%) asbestos as determined by using the method specified in appendix E, subpart E, 40 CRF part 763, section 1, polarized light microscopy.”

A summary of samples/suspect materials which **met** the regulatory definition of “ACM/ACBM” is included in Table 2.4.1.

Table 2.4.2 includes a summary of sample/suspect materials which **did not** meet the regulatory definition of ACM/ACBM.

A complete copy of the analytical laboratory report and results provided to MMG by EMSL is included in Appendix D. Laboratory chain of custody forms are attached in Appendix C.

**Table 2.4.1**

**Summary of ACM/ACBMs Identified at the CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-13** | 6-inch elbow – Beige | FL 1—A-Side Wall | Black/Yellow Fibrous Heterogeneous | 8% Chrysotile |
| **BA-14** | 6-inch elbow – Lt Blue | FL 1—A-Side Wall | Black/Yellow Fibrous Heterogeneous | 8% Chrysotile |
| **BA-15** | 6-inch elbow – Blue | FL 1—A-Side Wall | Black/Yellow Non-Fibrous Homogeneous | 8% Chrysotile |
| **BA-16** | White Caulk | FL 1—A-Side Wall; Cabinet | Black/Yellow Non-Fibrous Homogeneous | 3% Chrysotile |
| **BA-26** | 1-inch elbow – Green | FL 1—D-Side Wall | Tan/White Fibrous Heterogeneous | 15% Chrysotile |
| **BA-28** | 6-inch elbow – Red | FL 1—A/D-Side Wall | Brown/Red/Black Fibrous Heterogeneous | 8% Chrysotile |
| **BA-36** | Flashing Tar | Roof B-Side | Black Non-Fibrous Homogeneous | 15% Chrysotile |

*__A__ – S. Prieur Street Side; **B** – Gravier Street Side; **C** – S. Johnson Street Side; **D** – Tulane Avenue Side

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-01** | Concrete | FL 1—Center | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-02** | 6-inch TSI Run – Green | FL 1—Center | White/Yellow Fibrous Heterogeneous | None Detected |
| **BA-03** | 6-inch TSI Elbow - Green | FL 1—Center | White/Yellow Fibrous Heterogeneous | None Detected |
| **BA-04** | Grey Cloth Wrap | FL 1—Center | Gray/White Fibrous Heterogeneous | None Detected |
| **BA-05** | "FSB Wrap" – Large Elbow | FL 1—Center | White/Silver/Yellow Fibrous Heterogeneous | None Detected |
| **BA-06** | "FSB Wrap" – Large TSI Run | FL 1—Center | White/Silver Fibrous Homogeneous | None Detected |
| **BA-07** | 4-inch TSI – Metal Wrapped | FL 1—Center | Brown/Silver Fibrous Heterogeneous | None Detected |
| **BA-08** | 6-inch TSI - White | FL 1—A-Side Wall | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-09** | 6-inch TSI - Beige | FL 1—A-Side Wall | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-10** | 6-inch TSI – Lt. Blue | FL 1—A-Side Wall | Blue/Yellow Fibrous Heterogeneous | None Detected |
| **BA-11** | 6-inch TSI – Blue | FL 1—A-Side Wall | Blue/Yellow Fibrous Heterogeneous | None Detected |
| **BA-12** | 6-inch Elbow - White | FL 1—A-Side Wall | Yellow Non-Fibrous Homogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-17** | 6-inch TSI - Grey | FL 1—A/B-Side Wall | Grey/Yellow Fibrous Heterogeneous | None Detected |
| **BA-18** | 10-inch TSI - White | FL 1—B-Side Wall | Grey/Yellow Fibrous Heterogeneous | None Detected |
| **BA-19** | 10-inch TSI - Joint | FL 1—B-Side | White/Black Fibrous Heterogeneous | None Detected |
| **BA-20** | Plaster | FL 1—C-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-21 Cinderblock** | Cinderblock & Mortar | Electrical Rm | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-21 Mortar** | Cinderblock & Mortar | Electrical Rm | Gray Fibrous Homogeneous | None Detected |
| **BA-22** | 4-inch TSI - White | FL 1—Center | Tan/Yellow Fibrous Heterogeneous | None Detected |
| **BA-23** | 4-inch TSI Elbow - White | FL 1—Center | White Fibrous Heterogeneous | None Detected |
| **BA-24** | 4-inch TSI - Black | FL 1—B-Side | Pink Non-Fibrous Homogeneous | None Detected |
| **BA-25** | Fan Caulk | FL 1—D-Side Wall | Gray/Tan Non-Fibrous Homogeneous | None Detected |
| **BA-27** | 6-inch TSI - Red | FL 1—A/D-Side Wall | Brown/White/Black Fibrous Heterogeneous | None Detected |
| **BA-29** | Duct TSI & Tape | Electrical Rm | Brown/White Fibrous Heterogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-30** | Cloth Wrap - White | FL 2—A-Side Wall | White Fibrous Homogeneous | None Detected |
| **BA-31** | 12-inch Joint - White | FL 2—A-Side Wall | White/Black Fibrous Heterogeneous | None Detected |
| **BA-32** | Grey Cloth Jacket | FL 2—A-Side | White Fibrous Heterogeneous | None Detected |
| **BA-33** | 12-inch TSI - Blue | FL 2—B-Side | Brown/White/Blue Fibrous Heterogeneous | None Detected |
| **BA-34 Joint Compound** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | White Non-Fibrous Homogeneous | None Detected |
| **BA-34 Joint Tape** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | Brown Fibrous Homogeneous | None Detected |
| **BA-34 Sheetrock** | Sheetrock, joint tape, & joint compound | FL 2—Pump Rm | Gray Non-Fibrous Homogeneous | None Detected |
| **BA-35** | Roof Material | Roof B-Side | Black Fibrous Homogeneous | None Detected |
| **BA-37** | Flashing | Roof B-Side | Black Fibrous Homogeneous | None Detected |
| **BA-38** | White Roof Rubber | Roof Center | Grey/White Fibrous Heterogeneous | None Detected |
| **BA-39** | White Flashing Caulk | Roof B-Side | Grey Non-Fibrous Homogeneous | None Detected |
| **BA-40** | Exterior Window Caulking | Exterior D-Side | Grey/Tan Non-Fibrous Homogeneous | None Detected |

**Table 2.4.2**

**Summary of Samples/Materials Collected at CALS Building Former Power Plant/Mechanical Outbuilding - Corner of Gravier & S. Prieur Streets that DO NOT meet the Regulatory Definition of "ACM/ACBM"**

| Sample # | Sample Description | Sample Location | Material Description (Lab Report) | Asbestos Content |
|---|---|---|---|---|
| **BA-41 Brick** | Exterior Brick & Mortar | Exterior D-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-41 Mortar** | Exterior Brick & Mortar | Exterior D-Side | Tan Non-Fibrous Homogeneous | None Detected |
| **BA-42** | Exterior White Fan Caulking | Exterior D-Side | White Non-Fibrous Homogeneous | None Detected |
| **BA-43** | Expansion Joint | FL 2—Fan Rm | Black Fibrous Homogeneous | None Detected |
| **BA-44** | Exterior Base Tar | Exterior A-Side | Black Fibrous Homogeneous | None Detected |
| **BA-45** | Exterior Plaster | Exterior C-Side | White Non-Fibrous Homogeneous | None Detected |
| **BA-46** | Exterior Concrete | Exterior C-Side | Gray/Black Non-Fibrous Heterogeneous | None Detected |
| **BA-47 Brick** | Exterior Brick & Mortar | Exterior C-Side | Red Non-Fibrous Homogeneous | None Detected |
| **BA-47 Mortar** | Exterior Brick & Mortar | Exterior C-Side | Grey Non-Fibrous Homogeneous | None Detected |

*__A__ – S. Prieur Street Side; **B** – Gravier Street Side; **C** – S. Johnson Street Side; **D** – Tulane Avenue Side

## 3.0 Conclusions and Recommendations

Estimated quantities of ACM/ACBM identified on the interior and/or exterior of the CALS Mechanical Outbuilding are summarized in Table 3.1 below.

**Table 3.1**

**Approximate Quantities of ACM/ACBM – CALS Mechanical Outbuilding**
**Corner of Gravier Street & South Prieur Street, New Orleans, LA**

| Sample # | Sample Description | Sample Location | Asbestos Content | Estimated Quantity of ACM/ACBM |
|---|---|---|---|---|
| **BA-13** | 6-inch elbow – Beige | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-14** | 6-inch elbow – Lt Blue | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-15** | 6-inch elbow – Blue | FL 1—A-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-16** | White Caulk | FL 1—A-Side Wall; Cabinet | 3% Chrysotile | 2 sq ft |
| **BA-26** | 1-inch elbow – Green | FL 1—D-Side Wall | 15% Chrysotile | 1 linear ft |
| **BA-28** | 6-inch elbow – Red | FL 1—A/D-Side Wall | 8% Chrysotile | 1 linear ft |
| **BA-36** | Flashing Tar | Roof B-Side | 15% Chrysotile | 10,000 sq ft |

Per LAC 33.III Chapter 51, the notification and regulatory requirements outlined in 33.III.5151.F – Emission Standard for Demolition, Renovation, Asbestos-Contaminated Debris Activities, Response Actions, and Major Fiber Releases apply if, in a facility being renovated or demolished:

> *[T]he combined amount of regulated asbestos-containing material [RACM] to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is: (a) at least 60 linear feet on pipes; (b) at least 64 square feet on other facility components; or (c) at least 27 cubic feet off facility components where the length or area could not be measured previously.*

If the facility being renovated, abated, and/or demolished is part of a “school” facility as defined in LAC 33.III.2703, additional regulatory requirements, outlined in LAC 33.III Chapter 27 – Asbestos-Containing Materials (ACM) in School and State Buildings may also apply.

Contractors conducting ACM/ACBM removal, abatement, and/or response actions at the CALS Mechanical Outbuilding should be appropriately accredited by the Louisiana Department of Environmental Quality (LDEQ) and the Louisiana Board of Contractors. All applicable procedures for asbestos emission control, abatement air monitoring, and/or post-abatement clearance air testing outlined in LAC.33.III.2717 and/or LAC 33.III.5151.F3 should be used; asbestos contaminated waste material (ACWM) generated by ACM abatement, removal, and/or response action at the facility should be disposed of in accordance with LAC 33.III.5151.J.

If suspect ACM/ACBMs that are not clearly identified in this *Suspected ACM Testing Report* are encountered during abatement, renovation, demolition, and/or construction activities at the CALS Mechanical Outbuilding, they should be sampled to determine asbestos content. Untested suspected ACM/ACBM **must** be assumed to contain greater than 1% asbestos by weight and treated/removed/disposed of as ACM/ACBM in accordance with LAC 33.III Chapter 27 and/or LAC 33.III Chapter 51 until appropriate confirmatory testing can be performed.

**Please note** – due to on-Site conditions and confined space entry hazards, no suspected ACM bulk sampling of insulation materials located on or immediately to active “hot” lines, on or immediately adjacent to active electrical panels/lines, or inside boiler and heat exchangers was conducted. Materials meeting these descriptions should be assumed to contain asbestos and handled accordingly until additional confirmatory testing can be performed.

