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Purpose and Scope

To take reasonable precautions to reduce the potential for problematic mold growth.

The policy outlines the procedures that will be followed during new construction and/or renovation activities to minimize the potential for mold growth and for responding to problematic mold growth when it occurs.

Requirements

The Safety Director has been designated as Big Ox Energy responsible person for this program. They are to be contacted by Big Ox Energy site supervision with questions or concerns regarding this policy or situations regarding mold growth or personnel complaints of health effects that may arise on a project site. The back up contact person in the absence of the Safety Director is the project's responsible project manager.

Project Type

It is the policy of Big Ox Energy to evaluate each project from several standpoints. These evaluations include profitability, schedule and operational needs. Water intrusion risks are included in this evaluation to include factors of that may increase the risks of mold growth.

Contractual Provisions

Project executives and project managers will review contracts for terms and conditions that relate to the handling and/or discovery of mold at a project site. Big Ox Energy will attempt to have entered into the contract that we will not be responsible for conditions out of control. In the event that pre-existing mold is discovered on a project. Project executives and managers have received supplemental training on contract language regarding mold.


Procedural Controls

Because mold spores are present everywhere and cannot be totally eliminated from the environment under normal circumstances, the key to preventing problematic mold growth in structures is to prevent the spores from contacting water. In the event water gets into the structure, it is then critical to respond within 24 to 48 hours, remove the water and stop the water ingress. If the water is allowed to remain in contact with mold spores for longer than this period, problematic mold growth may occur.

Control of moisture during construction begins at the design phase and continues until ownership of the structure is transferred and plant operations begin. The moisture controls to be utilized by contractors during the various construction phases are discussed below.

Moisture Control During Design Phase

Moisture ingress and management concerns can best be addressed at the design stage. For this reason Big Ox Energy will verify that the following elements, which are part of our bid package and scope of work, are properly and

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consistently addressed in the construction specifications and plans prior to commencing site operations. This shall be the responsibility of the site manager or their designee.

- Roof penetrations
- Floor penetrations
- Foundation penetrations


Any discrepancies or concerns with the design shall be brought to the attention of the project architect or engineer for discussion and possible corrective action. Document the result of these communications with the architect/engineer, especially if a valid concern is not addressed in a timely or adequate manner. This documentation is to be retained in the project file.

Moisture Controls During Construction/Renovation Phase

Once site operations are underway, there are many opportunities for moisture to enter a structure. Controls must focus on discouraging this entry and encouraging the removal of accumulated moisture. To this end, the site manager or their designee shall be responsible for performing and documenting periodic inspections. The following criteria shall be adhered to:

- Deliveries are sequenced to avoid the storage of large amounts of moisture-sensitive material at the site for an extended time period
- Building materials are inspected upon delivery and significantly mold impacted materials rejected
- Moisture sensitive materials are protected from rain and snow during delivery and off-loading activities
- Stored building materials are elevated and covered, to protect them from rain or flooding
- Partitions are inspected for moisture and mold prior to being permanently enclosed
- Building penetrations are sealed at the end of the work day to avoid unneeded water infiltration
- Roof and building envelope are substantially completed. Tarpaper is applied to the roof before any porous materials are stored in the building
- Wet porous building materials are allowed to dry and will be inspected for mold growth prior to installation
- The moisture limiting design features, such as roofing, flashing, windows, doors, and exterior waterproofing, shall be properly installed according to manufacturer's specifications
- Site workers practice good housekeeping and sanitary practices
- Site workers are responsible for reporting any unwanted accumulation of water to site management
- Regular inspections are performed and documented during construction to identify leaks, ponded water and/or sources of water entry
- Water leaks are responded to within 24 to 48 hours of discovery
- Periodic communication between general contractor and other site contractors to remind them of this program and to discuss any possible mold issues

Procedures for Responding to Water Intrusion

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This policy is designed to incorporate procedures for the response to clean water ingress and not sewerage or other contaminated water sources. In the event water enters the structure, during the construction phase (e.g., roof leak, pipe leak, weather-related flooding), the emphasis must shift onto removing the water, halting the source of water, and encouraging any impacted materials to dry. In some cases, impacted porous materials may need to be removed and replaced. Response activities must commence immediately (within 24 to 48 hours) following the water event or upon discovery of the water damage to prevent potential mold growth.

