

Mold Remediation
At

City of Alma Nebraska

City Auditorium Renovation

Appendix E

Mold Remediation Specification

March 11, 2025

City of Alma Nebraska

Alma City Office

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Appendix E. Sample Mold Remediation Specification

Specification

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Note: This specification describes procedures to remediate building components contaminated with mold. The specification does not address the replacement of those components or nor does it address the measures that will be necessary to correct water and moisture issues at the facility which caused the mold growth. Unless the underlying cause of water or moisture accumulation is corrected, mold growth will continue. This specification does not address repairs to the building envelope or mechanical systems. A general description is provided for final clearance of the mold remediation area. An independent, third-party consultant under the direction of a CIH will be required for final visual inspections and if necessary, sampling.

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 1A – GENERAL REQUIREMENTS

1A.1 **Summary of Work.** The Contractor is required to furnish all labor, materials, services, equipment, tools, and insurance to remove and dispose of all microbial contaminated materials described in the scope of work. The project is located at City Auditorium, Alma NE State].

1A.2 **Scope of Work.** These specifications, together with other referenced documents, standards, and drawings in the contract documents, cover the requirements for all work associated with the mold remediation. The removal method and all related work must be in conformance with FAA policies, U.S. Occupational Safety and Health Administration (OSHA) regulations and all applicable state and local regulatory requirements.

SECTION 1B – SPECIAL REQUIREMENTS

1B.1 **Coordination.** All contracts between the contractor and the City of Alma shall be coordinated through the Project Manager / City Administrator and his/her designated representative.

1B.2 **Pre-Construction Conference.** As soon as practical after the award of the contract, the Project Manager / City Administrator will set a date for a pre-construction conference between the representatives of the City and the contractor at a location agreed upon by the Project Manager / City Administrator and the contractor. The contractor shall attend the conference and shall abide by all agreements reached at the conference regarding:

- Detailed procedures for administration of the project.
- Contractor’s telephone number.
- Procedures for submittals of Invoices.
- Available storage areas for contractor’s materials and equipment.
- Compliance with safety practices, general operating procedures.
- Availability of onsite power for use by the contractor.
- Contractor shall provide copies of all MSDS for any products and restoration materials to be used.
- In addition to the foregoing, other subjects pertinent to the contract may be discussed.

1B.3 **Working Hours.** 7 AM CST to NLT 6 PM CST

1B.4 **Ingress and Egress to Work Area.** The Project Manager shall direct all ingress and egress to the work area.

1B.5 **Security Requirements.** N/A

1B.6 Property Damage. The contractor shall take all precautions to avoid damage to City property or equipment.

1B.7 Parking of Contractor Vehicles. All personnel will park their vehicles away from the building and all access doors or as authorized by the RE. Materials and tools may be off-loaded at the work site in designated lay down area.

1B.8 Storage of Materials. The contractor shall store all materials in a manner to protect them from all elements of the weather. Storage of reasonable quantities of material, supplies and tools on site is permissible. The City of Alma is not responsible for the security of the materials, supplies and tools owned by the contractor.

1B.9 Site Visit. The contractor shall take steps necessary to ascertain the nature of the work and satisfy themselves to the conditions that can affect the work. No subsequent extras will be allowed due to any claim of lack of knowledge for conditions that can be determined by examining the site. Site visits can be arranged by contacting the Project Manager / City Administrator, at least 24 hours prior to the planned visit.

1B.10 Compliance with Local Codes and Other Codes. The contractor shall comply with local and other codes of standard trade practices adopted by these contract documents. Where the requirements of the specifications and drawings exceed those of the local and adapted codes, the contractor shall comply with the requirements of the specifications and drawings.

1B.11 Fire Protection. The contractor shall have an equivalent of two 20 lb Class A, B and D fire extinguishers in the work area through the progress of the job.

1B.12 Cleaning. The contractor shall keep the working area in a clean and proper condition. All rubbish and waste resulting from the execution of the work shall be removed at the end of each day. Upon completion of work and before final inspection, the contractor shall remove his/her working tools, equipment, debris, rubbish, and unused materials from the building site. Disposal of rubbish and debris will be in containers provided by the contractor.