## 4.0 Signatures



Ms. Braelin Carter, MSPH
Operations Manager and Environmental Health Scientist
LDEQ AI No. 193973

**Appendices**
Appendix A: Photographs

Appendix B: Maps and Figures

Appendix C: Chain of Custody Forms

Appendix D: Laboratory Results

Appendix E: Certifications and Accreditations

## Appendix A: Photographs



**Photograph #1**
Sample: BA-01 (Concrete)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #2**
Sample: BA-02 (6in Green TSI)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #3**
Sample: BA-03 (6in Green Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #4**
Sample: BA-04 (Grey Cloth Wrap)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #5**
Sample: BA-05 (“FSB” Wrap, Large Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #6**
Sample: BA-06 (Large “FSB” Wrap)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #7**
Sample: BA-07 (4in TSI, Metal Wrapped)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #8**
Sample: BA-08 (6in White TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #9**
Sample: BA-09 (6in Beige TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #10**
Sample: BA-10 (6in Light Blue TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #11**
Sample: BA-11 (6in Blue TSI)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #12**
Sample: BA-12 (6in White Elbow)
Location: FL 1—A-Side Wall
Results: No ACM Detected



**Photograph #13**
Sample: BA-13 (6in Beige Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #14**
Sample: BA-14 (6in Light Blue Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #15**
Sample: BA-15 (6in Blue Elbow)
Location: FL 1—A-Side Wall
Results: **Contains 8% Crysotile**



**Photograph #16**
Sample: BA-16 (White Caulk)
Location: FL 1—A-Side Wall
Results: **Contains 3% Crysotile**



**Photograph #17**
Sample: BA-17 (6in Grey TSI)
Location: FL 1—A/B-Side Wall
Results: No ACM Detected



**Photograph #18**
Sample: BA-18 (10in White TSI)
Location: FL 1—B-Side Wall
Results: No ACM Detected



**Photograph #19**
Sample: BA-19 (10in TSI Joint)
Location: FL 1—B-Side
Results: No ACM Detected



**Photograph #20**
Sample: BA-20 (Plaster)
Location: FL 1—C-Side
Results: No ACM Detected



**Photograph #21**
Sample: BA-21 (Cinderblock + Mortar)
Location: Electrical Rm
Results: No ACM Detected



**Photograph #22**
Sample: BA-22 (4in White TSI)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #23**
Sample: BA-23 (4in White Elbow)
Location: FL 1—Center
Results: No ACM Detected



**Photograph #24**
Sample: BA-24 (4in Black TSI)
Location: FL 1—B-Side
Results: No ACM Detected



**Photograph #25**
Sample: BA-25 (Fan Caulk)
Location: FL 1—D-Side Wall
Results: No ACM Detected



**Photograph #26**
Sample: BA-26 (1in Green Elbow)
Location: FL 1—D-Side Wall
Results: **Contains 15% Crysotile**



**Photograph #27**
Sample: BA-27, 28 (6in Red TSI + Elbow)
Location: FL 1—A/D-Side Wall
Results: **Contains 8% Crysotile (BA-28)**



**Photograph #28**
Sample: BA-29 (Duct TSI + Tape)
Location: Electrical Rm
Results: No ACM Detected



**Photograph #29**
Sample: BA-30 (White Cloth Wrap)
Location: FL 2—A-Side Wall
Results: No ACM Detected



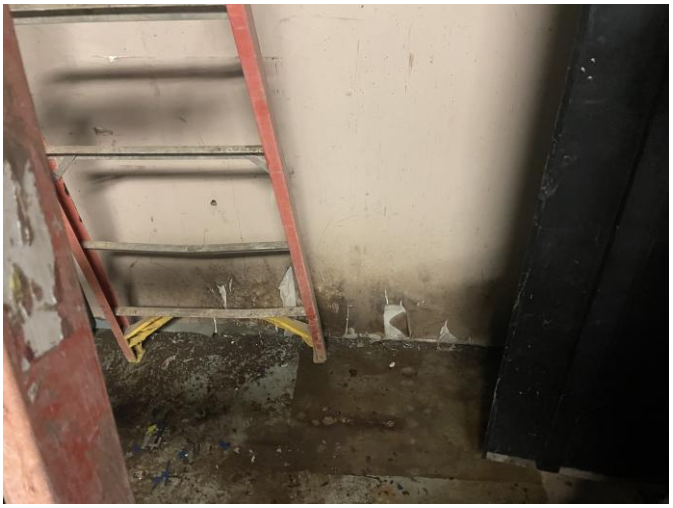
**Photograph #30**
Sample: BA-31 (12in White Joint)
Location: FL 2—A-Side Wall
Results: No ACM Detected



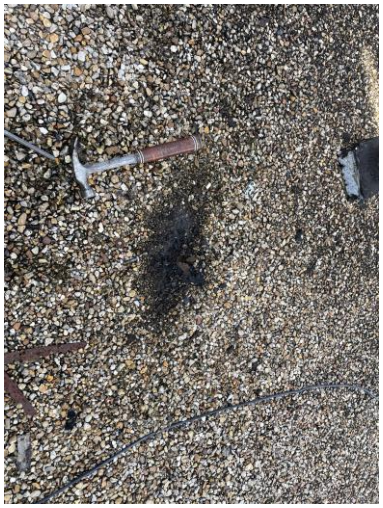
**Photograph #31**
Sample: BA-32 (Grey Cloth Jacket)
Location: FL 2—A-Side Wall
Results: No ACM Detected



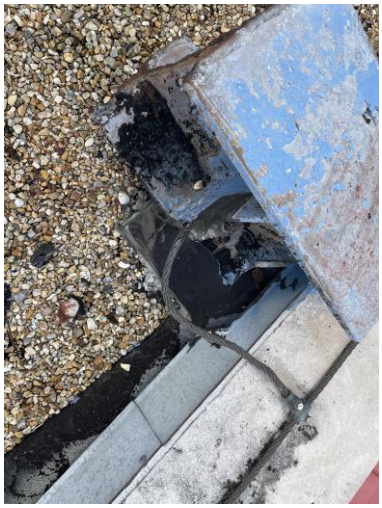
**Photograph #32**
Sample: BA-33 (12in Blue TSI)
Location: FL 2—B-Side Wall
Results: No ACM Detected



**Photograph #33**
Sample: BA-34 (Sheetrock, Tape, + Mud)
Location: FL 2—B-Side Wall
Results: No ACM Detected



**Photograph #34**
Sample: BA-35 (Roof)
Location: Roof B-Side
Results: No ACM Detected



**Photograph #35**
Sample: BA-36 (Flashing Tar)
Location: Roof B-Side
Results: **Contains 8% Crysotile**



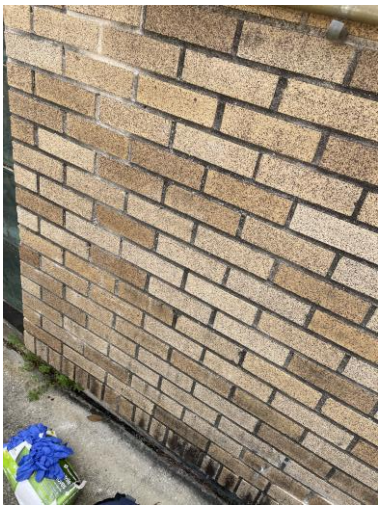
**Photograph #36**
Sample: BA-37 (Flashing)
Location: Roof B-Side
Results: No ACM Detected



**Photograph #37**
Sample: BA-38 (White Roof Rubber)
Location: Roof Center
Results: No ACM Detected



**Photograph #38**
Sample: BA-40 (Exterior Window Caulk)
Location: Exterior D-Side
Results: No ACM Detected



**Photograph #39**
Sample: BA-41 (Brick + Mortar)
Location: Exterior D-Side
Results: No ACM Detected



**Photograph #40**
Sample: BA-42 (White Fan Caulk)
Location: Exterior D-Side
Results: No ACM Detected



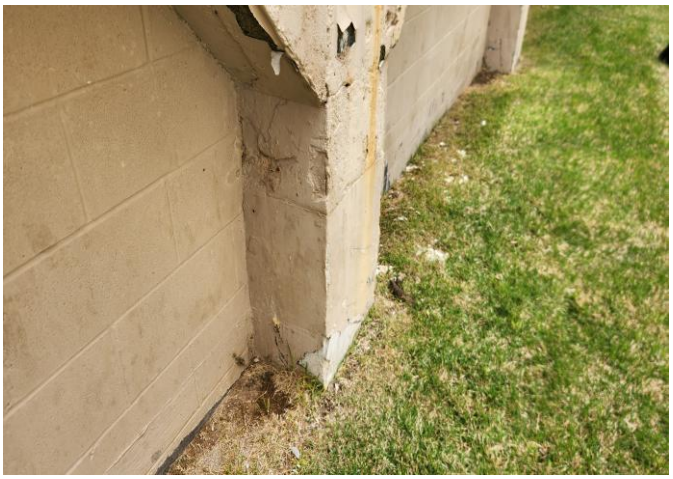
**Photograph #41**
Sample: BA-43 (Expansion Joint)
Location: FL 2—Fan Rm
Results: No ACM Detected