Dust Control During Limited Remediation Activities

In the event that Big Ox Energy decides to remove saturated materials, mold growth of less than ten square feet (10 sq. ft) in size and/or accumulated clean water from a building, it will be done in accordance with the provisions of this policy.

- Tack mats will be placed at all entry and exit points surrounding the work zone
- Debris removed during the clean up effort will be placed in an enclosed cart and covered with a tarp when moved to a dumpster for final disposal
- A vacuum cleaner, equipped with a high efficiency particulate air (HEPA) filter will be used to remove dust from the work zone and affected building materials
- Tack mats, cleaning rags and the vacuum filter will be placed in a sealed plastic bag and disposed with the rest of the debris

Moisture and Mold Remediation Guidelines

Mold growth is aesthetically undesirable and may cause damage to building materials if a mold/moisture problem is ignored for an extended period. For example, a long-term roof leak will result in mold growth that can weaken the roof and nearby walls as the mold feeds on wet wood. If it is suspected that mold has damaged building integrity, you should consult a structural engineer.


In most cases, it is not possible or desirable to sterilize an area as background levels of mold spores will remain in the air (roughly equivalent to or lower than the level in outside air). These spores will no grow if the moisture problem in the building has been resolved. Below are guidelines for handling material that has come in contact with a source of clean water, such as rain water, snow melt, building envelope leak, or broken supply line.

Prior to initiating any clean up effort to dry construction material, the source of the water ingress shall be located and eliminated.

Big Ox Energy will not undertake any clean up effort that requires the construction or use of a containment system as described in the U.S. Environmental Protection Agency. If a Certified Industrial Hygienist (CIH) determines that remediation can only occur within a containment structure, a reputable mold remediation firm will be contracted to perform the remediation.

Cleanup Methods

A variety of mold cleanup methods are available for remediating damage to building materials and furnishings caused by moisture infiltration and mold growth. The specific method or group of methods used will depend on the

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type of material affected. See Table 1. Please note that professional remediators may use some methods not covered in these guidelines. Also, the absence of a method in the guidelines does not necessarily mean that is not useful.

Method 1: Wet Vacuum

Wet vacuums are designed to collect water. They can be used to remove water from floors, carpets, and hard surfaces where water has accumulated. They are less effective for removing water from dense porous materials, such as gypsum board. They should be used only when materials are wet. Wet vacuums may spread spores if sufficient liquid is not present. The tank, hoses, and attachments of these vacuums should be thoroughly cleaned and dried after use since mold and mold spores may stick to the equipment surfaces.

Damp Wipe

Whether dead or alive, mold can cause allergic reactions in sensitive individuals. Some molds produce metabolic by-products called mycotoxins that can be toxic at certain levels. Mold can generally be removed from nonporous (hard) surfaces by wiping or scrubbing with water, or mix of water and detergent. It is important to dry these surfaces quickly and thoroughly to discourage further mold growth. Instructions for cleaning surfaces, as listed on cleaning product labels, should always be read and followed. Porous materials that are wet and have mold growing on them may have to be discarded. Since molds will infiltrate porous substances and grow on or fill in empty spaces or crevices, the mold can be difficult or impossible to remove completely.

HEPA Vacuum


HEPA (High Efficiency Particulate Air) vacuums are recommended for final cleanup of remediation areas after materials have been thoroughly dried and contaminated materials removed. HEPA vacuums are also recommended for cleanup of dust that may have settled on surfaces outside the remediation area. Care must be taken to assure that the filter is properly seated in the vacuum so that all the air must pass through the filter. When changing the vacuum filter, personnel should wear PPE to prevent exposure to the mold that has been captured. The filter and contents of the HEPA vacuum must be disposed of in well sealed plastic bags.