1B.13 Non-interference with Existing Facility Operations. The access to the facility shall be always kept unobstructed. If any interference with the existing facility operation or access seems to be unavoidable, the contractor shall advise the Project Manager / City Administrator before such interference.

1B.14 Other Contracts. The City of Alma may undertake other contracts for additional work at or near the site of the work under this contract. The contractor shall fully cooperate with other contractors and with the Government employees and shall adapt scheduling and performing the work under this contract to accommodate the other work. The contractor shall not commit or permit any act that will interfere with performance of work by any other contractor or by Government employees.

1B.15 Contractor's Liability. Damage to the existing facility or equipment caused by the contractor shall be immediately reported without delay. The contractor shall be responsible for

repairing or having repaired all damaged areas of the facility or equipment directly caused by contractor related work. All repairs shall be accomplished, without delay, at the contractor's expense to the satisfaction of the Project Manager / City Administrator.

1B.16 Permits. The contractor shall be responsible for obtaining all permits, if required, to complete the project, at no additional cost to the City.

1B.17 Material. All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended.

1B.18 Workmanship. The contract shall be accomplished by workers experienced in each trade in accordance with the highest standards of the various trades involved.

1B.19 Superintendence by the Contractor. At all times during the performance of this contract and until the work is completed and accepted, the contractor shall directly superintend the work on site or assign and have on site a competent superintendent.

1B.20 Warranties. The contractor shall guarantee that all work performed under this contract be free from defects in all materials and workmanship for a period of 12 months from the date of final acceptance.

1B.21 Responsibilities. If within the warranty period, such parts or work performed under this contract is found to be defective in materials or workmanship, that portion of work shall be replaced by the contractor immediately without any additional cost to the City.

SECTION 1C – SUBMITTALS

1C.1 Introduction. The product used can be identical or equal to the brand name product or known acceptable source in meeting the salient characteristics, but it need not exceed the actual minimum requirements. Any brand name product or known acceptable source mentioned will, however, not be required for use in order to comply with the specification or drawing unless those documents make it clear that the brand name product is required, and substitution is prohibited.

1C.2 Submittals. The contractor shall submit all of the following:

1. Detailed Work Plan
2. Emergency Response Plan
3. Safety Program
4. Respiratory Protection Program
5. Certificate of training, accreditation, qualification
6. List of Employees
7. Proof of Insurance
8. MSDS for all chemical products
9. Respirator fit test records for employees scheduled for this project.
10. Medical surveillance records

11. Negative Air HEPA filtration equipment specification sheets
12. Copies of all notifications to federal, state, or local regulatory agencies
13. Detailed schedule of all remediation and restoration activities on a room-by-room basis.

1C.3 Work Plan. The contractor shall prepare a detailed work plan for this mold remediation project. This work plan shall cover all the procedures that the contractor will use to complete the project. This document shall be provided to the Project Manager / City Administrator before the mold remediation work begins and must include a specification of:

1. The rooms or area designation where work will be performed.
2. Configuration of the work area enclosures, decontamination chamber location, HEPA filtered exhaust locations, and equipment cleaning area location.
3. Quantities of materials to be removed or cleaned per each room or area designation.
4. Proposed methods for each type of remediation in each type of area in the project.
5. Listing of equipment proposed for remediation
6. Employee decontamination procedures to be used and locations of decontamination units.
7. Use of chemicals for mold remediation (if authorized).
8. Handling of mold remediation waste materials.
9. Personal protective equipment use.
10. Remediation techniques for each remediation area.
11. Any other standard operating procedures required by law.

All required submittals shall be provided to the Project Manager / City Administrator at the following address:

City of Alma
614 Main St
Alma NE 68920

SECTION 1D – MOLD ABATEMENT

1D.1 Contractor Mobilization Requirements. The contractor shall provide all the services, equipment, supplies, materials, and labor required to remediate and remove the mold contaminated components and dispose of all waste. The abatement contractor must comply with the following:

1. All work shall be done under the direct supervision of a professional with experience and training in mold remediation.
2. All work shall be conducted by trained individuals following the requirements of Section 1D.3.
3. The contractor shall coordinate and prepare a schedule for conducting the remediation at the site.