**Photograph #42**
Sample: BA-44 (Base Tar)
Location: Exterior A-Side
Results: No ACM Detected



**Photograph #43**
Sample: BA-45 (Plaster)
Location: Exterior C-Side
Results: No ACM Detected



**Photograph #44**
Sample: BA-46 (Conrete)
Location: Exterior C-Side
Results: No ACM Detected

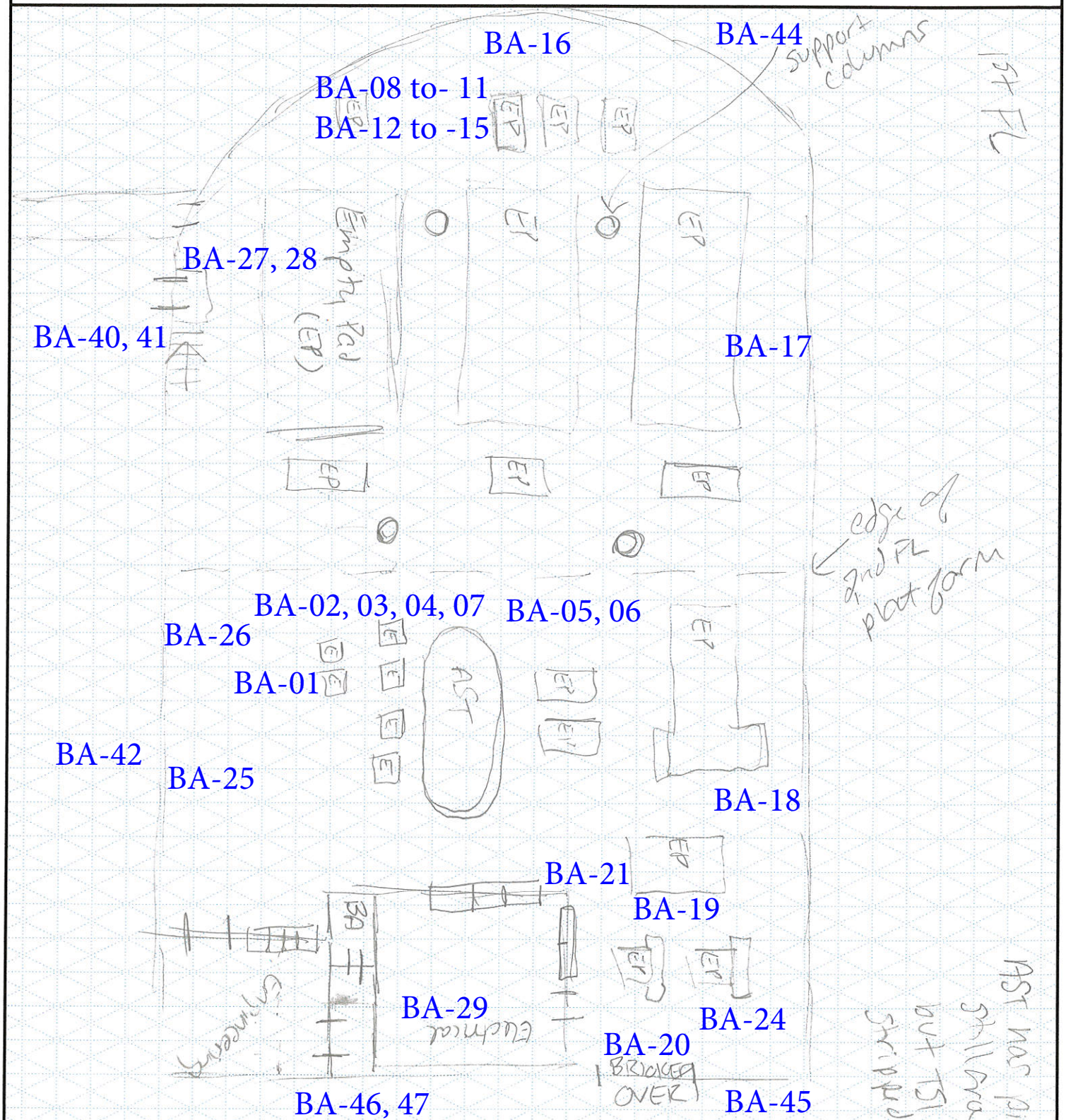


**Photograph #45**
Sample: BA-47 (Brick + Mortar)
Location: Exterior C-Side
Results: No ACM Detected

## Appendix B: Maps and Figures

# ACM Bulk Sampling FLOOR 1

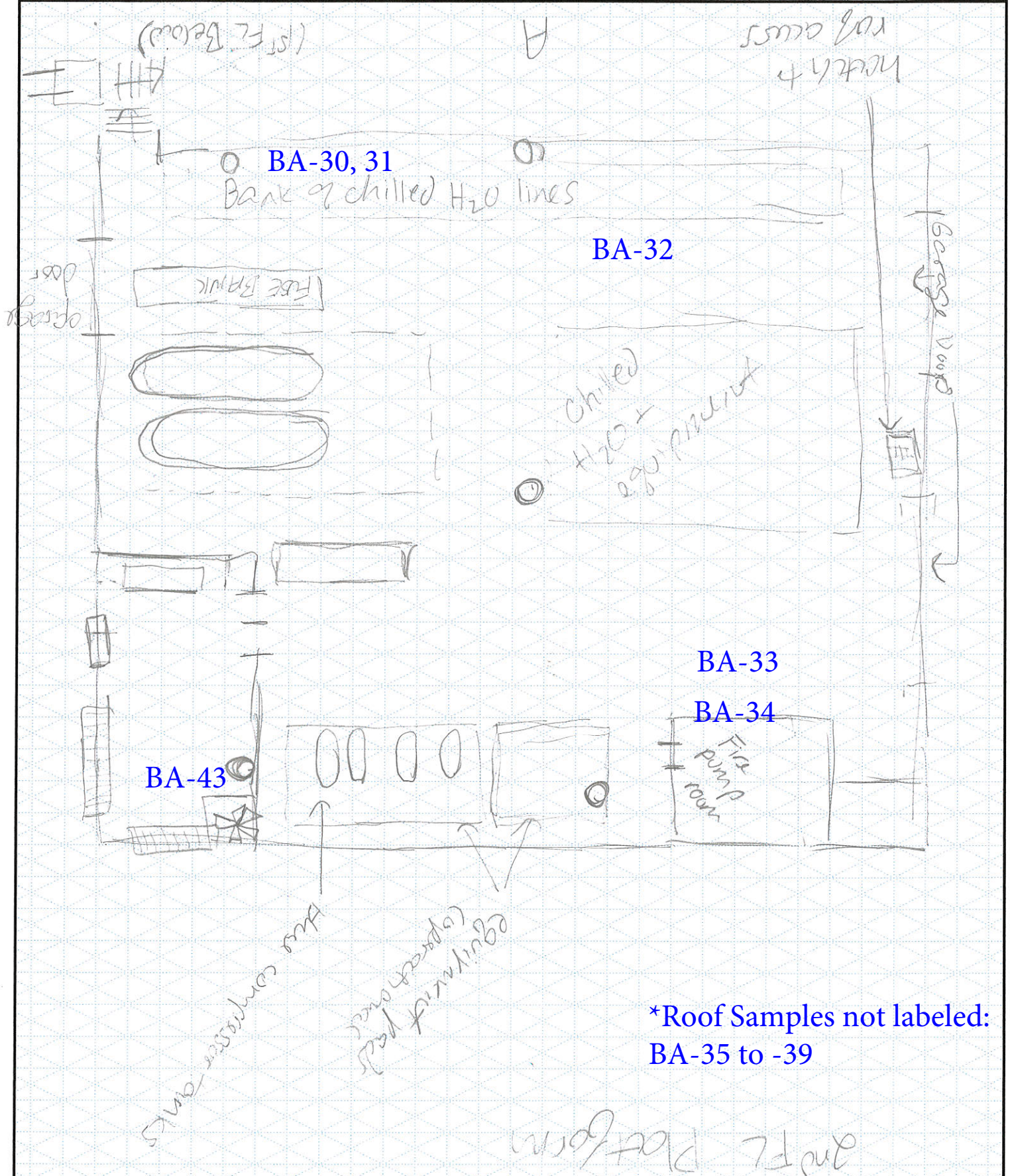
COMPANY _____ DATE _____ SHEET NO. _____ OF _____
CUSTOMER _____ DWG. NO. _____ REV. _____
SUBJECT _____ DRAWN BY _____
OTHER _____




0.25" SQUARE GRID ∠ 26.57° ISOMETRIC © 2023 GeekNavy www.GeekNavy.com Product # 3D025IN8511P

# ACM Bulk Sampling FLOOR 2

| | | | |
|---|---|---|---|
| COMPANY | | DATE | SHEET NO. OF |
| CUSTOMER | | DWG. NO. | REV. |
| SUBJECT | | DRAWN BY | |
| OTHER | | | |




*Roof Samples not labeled:
BA-35 to -39


© 2023 GeekNavy

## Appendix C: Chain of Custody Forms

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsbLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

| Customer Information | | Billing Information | |
|---|---|---|---|
| Customer ID: | MATM50 | Billing ID: | MATM50 |
| Company Name: | Materials Management Group, Inc. | Company Name: | Materials Management Group, Inc. |
| Contact Name: | Mia Barrios | Billing Contact: | Mia Barrios |
| Street Address: | 2401 Westbend Parkway, #3010 | Street Address: | 2401 Westbend Parkway, #3010 |
| City, State, Zip: | New Orleans, LA 70114 | City, State, Zip: | New Orleans, LA 70114 |
| Country: | | Country: | |
| Phone: | 504-368-0568 | Phone: | 504-368-0568 |
| Email(s) for Report: | miab@mmgnola.com | Email(s) for Invoice: | miab@mmgnola.com |

**Project Information**

Project Name/No: 4476 LSU
Purchase Order: 4476 LSU
EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: LA
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: Jeff Cairns
Sampled By Signature:
No. of Samples in Shipment: 47

**Turn-Around-Time (TAT)**

☐ 3 Hour ☐ 4-4.5 Hour AHERA ONLY ☐ 8 Hour ☐ 24 Hour ☑ 32 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

TEM Air 3-4 Hour, please call ahead to schedule, 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

**Test Selection**

PCM Air
- ☐ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.3um ☐ 0.45um

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-01 | Concrete | | 3-9-26 |
| 02 | 6 in TSI - Green | | |
| 03 | 6 in elbow - Green | | |
| 04 | Grey Cloth wrap | | |
| 05 | "FSB wrap" Large elbow | | |
| 06 | Large TSI "FSB wrap" | | |
| 07 | 4 in TSI - Metal wrapped | | |
| 08 | 6 in TSI - White | | |

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

1926 0172 3419

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: | Date/Time: 3-9-26 1200 | Received by: | Date/Time: 3/10/26 10:10am |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R13 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-09 | 6in TSI - Beige | | |
| 10 | " - Lt Blue | | |
| 11 | " - Blue | | |
| 12 | 6in elbow - white | | |
| 13 | \| Beige | | |
| 14 | \| Lt Blue | | |
| 15 | L Blue | | |
| 16 | White Caulk | | |
| 17 | 6in TSI Grey | | |
| 18 | 10in TSI white | | |
| 19 | 10in TSI joint | | |
| 20 | plaster | | |
| 21 | Cinderblock + Mortar | | |
| 22 | 4in TSI - white | | |
| 23 | 4in elbow white | | |
| 24 | 4in TSI black | | |
| 25 | Fan Caulk | | |
| 26 | 1in elbow - Green | | |
| 27 | 6in TSI - Red | | |
| 28 | 6in elbow - Red | | |
| 29 | Duct TSI + tape | | |
| 30 | cloth wrap - white | | |
| 31 | 12in Joint - white | | |
| 32 | Grey cloth Jacket | | |
| 33 | 12in TSI - Blue | | |

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: | Date/Time: 3-9-26 1700 | Received by: | Date/Time: 3/10/26 10:10Am |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R16 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 252600785

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

**#252600785**

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

| Sample Number | Sample Location / Description | Volume, Area or Homogeneous Area | Date / Time Sampled (Air Monitoring Only) |
|---|---|---|---|
| BA-34 | Sheetrock, tape, mud | | |
| 35 | roof | | |
| 36 | Flashing tar | | |
| 37 | Flashing | | |
| 38 | white roof rubber | | |
| 39 | White Flashing Caulk | | |
| 40 | Ext Window Caulk | | |
| 41 | Ext Brick + Mortar | | |
| 42 | Ext white Fan Caulk | | |
| 43 | Xpansion Joint | | |
| 44 | Ext Base tar | | |
| 45 | Plaster | | |
| 46 | concrete | | |
| 47 | Brick + Mortar | | |
| 48 | | | |
| | | | |
| | | | |
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| | | | |

| | | | |
|---|---|---|---|
| Method of Shipment: Fedex | | Sample Condition Upon Receipt: | |
| Relinquished by: MMG | Date/Time: 3-9-26 1700 | Received by: | Date/Time: 3/10/26 10:10AM |
| Relinquished by: | Date/Time: | Received by: | Date/Time |

Controlled Document - COC-05 Asbestos R18 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature )

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

# Appendix D: Analytical Laboratory Results

# EMSL Analytical, Inc.

**18369 Petroleum Drive Baton Rouge, LA 70809**

Tel/Fax: (225) 755-1920 / (225) 755-1989

http://www.EMSL.com / batonrougelab@emsl.com


| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

| | | | |
|---|---|---|---|
| **Attention:** | Paul Lo | **Phone:** | (504) 368-0568 |
| | MMG/Materials Management Group, Inc. | **Fax:** | (504) 368-8409 |
| | 2401 Westbend Parkway | **Received Date:** | 03/10/2026 10:10 AM |
| | Suite 3010 | **Analysis Date:** | 03/11/2026 |
| | New Orleans, LA 70114 | **Collected Date:** | 03/09/2026 |
| **Project:** | 4476LSU | | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-01<br>*252600785-0001* | concrete | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-02<br>*252600785-0002* | 6in TSI - Green | White/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-03<br>*252600785-0003* | 6in elbow - Green | White/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-04<br>*252600785-0004* | Grey cloth wrap | Gray/White<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-05<br>*252600785-0005* | "FSB wrap" Large elbow | White/Silver/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-06<br>*252600785-0006* | Large TSI "FSB Wrap" | White/Silver<br>Fibrous<br>Homogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-07<br>*252600785-0007* | 4in TSI - Metal wrapped | Brown/Silver<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>65% Glass | 10% Non-fibrous (Other) | None Detected |
| BA-08<br>*252600785-0008* | 6in TSI - White | Tan/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-09<br>*252600785-0009* | 6in TSI - Beige | Tan/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-10<br>*252600785-0010* | 6in TSI - Lt Blue | Blue/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-11<br>*252600785-0011* | 6in TSI - Blue | Blue/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-12<br>*252600785-0012* | 6in elbow - White | Yellow<br>Non-Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| BA-13<br>*252600785-0013* | 6in elbow - Beige | Black/Yellow<br>Fibrous<br>Heterogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-14<br>*252600785-0014* | 6in elbow - Lt Blue | Black/Yellow<br>Fibrous<br>Heterogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-15<br>*252600785-0015* | 6in elbow - Blue | Black/Yellow<br>Non-Fibrous<br>Homogeneous | 80% Glass | 12% Non-fibrous (Other) | **8% Chrysotile** |
| BA-16<br>*252600785-0016* | White Caulk | Black/Yellow<br>Non-Fibrous<br>Homogeneous | | 97% Non-fibrous (Other) | **3% Chrysotile** |

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| | |
|---|---|
| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-17<br>*252600785-0017* | 6in TSI Grey | Gray/Yellow<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-18<br>*252600785-0018* | 10in TSI White | Gray/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-19<br>*252600785-0019* | 10in TSI joint | White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose | 75% Non-fibrous (Other) | None Detected |
| BA-20<br>*252600785-0020* | plaster | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-21-Cinder Block<br>*252600785-0021* | Cinderblock + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-21-Mortar<br>*252600785-0021A* | Cinderblock + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-22<br>*252600785-0022* | 4in TSI - White | Tan/Yellow<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-23<br>*252600785-0023* | 4in elbow white | White<br>Fibrous<br>Heterogeneous | 60% Glass | 40% Non-fibrous (Other) | None Detected |
| BA-24<br>*252600785-0024* | 4in TSI black | Pink<br>Non-Fibrous<br>Homogeneous | 25% Cellulose<br>60% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-25<br>*252600785-0025* | Fan Caulk | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-26<br>*252600785-0026* | 1in elbow - Green | Tan/White<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 15% Non-fibrous (Other) | **15% Chrysotile** |
| BA-27<br>*252600785-0027* | 6in TSI - Red | Brown/White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 30% Non-fibrous (Other) | None Detected |
| BA-28<br>*252600785-0028* | 6in elbow - Red | Brown/Red/Black<br>Fibrous<br>Heterogeneous | 65% Glass | 27% Non-fibrous (Other) | **8% Chrysotile** |
| BA-29<br>*252600785-0029* | Duct TSI + tape | Brown/White<br>Fibrous<br>Heterogeneous | 25% Cellulose<br>45% Glass | 30% Non-fibrous (Other) | None Detected |
| BA-30<br>*252600785-0030* | Cloth wrap - white | White<br>Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| BA-31<br>*252600785-0031* | 12in Joint - white | White/Black<br>Fibrous<br>Heterogeneous | 25% Cellulose | 75% Non-fibrous (Other) | None Detected |
| BA-32<br>*252600785-0032* | Grey cloth Jacket | White<br>Fibrous<br>Heterogeneous | 20% Cellulose<br>75% Glass | 5% Non-fibrous (Other) | None Detected |
| BA-33<br>*252600785-0033* | 12in TSI - Blue | Brown/White/Blue<br>Fibrous<br>Heterogeneous | 85% Glass | 15% Non-fibrous (Other) | None Detected |
| BA-34-Joint Compound<br>*252600785-0034* | Sheetrock, tape + Mud | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

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| | |
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| **EMSL Order:** | 252600785 |
| **Customer ID:** | MATM50 |
| **Customer PO:** | 4476LSU |
| **Project ID:** | |

## *Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| BA-34-Tape<br>*252600785-0034A* | Sheetrock, tape + Mud | Brown<br>Fibrous<br>Homogeneous | 98% Cellulose | 2% Non-fibrous (Other) | None Detected |
| BA-34-Sheetrock<br>*252600785-0034B* | Sheetrock, tape + Mud | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-35<br>*252600785-0035* | roof | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-36<br>*252600785-0036* | Flashing tar | Black<br>Non-Fibrous<br>Homogeneous | | 85% Non-fibrous (Other) | **15% Chrysotile** |
| BA-37<br>*252600785-0037* | Flashing | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-38<br>*252600785-0038* | white roof rubber | Gray/White<br>Fibrous<br>Heterogeneous | 45% Glass | 55% Non-fibrous (Other) | None Detected |
| BA-39<br>*252600785-0039* | White Flashing Caulk | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-40<br>*252600785-0040* | Ext Window Caulk | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-41-Brick<br>*252600785-0041* | Ext Brick + Mortar | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-41-Mortar<br>*252600785-0041A* | Ext Brick + Mortar | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-42<br>*252600785-0042* | Ext White Fan Caulk | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-43<br>*252600785-0043* | Xpansion Joint | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-44<br>*252600785-0044* | Ext Base tar | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| BA-45<br>*252600785-0045* | Ext Plaster | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-46<br>*252600785-0046* | Ext concrete | Gray/Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-47-Brick<br>*252600785-0047* | Ext Brick + Mortar | Red<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| BA-47-Mortar<br>*252600785-0047A* | Ext Brick + Mortar | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

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| **EMSL Order:** | 252600785 |
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| **Project ID:** | |

Analyst(s)

*Brett Fairchild (25)*
*Bailey Gunter (27)*

Martiana Beach, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Baton Rouge, LA NVLAP Lab Code 200375-0, LELAP 01950, TX 300238

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## Appendix E: Certifications and Accreditations

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Jeffrey P Camus*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI182306

**AI No.** 182306

**Date of Issuance** June 20, 2025

**Expiration** June 21, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Justin H Crochet*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI184257 **AI No.** 184257

**Date of Issuance** June 20, 2025 **Expiration** June 21, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Sue F Lichtveld*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Asbestos Inspector**

**Accreditation No.** JI210196 **AI No.** 210196

**Date of Issuance** July 1, 2025 **Expiration** June 17, 2026

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Services Division**
**Office of Environmental Services**

# STATE OF LOUISIANA
## DEPARTMENT OF ENVIRONMENTAL QUALITY

**Is hereby granting a Louisiana Environmental Laboratory Accreditation to**

## EMSL Analytical Inc
## 18369 Petroleum Dr
## Baton Rouge, Louisiana 70809

**Agency Interest No. 205208**
**Activity No. ACC20250002**

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Tonya Landry
Administrator
Public Participation and Permit Support Division

**Issued Date:** 5/27/2025

**Effective Date:** July 1, 2025
**Expiration Date:** June 30, 2026
**Certificate Number:** 01950

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2025

EMSL Analytical Inc
AI Number: 205208
Activity No. ACC20250002
Expiration Date: June 30, 2026

18369 Petroleum Dr, Baton Rouge, Louisiana 70809

**Certificate Number: 01950**

## Air Emissions

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|
| 1075 - Lead | NIOSH 7082, Rev 2 | 90012230 | State | A2LA |
| 1520 - Asbestos | 40 CFR Part 763, Subpart E, Appendix A (Mandatory TEM) | 3726 | ISO 17025 | NVLAP |
| 3379 - Fungal - Direct Examination (Air) | EMSL Micro-SOP-201 | 5276 | State | A2LA |

## Non Potable Water

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|

## Solid Chemical Materials

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|
| 1075 - Lead | EPA 3050 | 10135203 | NLLAP | A2LA |
| 1075 - Lead | EPA 7000 | 10157401 | NLLAP | A2LA |
| 1520 - Asbestos | EPA 600/R-93/116 | 10294583 | ISO 17025 | NVLAP |
| 1818 - Asbestos in Bulk Insulation | 40 CFR 763, Subpart E, Appendix E (Section 1.PLM) | 3853 | ISO 17025 | NVLAP |
| 3377 - Fungal - Direct Examination (Bulk) | EMSL Micro-SOP-200 | 5277 | State | A2LA |
| 3378 - Fungal - Direct Examination (Surface) | EMSL Micro-SOP-200 | 5277 | State | A2LA |

## Biological Tissue

| Analyte | Method Name | Method Code | Type | AB |
|---|---|---|---|---|

**April 17, 2026**

# Suspected Lead-Based Paint (LBP) Testing Report

# CALS Building Former Power Plant/Mechanical Outbuilding
# Corner of Gravier Street & S. Prieur Street
# New Orleans, LA 70112

## (MMG Job #: 4476 LSU)



**Prepared for:**

**Mr. Darren Burkett, CIH, CSP, CHMM, MSPH**
**Executive Director, Environmental Health & Safety**
**LSU Health Sciences Center, New Orleans, LA**

**By:**

**Materials Management Group, Inc.**
**2401 Westbend Parkway, Suite 3010**
**New Orleans, LA 70114**

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*Appendix A* *Site Maps & Project Photographs*
*Appendix B* *XRF Test Results for Lead-Based Paint*
*Appendix C* *Certifications*

# Executive Summary

## Background

Materials Management Group, Inc. (MMG) was engaged by representatives of the Louisiana State University Health Sciences Center (LSU HSC) to conduct a suspected lead-based paint (LBP) investigation of the CALS Mechanical Outbuilding located at the corner of Gravier and S. Prieur Street, New Orleans, LA 70112 (CALS Mechanical Outbuilding).

## Investigation

Suspected LBP testing was performed at the CALS Mechanical Outbuilding on March 9, 2026 by LDEQ-certified Lead Inspector/Risk Assessor, Justin Crochet. Mr. Crochet tested representative interior and exterior painted surfaces and building components that were reasonably accessible on March 9, 2026 with an X-Ray Fluorescence Spectrophotometer (XRF).

The XRF is a direct-reading instrument which provides an immediate determination of the lead concentration in paint or surface coatings reported in milligrams per centimeter squared ($mg/cm^2$). For the purposes of this investigation, LBP was defined as “paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter ($mg/cm^2$).” This definition was taken from the Louisiana Administrative Code (LAC), Title 33 (Environmental Quality), Part III (Air), Chapter 28 (Lead-Based Paint Activities), Section 2803 (Definitions). Suspect painted surfaces tested during this investigation may have included, but may not have been limited to, walls, doors, door casings, door jambs, windows, windowsills, structural components, equipment, concrete slabs, etc.

## Findings

A total of one hundred and five (105) LBP tests were conducted on painted surfaces associated with the CALS Mechanical Outbuilding; ten (10) surfaces tested positive for LBP. Surfaces and building components which tested positive for the presence of LBP were found in multiple locations and generally included stair components, window components, structural elements, and doors. Paint meeting the definition of LBP was generally described as “yellow” or “green” by the Inspector.

The majority of painted surfaces throughout the CALS Mechanical Outbuilding were deemed to be in “poor” or “deteriorated” condition by LDEQ-Certified Lead Inspector/Risk Assessors. A summary of the description, location, and condition of surfaces which tested positive for the presence of LBP is included in Table 3.1.

## Conclusions and Recommendations

Lead-based paint (LBP) was detected at the CALS Mechanical Outbuilding. Estimated quantities of LBP identified on the interior and/or exterior of the CALS Mechanical Outbuilding are summarized in the table below, as applicable.

**Estimated Quantities for Lead-Based Paint (LBP)**

**(LBP Testing performed by MMG at the CALS Mechanical Outbuilding on 3/9/26)**

| Inspector | Justin Crochet | | | XRF | MMG Unit 112491 | | | |
|---|---|---|---|---|---|---|---|---|
| Reading No | Room | Component | Substrate | Side** | Color | Condition | PbC ($mg/cm^2$) | Estimated Quantity |
| 11 | MAIN ROOM | PAD | Concrete | Room Center | Yellow | Deteriorated | 3.8 | 30 sq ft |
| 25 | MAIN ROOM | Window Casing 3 | Metal | C | Green | Deteriorated | 36.5 | 10 sq ft |
| 26 | MAIN ROOM | Window Casing 3 | Metal | C | Green | Deteriorated | 39.3 | 10 sq ft |
| 28 | MAIN ROOM | Door Casing | Metal | C | Green | Deteriorated | 1.5 | 20 sq ft |
| 32 | MAIN ROOM | Stairs | Metal | Floor | Yellow | Deteriorated | 3.4 | 200 sq ft |
| 33 | MAIN ROOM | Stair Stringer | Metal | Floor | Yellow | Deteriorated | 4.3 | 100 sq ft |
| 34 | MAIN ROOM | Hand Rail | Metal | Floor | Yellow | Deteriorated | 4.7 | 20 sq ft |
| 35 | MAIN ROOM | Post | Metal | Floor | Yellow | Deteriorated | 2 | 20 sq ft |
| 54 | MAIN ROOM | Hand Rail | Metal | A | Yellow | Deteriorated | 2.5 | 20 sq ft |
| 69 | MAIN ROOM | PIPE RACK | Metal | Floor | Yellow | Deteriorated | 3 | 20 sq ft |