4. Prior to the scheduled pre-construction meeting, the contractor shall provide copies of all MSDS for any chemicals and other products that have been authorized to be brought on site and used during this project.
5. The contractor shall hold a pre-work briefing. The briefing will include a description of work to be done. The contractor will schedule and coordinate the meeting through the Project Manager / City Administrator.
6. Equipment and furnishings in the Auditorium shall be HEPA vacuumed or damp wiped. The surface of all remaining equipment and material in each room shall be HEPA vacuumed or damp wiped.
7. All 6-mil polyethylene sheeting is to be fire retardant.
8. The contractor shall notify the Project Manager / City Administrator immediately if any conditions are identified during the remediation, which may require immediate attention to prevent potential exposure to mold at the facility.

1D.2 Worker Safety. Worker protection for all abatement work shall be, at a minimum, half face air purifying respirators equipped with HEPA filters, full body disposable clothing for mold abatement, gloves, boots, and eye protection. Double suiting will be utilized by the contractor's employees in areas where a decontamination unit cannot be provided directly adjacent to the abatement area. In those cases, the contractor shall provide a means outside the containment where the workers may wash their hands and face prior to leaving the site. Respirators used to provide protection from mold and mold spores must be certified by the National Institute for Occupational Safety and Health (NIOSH). As specified by OSHA in 29 CFR 1910.134, individuals who use respirators must be properly trained, have medical clearance, and be properly fit tested before they begin using a respirator. In addition, use of respirators requires the employer to develop and implement a written respiratory protection program, with work site specific procedures and elements.

1D.3 Worker Training. All workers involved in mold-related activities shall be trained to conduct that abatement. Completion of a mold-abatement course such as that provided by the Indoor Air Quality Council or equivalent shall be mandatory. Workers shall be familiar with all relevant federal, state and local standards. Workers shall also receive training in Hazard Communication in accordance with CFR 1910.1200.

1D.4 Work Plan. The contractor shall prepare a use detailed work plan for this mold remediation project as described in Section 1C.6.

1D.5 Required Procedures for Remediation and Dust Control.

1. The contractor shall isolate the HVAC system, stair access door, pipe chase and other floor to floor penetrations. Proper lockout/tagout procedures shall be followed when shutting down the HVAC system.
2. Place mold remediation warning signs that restrict access to authorized persons at all entrances to the work area.
3. Pre-clean the area that will be house the two-stage decontamination unit and then install the decontamination unit. The decontamination shall have water available for the contractor's employees and authorize visitors to wash their hands and face.

4. A two-stage decontamination unit shall be used for the decontamination of non-porous materials, construction equipment, personnel, and safety equipment. The two-stage unit will have a clean room and a dirty room. Personnel and equipment shall enter and exit the work area through the decontamination unit.
5. Designate an equipment cleaning area at a location to permit cleaned equipment to be removed directly from the cleaning area to a designated storage area. The cleaning area should be immediately adjacent to the designated storage area. Isolate the equipment cleaning area and designated storage area with 6-mil polyethylene sheeting. Equipment shall be cleaned using HEPA vacuums and damp wiping techniques. Cover and protect cleaned equipment with 6-mil polyethylene sheeting for the duration of the project.

1D.6 Removal of Mold Contaminated Drywall. Remove drywall to the extent indicated on the drawings. Drywall shall be cut away through the use of spiral cutting saw equipped with a close capture exhaust system attached to a HEPA filtered vacuum for dust control. The cutting depth of the spiral saw will be adjusted to a depth slightly less than the thickness of the drywall. Final cutting of the scored drywall will be made with a razor knife to avoid release of dust into the wall cavity and to prevent damage to concealed equipment, or additional layers of wall board that are present. In areas where access restrictions prevent use of spiral saws, hand saws may be used, but only while a HEPA vacuum is used to capture dust at the point of generation. Reciprocating saws shall not be used.