**A = S. Prieur Street; B = Gravier Street; C = S. Johnson Street; D = Tulane Avenue

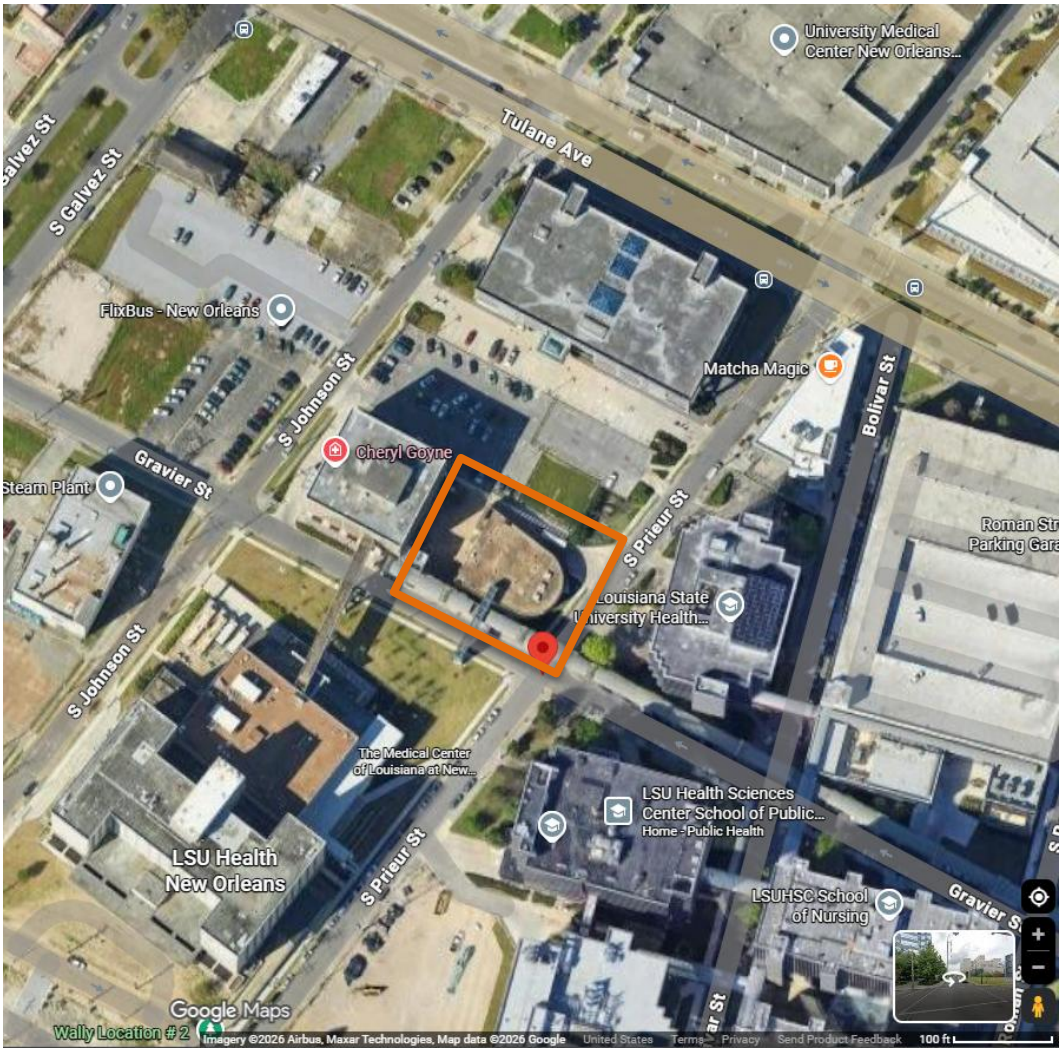
MMG recommends engaging an appropriately licensed lead abatement contractor to perform lead hazard mitigation activities on any LBP surfaces identified inside the CALS Mechanical Outbuilding which are currently in “poor” or “deteriorated” condition prior to demolition, renovation, facility refurbishment, and/or equipment reclamation work. Any surfaces coated in LBP which may be disrupted, disturbed, or have the potential to generate lead dust during the course of CALS Mechanical Outbuilding redevelopment and/or demolition activities should be abated **prior** to the start of renovation/demolition work regardless of current condition.

# 1.0 Introduction

Materials Management Group, Inc. (MMG) was engaged by representatives of the Louisiana State University Health Sciences Center (LSU HSC) to conduct a suspected lead-based paint (LBP) investigation of the CALS Mechanical Outbuilding located at the corner of Gravier and South Prieur Streets, New Orleans, LA 70112 (CALS Mechanical Outbuilding.

The CALS Mechanical Outbuilding (outlined in **orange** below) is contained in the city block bordered by Gravier Street to the southwest, South Johnson Street to the northwest, Tulane Avenue to the northeast, and S. Prieur Street to the southeast, as illustrated in Figure 1.1.

**Figure 1.1. Site Location Map**



## 1.1 Description of the CALS Mechanical Outbuilding

The CALS Mechanical Outbuilding is constructed primarily of orange/yellow brick and cinderblock with a flat, composite roof. The CALS Mechanical Outbuilding has two (2) interior floors.

The 1st Floor consists of concrete floors, cinderblock interior walls, and finished concrete ceilings. The concrete floors are largely unpainted. The raised equipment pads show evidence of deteriorated yellow and/or green paint along their vertical edges; deteriorated paint is also visible on select walls, support columns, window components, stairways, and doors located throughout the space. The 1st Floor comprises a large, central equipment bay as well as two enclosed office/work rooms located on the C-Side.

The 2nd Floor consists of concrete floors, cinderblock interior walls, and finished concrete ceilings. Concrete floors are partially painted. The 2nd Floor contains a mix of active and inactive electrical panels, HVAC systems, steam, and chilled water lines; concrete equipment pads and ceilings on the 2nd floor are largely inaccessible due to the density of equipment and piping. The second floor also contains two (2) enclosed rooms. The “fire pump” room is located on the C-Side; this room was locked and inaccessible the day that LBP testing was performed. The “High Voltage” room is located on the D-Side of the 2nd Floor; this room was open and accessible the day this investigation was conducted.

Suspected LBP testing was performed on all interior and exterior painted surfaces and building components which were accessible to MMG personnel on March 9, 2026.

## 1.2 Scope of Services

The purpose of this suspected LBP investigation was to identify surfaces and building components coated in LBP which might be disrupted or disturbed during future demolition, renovation, facility refurbishment, and/or equipment reclamation work at the CALS Mechanical Outbuilding.

Technical and professional services provided by MMG included:

- A visual survey of the CALS Mechanical Outbuilding conducted by an LDEQ-certified Lead Inspector/Risk Assessor
- The collection of field documentation including the description, location, and condition of surfaces and building components coated in suspected LBP
- LBP testing of interior and exterior painted surfaces and building components located throughout the CALS Mechanical Outbuilding using an X-Ray Fluorescence Spectrophotometer (XRF)

- Development of a *Suspected LBP Testing Report* which includes site maps, photographs, XRF testing results, and approximate quantities of LBP identified during the investigation, as necessary or applicable.

### 1.3 Limitations and Exceptions

This investigation was conducted exclusively on painted surfaces and building components located in areas that were accessible to MMG on March 9, 2026. It must be assumed that areas and building components which may become accessible only during or after demolition, renovation, and/or equipment reclamation activities have not been tested for the potential presence of LBP; surfaces and building components meeting this description should be assumed to contain LBP and handled accordingly until confirmatory testing by an accredited lead professional can be performed.

## 2.0 Methodology

On March 9, 2026, Justin Crochet of MMG arrived at the CALS Mechanical Outbuilding to conduct suspected LBP testing. LDEQ certification information for Mr. Crochet is included in Table 2.1 below.

**Table 2.1 Certifications of MMG Staff**

| Name | Certification Types | Certification Number | Expiration |
|---|---|---|---|
| Justin Crochet | Lead Inspector | MI184257 | 03/25/26 |
| | Lead Risk Assessor | MR184257 | 03/12/26 |

### 2.1 Methodology for LBP Investigation

#### 2.1.1 Investigation Procedures

Mr. Crochet conducted the lead-based paint survey using an X-Ray Fluorescence Spectrophotometer (XRF) - Niton XLP-300A Spectrum Analyzer. He conducted this survey using the procedures dictated by LAC 33:III.2811B. Painted surfaces throughout the CALS Mechanical Outbuilding were tested for the suspected presence and concentration of LBP. Quality control procedures were applied according to documented methodologies and the XRF manufacturer's instruction.

For the purposes of this investigation, "LBP" was defined as "paint or other surface coatings that contain lead equal to or in excess of 1.0 milligrams per square centimeter ($mg/cm^2$)." This definition was taken from the Louisiana

Administrative Code (LAC), Title 33 (Environmental Quality), Part III (Air), Chapter 28 (Lead-Based Paint Activities), Section 2803 (Definitions). The Niton XLP-300A instrument used to conduct the XRF survey measures lead concentration in milligrams per square centimeter (mg/cm$^2$). Therefore, the evaluation of testing results involved comparing all XRF survey readings directly to the 1.0 mg/cm$^2$ regulatory standard for the determination of lead content.

### 2.1.2 Health and Safety

As required by the U.S. Nuclear Regulatory Commission and the Louisiana Department of Environmental Quality – Radiation Protection Division, all MMG personnel handling the XRF have basic Radiation Safety Training and equipment specific training. A Louisiana state Radiation Material License is required to operate the device. MMG's license number is LA-806-L01.

### 2.2.3 XRF Calibration

Before leaving the factory, Niton calibrated the XLP 300A. To further assure the best Quality Assurance/Quality Control, the XLP 300A performs a self-calibration every time the device is turned on. Once the device completes the self-calibration, the sampling technician conducts a calibration check using the Niton supplied NIST Standard Reference Material (001233). This calibration step consists of a series of three checks with lead standard strips. Additional calibration checks are made at the completion of the testing for the day or every four hours, whichever comes first.

# 3.0 Results and Discussion

## 3.1 Lead-Based Paint Results

A total of one hundred and five (105) LBP tests were conducted on painted surfaces associated with the CALS Mechanical Outbuilding; ten (10) surfaces tested positive for LBP. Surfaces and building components which tested positive for the presence of LBP were found primarily on the 1$^{st}$ Floor and included window components, door components, equipment pads, and stair components. Most painted surfaces throughout the CALS Mechanical Outbuilding were deemed to be in "poor" or deteriorated condition by LDEQ-Certified Lead Inspector/Risk Assessors.

A summary of the description, location, and condition of surfaces and components which tested positive for the presence of LBP is included in Table 3.1 below. The full summary of the suspected LBP testing survey, including surfaces and building components which tested negative for the presence of LBP, is included in Appendix B. An investigation map can be found in Appendix A, along with photographs of components that tested positive for LBP.

**Table 3.1 Positive Lead-Based Paint Tests (03/09/26)**

| Inspector | Justin Crochet | | | XRF | MMG Unit 112491 | | | |
|---|---|---|---|---|---|---|---|---|
| Reading No | Room | Component | Substrate | Side** | Color | Condition | Results | PbC ($mg/cm^2$) |
| 11 | Main Room | PAD | Concrete | Room Center | Yellow | Deteriorated | Positive | 3.8 |
| 25 | Main Room | Window Casing 3 | Metal | C | Green | Deteriorated | Positive | 36.5 |
| 26 | Main Room | Window Casing 3 | Metal | C | Green | Deteriorated | Positive | 39.3 |
| 28 | Main Room | Door Casing | Metal | C | Green | Deteriorated | Positive | 1.5 |
| 32 | Main Room | Stairs | Metal | Floor | Yellow | Deteriorated | Positive | 3.4 |
| 33 | Main Room | Stair Stringer | Metal | Floor | Yellow | Deteriorated | Positive | 4.3 |
| 34 | Main Room | Hand Rail | Metal | Floor | Yellow | Deteriorated | Positive | 4.7 |
| 35 | Main Room | Post | Metal | Floor | Yellow | Deteriorated | Positive | 2 |
| 54 | Main Room | Hand Rail | Metal | A | Yellow | Deteriorated | Positive | 2.5 |
| 69 | Main Room | PIPE RACK | Metal | Floor | Yellow | Deteriorated | Positive | 3 |

**A = S. Prieur Street; B = Gravier Street; C = S. Johnson Street; D = Tulane Avenue

# 4.0 Conclusions and Recommendations

Lead-based paint was detected at the CALS Mechanical Outbuilding. Estimated quantities of LBP identified on the interior, 1st Floor are summarized in Tables 4.1 below.

**Table 4.1: Estimated Quantities of LBP Identified at the CALS Mechanical Outbuilding (03/09/26)**

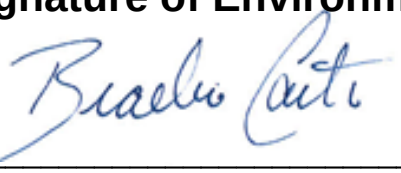
| Inspector | Justin Crochet | | | XRF | MMG Unit 112491 | | | |
|---|---|---|---|---|---|---|---|---|
| Reading No | Room | Component | Substrate | Side** | Color | Condition | PbC ($mg/cm^2$) | Estimated Quantity |
| 11 | Main Room | PAD | Concrete | Room Center | Yellow | Deteriorated | 3.8 | 30 sq ft |
| 25 | Main Room | Window Casing 3 | Metal | C | Green | Deteriorated | 36.5 | 10 sq ft |
| 26 | Main Room | Window Casing 3 | Metal | C | Green | Deteriorated | 39.3 | 10 sq ft |
| 28 | Main Room | Door Casing | Metal | C | Green | Deteriorated | 1.5 | 20 sq ft |
| 32 | Main Room | Stairs | Metal | Floor | Yellow | Deteriorated | 3.4 | 200 sq ft |
| 33 | Main Room | Stair Stringer | Metal | Floor | Yellow | Deteriorated | 4.3 | 100 sq ft |
| 34 | Main Room | Hand Rail | Metal | Floor | Yellow | Deteriorated | 4.7 | 20 sq ft |
| 35 | Main Room | Post | Metal | Floor | Yellow | Deteriorated | 2 | 20 sq ft |
| 54 | Main Room | Hand Rail | Metal | A | Yellow | Deteriorated | 2.5 | 20 sq ft |
| 69 | Main Room | PIPE RACK | Metal | Floor | Yellow | Deteriorated | 3 | 20 sq ft |

**A = S. Prieur Street; B = Gravier Street; C = S. Johnson Street; D = Tulane Avenue

Lead-based paint was detected at the CALS Mechanical Outbuilding. MMG recommends engaging an appropriately licensed lead abatement contractor to perform lead hazard mitigation activities on any LBP surfaces identified inside the building which are currently in poor or deteriorated condition prior to demolition, renovation, facility

refurbishment, and/or equipment reclamation work. Additionally, any surfaces coated in LBP which may be disrupted, disturbed, or have the potential to generate lead dust during the course of potential CALS Mechanical Outbuilding redevelopment, renovation, and/or demolition activities should be abated prior to the start of renovation work **regardless** of current condition.

## 5.0 Signature of Environmental Professional(s)



Braelin Carter, MSPH
*Operations Manager & Environmental Health Scientist*
*LDEQ-Certified Lead Inspector/Risk Assessor*

## Appendices

Appendix A Site Maps & Project Photographs

Appendix B XRF Test Results for Lead-Based Paint

Appendix C Certifications

# Appendix A: Site Maps & Project Photographs

# Suspected Lead-Based Paint Testing Report

**CALS Former Power Plant/Mechanical Outbuilding** **April 17, 2026**
**Corner of Gravier & S. Prieur Streets**
**New Orleans, LA 70112** **MMG #: 4476 LSU**



**Photograph #1**

XRF Reading: 11
Description: Yellow Paint on Concrete Pad in Main Room (Center) Positive for Lead-Based Paint
Paint Condition: Deteriorated



**Photograph #2**

XRF Reading: 25,26
Description: Green Paint on Window Casing 3 in Main Room (C-Side) Positive for Lead-Based Paint
Paint Condition: Deteriorated



**Photograph #3**

XRF Reading: 28
Description: Green Paint on Door Casing in Main Room (C-Side) Positive for Lead-Based Paint
Paint Condition: Deteriorated



**Photograph #4**

XRF Reading: 41
Description: Yellow Paint on Stairs, Stair Stringer, Handrail and Post in Main Room (D-Side) Positive for Lead-Based Paint
Paint Condition: Deteriorated



**Photograph #5**

XRF Reading: 54
Description: Yellow Paint on Handrail in Main Room 2nd Floor (A-Side) Positive for Lead-Based Paint
Paint Condition: Deteriorated



**Photograph #6**

XRF Reading: 69
Description: Yellow Paint on Pipe Rack in Main Room 2nd Floor (Room Center) Positive for Lead-Based Paint
Paint Condition: Deteriorated

# Appendix B: XRF Test Results for Lead-Based Paint

# Daily XRF Calibration Form

Date: 3/9/26

MMG Project #: 4476LSU

Site: LSU POWER PLANT

Contact: _____ Phone: _____

Device: Niton XLP 300A Serial No. 112491

NIST SRM Used 1.0 mg/cm$^2$ +/- 0.1 mg/cm$^2$

| Initial Calibration Check | | | | |
|---|---|---|---|---|
| First Reading (mg/cm$^2$) **Sample #:** 2 | Second Reading (mg/cm$^2$) **Sample #:** 3 | Third Reading (mg/cm$^2$) **Sample #:** 4 | Average | Does Cal Average fall within Tolerance 1.2 to 0.8 mg/cm$^2$ |
| 1.1 | 1.1 | 1.1 | 1.1 | (Yes) No* |
| **Battery Level:** Volts | **Comment:** | | | |
| **4-hour Calibration Check** | | | | |
| First Reading (mg/cm$^2$) **Sample #:** | Second Reading (mg/cm$^2$) **Sample #:** | Third Reading (mg/cm$^2$) **Sample #:** | Average | Does Cal Average fall within Tolerance 1.2 to 0.8 mg/cm$^2$ |
| | | | | Yes No* |
| **Battery Level:** Volts | **Comment:** | | | |
| **Final Calibration Check** | | | | |
| First Reading (mg/cm$^2$) **Sample #:** 110 | Second Reading (mg/cm$^2$) **Sample #:** 111 | Third Reading (mg/cm$^2$) **Sample #:** 112 | Average | Does Cal Average fall within Tolerance 1.2 to 0.8 mg/cm$^2$ |
| 1.0 | 1.1 | 1.1 | 1.1 | (Yes) No* |
| **Battery Level:** Volts | **Comment:** | | | |

* If the difference of the Calibration Average from the NIST SRM film value is not within the allowable tolerance, consult the manufacture's recommendations.

Is the structure occupied? Yes No
Are any of the occupants age 6 or less? Yes No
Is the property being performed for HUD? Yes No
Is the property under Section 8 funding? Yes No

Was a map or drawing provided for the property by the Client? Yes No

Comments: _____

Completed By: _____ (504) 368-0568

COMPANY _____ DATE 3/9/26 SHEET NO. ____ OF ____
CUSTOMER _____ DWG. NO. _____ REV. ____
SUBJECT 4476LSU DRAWN BY _____
OTHER _____

| #2 | #3 | #4 |
|---|---|---|
| 1.1 | 1.1 | 1.1 |

| #110 | #111 | #112 |
|---|---|---|
| 1.0 | 1.1 | 1.1 |

0.25" SQUARE GRID ∠ 26.57° ISOMETRIC © 2023 GeekNavy www.GeekNavy.com Product # 3D025IN8511P