1D.7 Ceiling Tile Removal. The following procedures shall be used for removal of mold contaminated suspended ceiling tiles:

1. Cover the floor under the ceiling tile(s) to be removed with 6 mil polyethylene sheeting.
2. Vacuum lower surface of the tile to be removed with a HEPA filtered vacuum.
3. Carefully remove the ceiling tile and place it directly into a 6-mil plastic bag and seal.
4. Clean the exposed grid with a HEPA filtered vacuum.
5. HEPA vacuum the floor to remove any visible debris.
6. Remove the 6 mil floor covering.

1D.8 HVAC System Decontamination; The following procedures shall be used for the decontamination of mold inside HVAC systems:

1. The HVAC system shall be shut down prior to work.
2. The work area shall be completely isolated from other areas of the HVAC system using 6 mil polyethylene sheeting and duct tape. The access areas for the duct work shall be enclosed in a negative pressure enclosure.
3. A two-stage decontamination system shall be used.
4. Remove all mold contaminated materials including interior insulation of interior lined ducts and filters.
5. If contaminated interior insulation can not be adequately removed, or if the interior sections can not be adequately cleaned, those HVAC system components are to be removed in entirety.
6. HEPA vacuum all interior and exterior surfaces of the HVAC system in the work area.

7. Clean all surfaces with a damp cloth and/or mop and a detergent solution. A biocide may be used in certain areas of the HVAC system, such as cooling coils and condensate pans. The type used will depend on recommendations from the HVAC manufacturer. The contractor shall provide information on any biocides proposed to be used to the RE prior to initiation of work.
8. Allow all areas to thoroughly dry.
9. All areas shall be left dry and visibly free of mold contamination and debris.

1. **D.9 Concrete Block Wall Decontamination.** [The following procedure is for cleaning the interior side of cement block wall]

1. HEPA vacuum the wall surface to remove loose surface mold.
2. Scrub off any remaining visible contamination with a stiff brush while keeping the area wet using a detergent or bleach solution.
3. After the area dries, HEPA vacuum the surface again.
4. Wipe the surface with a damp sponge containing a detergent or bleach solution.
5. Let the area thoroughly dry.

1D.10 Wooden Building Components. Mold has been identified on wooden building components. The contractor shall follow the procedures as described in Section 1D.5 to isolate and demarcate the area. The affected wooden building components shall be replaced, if structurally feasible, or cleaned and treated with an approved fungicide. If the components are to be cleaned and treated, the contractor will clean, disinfect, and apply a suitable surface coating. Any areas of visible mold shall be manually removed and appropriate repairs made prior to the application of an anti-microbial surface coating.

1D.12 Waste Disposal. The mold contaminated waste is to be double sealed or bagged in labeled 6 mil polyethylene sheeting or bags. Each bag shall be adequately sealed. The seams of the sheeting shall be sealed with duct tape. The outside of the bags or sheeting shall be visibly clean before transporting to the outside of the abatement areas. Finally, the bags shall be transported to the remediation contractors vehicle and then disposed of in a approved landfill. The contractor is responsible for proper packaging, temporary storage, transport, and disposal of all waste generated as the result of this project.+

1D.13 Remediation Area Completion. The work area must be free of visible mold, mold damaged materials, and accumulation of dust as determined by visual examination. The inspection will be performed by a third party Certified Industrial Hygienist (CIH) hired by the FAA. The CIH will determine the need for post-remediation air sampling. If sampling is performed, the following verification criteria will be utilized:

1. Sampling will be performed only after the remediation area has passed a thorough visual inspection and before the containment barriers are removed.
2. All air sampling pumps will be calibrated before and after use.
3. Airborne concentrations of mold spores within the work area must not exceed outdoor concentrations. The mean of at least 3 samples collected from each work area will be compared to the mean of 3 samples collected from outside the building. The genera of mold spores within the work area must be similar to those found outside.