# Lead-Based Paint Inspection - XRF Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Client:** | LSU-HSC | | | | | | | |
| **Survey Location:** | Gravier & S. Prieur Streets | | | | | | | |
| **Survey Date:** | 3/9/2026 | | | | | | | |
| **Inspector:** | Justin Crochet | | | **License #** | MR184257 | **XRF Serial #** | 112491 | |
| **Reading No** | **Room** | **Component** | **Substrate** | **Side** | **Color** | **Condition** | **Results** | **PbC mg/cm2** |
| 2 | | | | Calibrate | Red | | Positive | 1.1 |
| 3 | | | | Calibrate | Red | | Positive | 1.1 |
| 4 | | | | Calibrate | Red | | Positive | 1.1 |
| 5 | MAIN ROOM | Wall | Cinderblock | A | White | Intact | Negative | 0 |
| 6 | MAIN ROOM | Wall | Concrete | A | Gray | Intact | Negative | 0 |
| 7 | MAIN ROOM | Column | Concrete | A | Gray | Intact | Negative | 0 |
| 8 | MAIN ROOM | Column | Concrete | A | White | Intact | Negative | 0 |
| 9 | MAIN ROOM | Column | Concrete | Room Center | White | Intact | Negative | 0 |
| 10 | MAIN ROOM | Column 2 | Concrete | Room Center | White | Intact | Negative | 0 |
| **11** | **MAIN ROOM** | **PAD** | **Concrete** | **Room Cente** | **Yellow** | **Deteriorated** | **Positive** | **3.8** |
| 12 | MAIN ROOM | PAD | Concrete | Room Center | Green | Deteriorated | Negative | 0.18 |
| 13 | MAIN ROOM | BIG PAD | Concrete | Room Center | Yellow | Deteriorated | Negative | 0.16 |
| 14 | MAIN ROOM | Floor | Concrete | Room Center | Green | Deteriorated | Negative | 0 |
| 15 | MAIN ROOM | Wall | Concrete | B | White | Intact | Negative | 0 |
| 16 | MAIN ROOM | Wall | Cinderblock | B | White | Intact | Negative | 0 |
| 17 | MAIN ROOM | Door Casing | Metal | B | Gray | Deteriorated | Negative | 0.07 |
| 18 | MAIN ROOM | Door | Metal | B | Gray | Deteriorated | Negative | 0.13 |
| 19 | MAIN ROOM | Window Casing | Metal | C | Green | Deteriorated | Negative | 0 |
| 20 | MAIN ROOM | Window | Metal | C | Green | Deteriorated | Negative | 0.01 |
| 21 | MAIN ROOM | Door | Metal | D | Green | Deteriorated | Negative | 0.05 |
| 22 | MAIN ROOM | Door Casing | Metal | D | Green | Deteriorated | Negative | 0.13 |
| 23 | MAIN ROOM | Window Casing | Metal | D | Green | Deteriorated | Negative | 0.02 |
| 24 | MAIN ROOM | Window Casing | Metal | C | Green | Deteriorated | Negative | 0 |
| **25** | **MAIN ROOM** | **Window Casin** | **Metal** | **C** | **Green** | **Deteriorated** | **Positive** | **36.5** |
| **26** | **MAIN ROOM** | **Window Casin** | **Metal** | **C** | **Green** | **Deteriorated** | **Positive** | **39.3** |
| 27 | MAIN ROOM | Window 3 | Metal | C | Gray | Deteriorated | Negative | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **28** | **MAIN ROOM** | **Door Casing** | **Metal** | **C** | **Green** | **Deteriorated** | **Positive** | **1.5** |
| 29 | MAIN ROOM | Door | Metal | C | Green | Deteriorated | Negative | 0.6 |
| 30 | MAIN ROOM | Wall | Cinderblock | D | White | Deteriorated | Negative | 0 |
| 31 | MAIN ROOM | Wall | Cinderblock | D | Gray | Deteriorated | Negative | 0 |
| **32** | **MAIN ROOM** | **Stairs** | **Metal** | **Floor** | **Yellow** | **Deteriorated** | **Positive** | **3.4** |
| **33** | **MAIN ROOM** | **Stair Stringer** | **Metal** | **Floor** | **Yellow** | **Deteriorated** | **Positive** | **4.3** |
| **34** | **MAIN ROOM** | **Hand Rail** | **Metal** | **Floor** | **Yellow** | **Deteriorated** | **Positive** | **4.7** |
| **35** | **MAIN ROOM** | **Post** | **Metal** | **Floor** | **Yellow** | **Deteriorated** | **Positive** | **2** |
| 36 | MAIN ROOM | Door Casing 2 | Metal | D | Green | Deteriorated | Negative | 0.01 |
| 37 | MAIN ROOM | Door Casing 2 | Metal | D | Green | Deteriorated | Negative | 0.01 |
| 38 | ELECTRICAL | Wall | Cinderblock | A | White | Deteriorated | Negative | 0.6 |
| 39 | ELECTRICAL | Window Casing | Metal | A | Green | Deteriorated | Negative | 0.07 |
| 40 | ELECTRICAL | Window Casing | Metal | B | Green | Deteriorated | Negative | 0.02 |
| 41 | ELECTRICAL | Door | Metal | B | Green | Deteriorated | Negative | 0.02 |
| 42 | ELECTRICAL | Door Casing | Metal | B | Green | Deteriorated | Negative | 0.04 |
| 43 | ELECTRICAL | Wall | Cinderblock | C | Green | Deteriorated | Negative | 0 |
| 44 | ELECTRICAL | Wall | Cinderblock | D | Green | Deteriorated | Negative | 0 |
| 45 | ENGINEERING | Wall | Cinderblock | A | Green | Deteriorated | Negative | 0 |
| 46 | ENGINEERING | Door | Metal | A | Green | Deteriorated | Negative | -0.06 |
| 47 | ENGINEERING | Door Casing | Metal | A | Green | Deteriorated | Negative | 0.07 |
| 48 | ENGINEERING | Window Casing | Metal | A | Green | Deteriorated | Negative | 0.07 |
| 49 | ENGINEERING | Wall | Cinderblock | B | White | Deteriorated | Negative | 0 |
| 50 | ENGINEERING | Wall | Cinderblock | B | White | Deteriorated | Negative | 0.08 |
| 51 | ENGINEERING | Wall | Cinderblock | C | White | Deteriorated | Negative | 0 |
| 52 | ENGINEERING | Wall | Cinderblock | D | White | Deteriorated | Negative | 0 |
| 53 | MAIN ROOM | Floor | Concrete | Floor | Green | Deteriorated | Negative | 0 |
| **54** | **MAIN ROOM** | **Hand Rail** | **Metal** | **A** | **Yellow** | **Deteriorated** | **Positive** | **2.5** |
| 55 | MAIN ROOM | Door Casing | Metal | B | Yellow | Deteriorated | Negative | 0.05 |
| 56 | MAIN ROOM | Door | Metal | B | Gray | Deteriorated | Negative | 0.02 |
| 57 | MAIN ROOM | Threshold | Metal | B | Gray | Deteriorated | Negative | 0.04 |
| 58 | MAIN ROOM | Threshold 2 | Metal | B | Gray | Deteriorated | Negative | 0.01 |
| 59 | MAIN ROOM | Door Casing 2 | Metal | B | Gray | Deteriorated | Negative | 0.01 |
| 60 | MAIN ROOM | Door 2 | Metal | B | Gray | Deteriorated | Negative | 0 |
| 61 | MAIN ROOM | BEAM | Metal | Room Center | Silver | Deteriorated | Negative | 0.01 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 62 | MAIN ROOM | Wall | Drywall | C | Beige | Deteriorated | Negative | 0 |
| 63 | MAIN ROOM | Door 3 | Metal | C | Beige | Deteriorated | Negative | 0 |
| 64 | MAIN ROOM | Door Casing 3 | Metal | C | Beige | Deteriorated | Negative | 0 |
| 65 | MAIN ROOM | Wall | Cinderblock | B | Gray | Deteriorated | Negative | 0 |
| 66 | MAIN ROOM | Wall | Cinderblock | C | Gray | Deteriorated | Negative | 0.13 |
| 67 | MAIN ROOM | Door | Metal | C | Black | Deteriorated | Negative | 0.06 |
| 68 | MAIN ROOM | Door Casing | Metal | C | Black | Deteriorated | Negative | 0.02 |
| **69** | **MAIN ROOM** | **PIPE RACK** | **Metal** | **Floor** | **Yellow** | **Deteriorated** | **Positive** | **3** |
| 70 | MAIN ROOM | Door 2 | Metal | D | Gray | Deteriorated | Negative | 0.13 |
| 71 | MAIN ROOM | Door Casing 2 | Metal | D | Gray | Deteriorated | Negative | 0.07 |
| 72 | MAIN ROOM | Threshold | Metal | D | Gray | Deteriorated | Negative | 0.01 |
| 73 | HIGH VOLTAG | Floor | Concrete | Floor | Gray | Deteriorated | Negative | 0 |
| 74 | HIGH VOLTAG | Wall | Cinderblock | A | White | Deteriorated | Negative | 0.07 |
| 75 | HIGH VOLTAG | Wall | Cinderblock | B | White | Deteriorated | Negative | 0.03 |
| 76 | HIGH VOLTAG | Door | Metal | B | Black | Deteriorated | Negative | 0.01 |
| 77 | HIGH VOLTAG | Door Casing | Metal | B | Black | Deteriorated | Negative | 0.06 |
| 78 | HIGH VOLTAG | Wall | Cinderblock | C | White | Deteriorated | Negative | 0.05 |
| 79 | HIGH VOLTAG | Window | Metal | C | Gray | Deteriorated | Negative | 0 |
| 80 | HIGH VOLTAG | Window | Metal | D | Gray | Deteriorated | Negative | 0.05 |
| 81 | HIGH VOLTAG | Window 2 | Metal | D | Gray | Deteriorated | Negative | 0 |
| 82 | HIGH VOLTAG | Wall | Cinderblock | D | White | Deteriorated | Negative | 0.04 |
| 83 | Exterior | Door Casing | Metal | B | Beige | Deteriorated | Negative | 0.03 |
| 84 | Exterior | Door | Metal | B | Beige | Deteriorated | Negative | 0.03 |
| 85 | Exterior | Door 2 | Metal | B | Beige | Deteriorated | Negative | 0 |
| 86 | Exterior | Door Casing 2 | Metal | B | Beige | Deteriorated | Negative | 0 |
| 87 | Exterior | Door Casing 3 | Metal | B | Beige | Deteriorated | Negative | 0.01 |
| 88 | Exterior | Door 3 | Metal | B | Beige | Deteriorated | Negative | 0 |
| 89 | Exterior | Wall | Cinderblock | C | Beige | Deteriorated | Negative | 0 |
| 90 | Exterior | Wall | Concrete | C | Beige | Deteriorated | Negative | 0 |
| 91 | Exterior | Wall | Brick | C | Beige | Deteriorated | Negative | 0 |
| 92 | Exterior | Wall | Brick | B | Beige | Deteriorated | Negative | 0 |
| 93 | Exterior | Wall | Concrete | B | Beige | Deteriorated | Negative | 0.01 |
| 94 | Exterior | Wall | Cinderblock | B | Beige | Deteriorated | Negative | 0 |
| 95 | Exterior | Wall | Cinderblock | C | Beige | Deteriorated | Negative | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 96 | Exterior | VENT | Metal | C | Beige | Deteriorated | Negative | 0.07 |
| 97 | Exterior | VENT 2 | Metal | C | Beige | Deteriorated | Negative | 0 |
| 98 | Exterior | Wall | Metal | C | Beige | Deteriorated | Negative | 0.03 |
| 99 | Exterior | VENT | Metal | D | Beige | Deteriorated | Negative | 0.01 |
| 100 | Exterior | VENT 2 | Metal | D | Beige | Deteriorated | Negative | 0 |
| 101 | Exterior | VENT 2 COVE | Metal | D | Beige | Deteriorated | Negative | 0.01 |
| 102 | Exterior | Door Casing | Metal | D | Beige | Deteriorated | Negative | 0.04 |
| 103 | Exterior | Door | Metal | D | Beige | Deteriorated | Negative | 0.12 |
| 104 | Exterior | Door 2 | Metal | D | Black | Deteriorated | Negative | 0 |
| 105 | Exterior | Door Casing 2 | Metal | D | Black | Deteriorated | Negative | 0 |
| 106 | Exterior | Door Jamb 2 | Metal | D | Black | Deteriorated | Negative | 0 |
| 107 | ROOF | BEAM | Metal | Room Center | Silver | Deteriorated | Negative | 0.08 |
| 108 | ROOF | PIPE RACK | Metal | B | Blue | Deteriorated | Negative | 0.19 |
| 109 | ROOF | BEAM | Metal | Room Center | Blue | Deteriorated | Negative | 0.08 |
| 110 | | | | Calibrate | Red | | Positive | 1 |
| 111 | | | | Calibrate | Red | | Positive | 1.1 |
| 112 | | | | Calibrate | Red | | Positive | 1.1 |

# Appendix C: Certifications

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Justin H Crochet*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Lead Inspector**

**Accreditation No.** **MI184257**

**AI No.** **184257**

**Date of Issuance** **March 18, 2026**

**Expiration** **March 25, 2027**

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Division**
**Office of Environmental Services**

# STATE OF LOUISIANA

# DEPARTMENT OF ENVIRONMENTAL QUALITY

**certifies that**

## *Justin H Crochet*

**Has complied with all requirements of the Louisiana Department of Environmental Quality and is authorized to perform the duties of**

**Lead Risk Assessor**

**Accreditation No.** MR184257 **AI No.** 184257

**Date of Issuance** March 18, 2026 **Expiration** March 12, 2027

**Failure to comply with all applicable provisions of La. R.S. 30:2025.E. (1)(a) and La. R.S. 30:2025.F. (2)(a) may result in civil and/or criminal enforcement actions by the State.**

Charles Finley

**Public Participation & Permit Support Division**
**Office of Environmental Services**

# LSU HEALTH / NEW ORLEANS

## CALS Plant Building Demolition

2110 Gravier Street
New Orleans, LA  70112

1
NTS

LSU Health NEW ORLEANS Planning & Construction

CALS Plant Building Demolition

SHEET TITLE:
DRAWING LAYOUT, LEGENDS, GENERAL NOTES, INDEX OF DRAWINGS

CHRISTOPHER POCHE REG. NO. 46811 STATE OF LOUISIANA REGISTERED ARCHITECT

SHEET NO.
T1

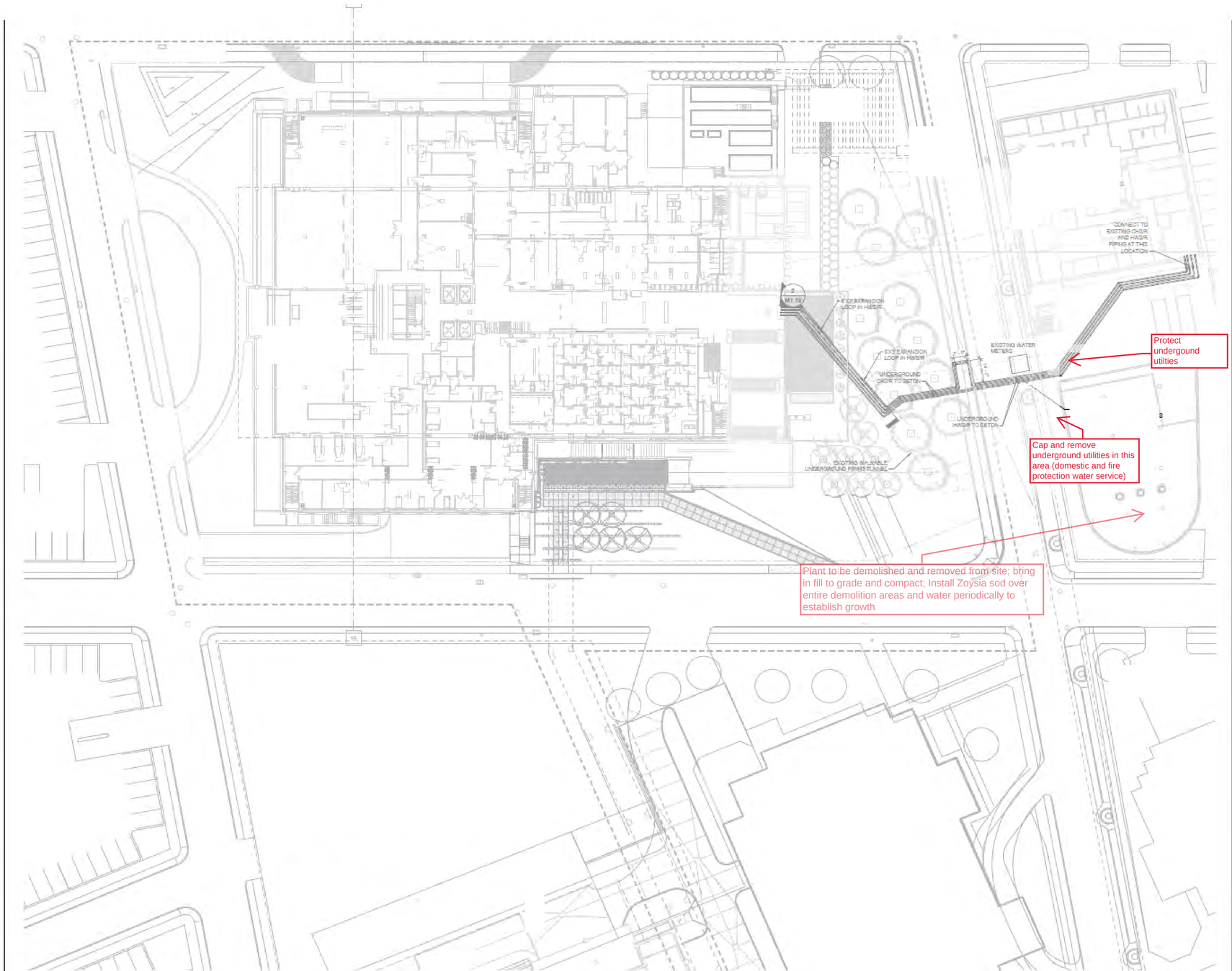
SHEET 1 OF 8

DATE:
11-13-25

SCALE:

SIZE

REV.




LSU Health NEW ORLEANS
Planning & Construction

CHRISTOPHER POCHE
REG. NO. 46911
STATE OF LOUISIANA
REGISTERED ARCHITECT

CALS Plant Building Demolition

SHEET TITLE:

**SITE PLAN**

| | INTLS. | DATE |
|---|---|---|
| DRAWN BY | | |
| CHECKED BY | | |
| ENGINEER APPROVAL | | |
| MANAGER APPROVAL | | |

SHEET NO.

2

SHEET 2 OF 8

DATE: 11-13-25

SCALE:

SIZE | REV.



1 EAST VIEW

Demolish and remove from site: plant building, equipment, site paving, and fencing at drive gate. Cap utilities, install fill to grade, and install Zoysia sod.



2 NORTH VIEW

Demolish and remove from site: plant building, equipment, site paving, and fencing at drive gate. Cap utilities, install fill to grade, and install Zoysia sod.



3 WEST VIEW

Demo and remove from site plant building, equipment, site paving, and fencing at drive gate. Cap utilities, install fill to grade, and install Zoysia sod.



4 SOUTH VIEW

Demo and remove from site plant building, equipment, site paving, and fencing at drive gate. Cap utilities, install fill to grade, and install Zoysia sod.

LSU Health NEW ORLEANS
Planning & Construction

CHRISTOPHER POCHE
REG. NO. 46611
STATE OF LOUISIANA
REGISTERED ARCHITECT

CALS Plant Building Demolition

SHEET TITLE:

**PHOTO PLAN**

| | INTLS. | DATE |
|---|---|---|
| DRAWN BY | | |
| CHECKED BY | | |
| ENGINEER APPROVAL | | |
| MANAGER APPROVAL | | |

SHEET NO.
3

SHEET 3 OF 8

DATE: 11-13-25

SCALE:

SIZE | REV.




5 PIPE ENCLOSURE

Demolish and remove from site: pipe enclosure and all associated piping, protect existing walkway




6 PIPE ENCLOSURE'S CONCRETE BASE

Demolish and remove from site: concrete base, seal opening with concrete at tunnel below grade (field verify) (coordinate with Construction Coordinator)



7 CenTrio's Utilities

Disconnect and cap all electrical items back to nearest junction box within bridge panel enclosure; remove and dispose of all conduit & conductors; CHW and HHW piping shall be valved off and capped; verify valve locations within panel enclosure; if valves are present; remove all associated piping after valve and install blind flange




8 SITE PAVEMENT AND FUEL TANK

Demolish and remove from site: plant building, equipment, site paving, fuel tanks, and fencing at drive gate. Cap utilities, install fill, and install Zoysia sod.

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CALS Plant Building Demolition

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5 DOMESTIC AND FIREPROTECTION SERVICE TO BUILDING

Demolish and remove from site existing domestic and fire protection water service to plant back to meter (close as possible without disturbing other underground utilities)




6 GAS PIPING

Demolish and remove from site: gas piping back to meter, demo and remove from site all concrete paving and fencing, install fill to grade and install Zoysia Sod




7 SITE PAVING

Demolish and remove from site: all site paving and associated curb; install fill to grade and install Zoysia Sod




8 SIDEWALK AND CURB EXTENSION

Demolish and remove from site existing site paving; bring in fill to grade to extend existing sidewalk, curb, and install Zoysia Sod between new sidewalk and curb (match existing width)

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9

Demolish and remove from site underground fuel / water separator tank and all associated piping and components. Install fill to grade and install Zoysia Sod.



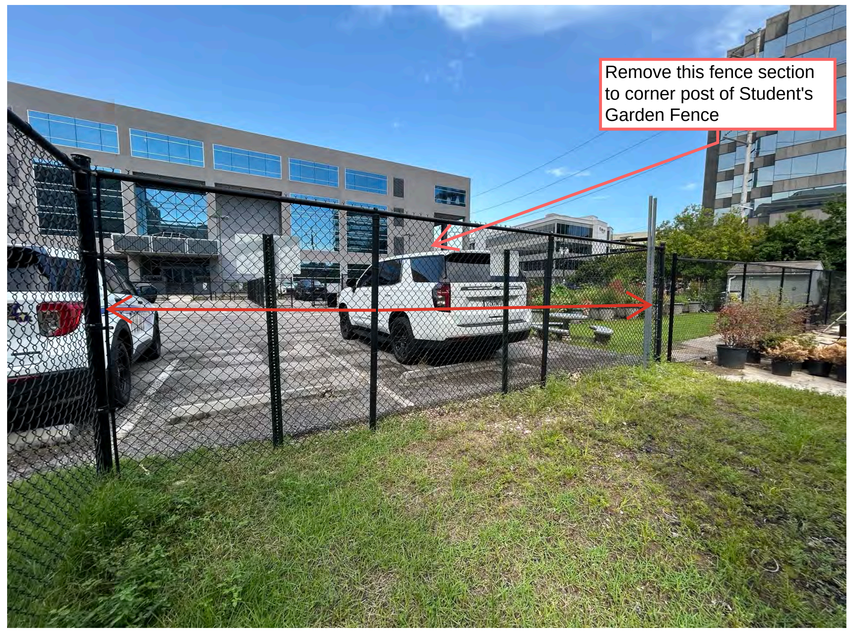
10

Remove and salvage black vinyl between Student's Garden and Plant. Demolish and remove from site, site-paving and underground utilities. Cap all underground utilities. Re-install black vinyl fence. Supply all new post. Install fill to grade and install Zoysia Sod.




11

Remove this section of black vinyl fence; components can be salvage for the re-installation of the Student's Garden fence as needed; dispose of any remaining fencing material not needed.




12

Remove this section of black vinyl fence; components can be salvage for the re-installation of the Student's Garden fence as needed; dispose of any remaining fencing material not needed.

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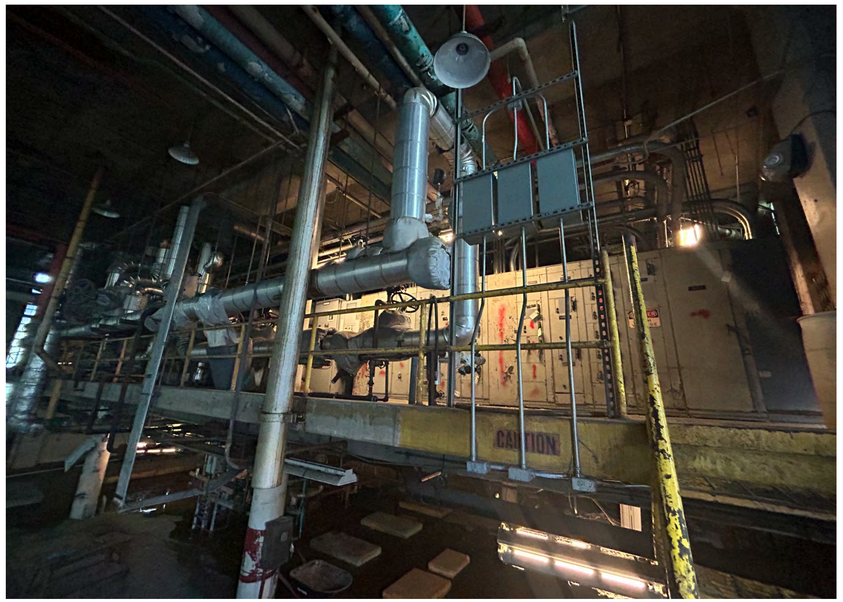
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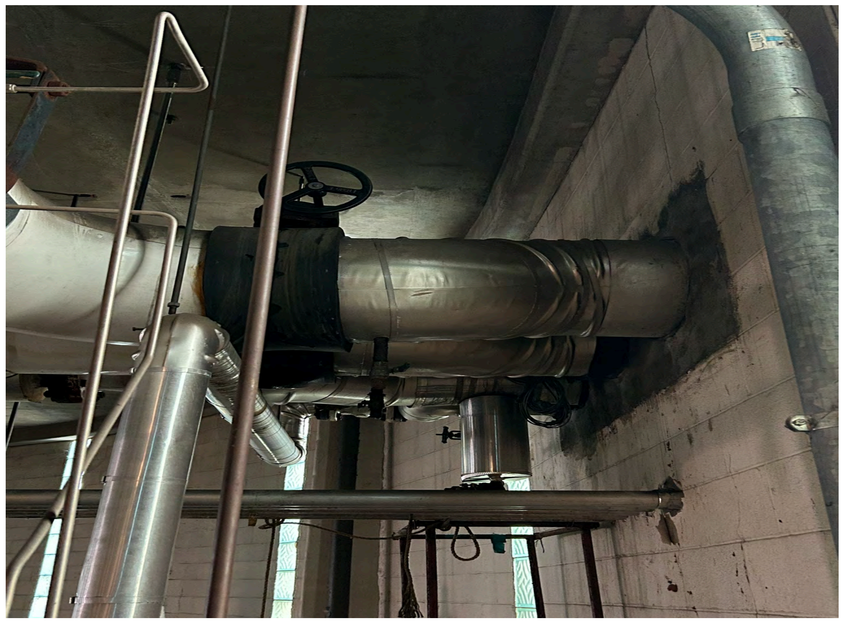

13

Coordinate with LSUHSC to make sure all utilites are disconnected before demolition of equipment; Remove all equipment, plumbing, electrical, and mechanical items (Verify with LSUHSC on any salvageable equipment before removal)




14

Coordinate with LSUHSC to make sure all utilites are disconnected before demolition of equipment; Remove all equipment, plumbing, electrical, and mechanical items (Verify with LSUHSC on any salvageable equipment before removal)



15

Valves location for CenTrio's Utilities entering  Plant from Sky Bridge; if no valve is located within enclosure at sky bridge, this section of pipe will need to remain (install blind flange at valve and demolish the remaining piping after the valve)



16

Coordinate with LSUHSC to make sure all utilites are disconnected before demolition of equipment; Remove all equipment, plumbing, electrical, and mechanical items (Verify with LSUHSC on any salvageable equipment before removal)

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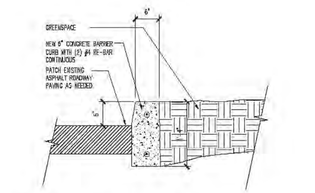
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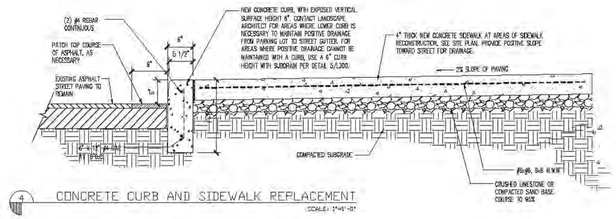
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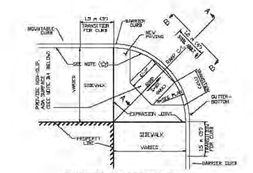
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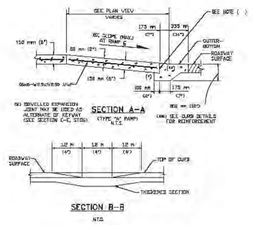

1 STREET CONCRETE CURB REPLACEMENT
SCALE: 1"=1'-0"




4 CONCRETE CURB AND SIDEWALK REPLACEMENT
SCALE: 1"=1'-0"

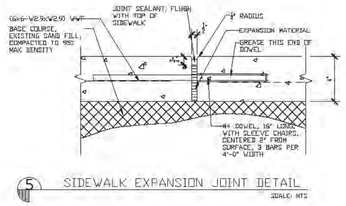



CONCRETE HANDICAPPED RAMP
TYPE "A"
N.T.S.

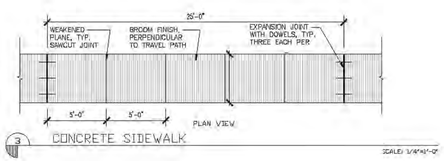



N.T.S.

2 HANDICAP RAMP DETAILS
SCALE: NTS




5 SIDEWALK EXPANSION JOINT DETAIL
SCALE: NTS




3 CONCRETE SIDEWALK
SCALE: 1/4"=1'-0"

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