Drying and Ventilation

Materials that comes into contact with water are to be allowed to dry prior to being installed or covered with additional material. There are several methods used to assist in drying damp materials. Large blowers with directional controls or heaters will assist in the drying process. Care is to be exercised when exhausting forced ventilation so as to avoid contaminating an adjacent location; vent directly outside whenever possible. Combustion type heaters are to be avoided for drying purposes as oxygen levels are decreased, the exhaust requires outside ventilation and moisture is generated as a by-product of incomplete combustion.

Discard

Damaged materials should be removed and sealed in plastic bags. Building materials and furnishings that are contaminated with mold growth and are not salvageable should be double-bagged using 6-mil polyethylene bags. These materials can then usually be discarded as ordinary construction waste. It is important to package mold contaminated materials in sealed bags before removal from the containment area to minimize the dispersion of

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mold spores throughout the building. Large items that have heavy mold growth should be covered with polyethylene sheeting and sealed with duct tape before they are removed from the containment area.

Mold Remediation/Cleanup and Biocides

The purpose of mold remediation is to remove the mold, to prevent human exposure and damage to building materials and furnishings. It is necessary to clean up mold contamination, not just to kill the mold. Dead mold is still allergenic and some dead molds are potentially toxic. A solution of water and a house-hold disinfectant is to be used to clean up mold growth on structural members that will remain in place. The use of a biocide, such as chlorine bleach, is **NOT RECOMMENDED** as a routine practice during mold remediation, although there may be instances where professional judgment may indicate its use. When working in a health care facility, biocides shall only be used under the direction of, and after consultation with, the owner's infection control officer. Ensure that an Infection Control Risk Assessment has been performed prior to the initiation of any cleanup efforts. There are significant ventilation, protective equipment, and disposal considerations when using biocides.

Summary Guidelines for Responding to Clean Water Damage Within 24 to 48 Hours

Water Damage Material	Actions
Books and paper	<ul style="list-style-type: none"> - For non-valuable items, discard books and papers - Photocopy valuable/important items, discard originals - Freeze (in frost-free freezer or meat locker) or freeze-dry. Consultation with restoration/water damage professional is needed
Carpet and backing – dry within 24-48 hours	<ul style="list-style-type: none"> - Remove water with water extraction vacuum - Reduce ambient humidity levels with dehumidifier - Accelerate drying process with fans
Ceiling tiles	<ul style="list-style-type: none"> - Discard and replace
Cellulose insulation	<ul style="list-style-type: none"> - Discard and replace
Concrete or cinder block surfaces	<ul style="list-style-type: none"> - Remove water with water extraction vacuum - Accelerate drying process with dehumidifiers, fans, and/or heaters - Discard and replace
Fiberglass insulation	<ul style="list-style-type: none"> - Discard and replace
Hard surface, porous flooring (linoleum, ceramic tile, vinyl)	<ul style="list-style-type: none"> - Vacuum or damp wipe with water and mild detergent and allow drying; scrubbing if necessary - Check to make sure underflooring is dry; dry underflooring if necessary
Hard surface non-porous (Plastics, metals)	<ul style="list-style-type: none"> - Vacuum or damp wipe with water and mild detergent and allow drying; scrubbing if necessary
Upholstered furniture	<ul style="list-style-type: none"> - Remove water with water extraction vacuum

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	<ul style="list-style-type: none"> - Accelerate drying process with dehumidifiers, fans, and/or heaters - May be difficult to completely dry within 48 hours. If the piece is valuable, consult a restoration/water damage professional who specializes in furniture
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Note:

These guidelines are for damage caused by clean water. Even if materials are dried within 48 hours, mold growth may have occurred. Items may be tested by professionals if there is doubt. Note that mold growth will not always occur after 48 hours; this is only a guideline. If a particular item(s) has high monetary or sentimental value, you may wish to consult a restoration/water damage specialist.

Employee Training

While enforcement of this mold prevention and management plan during the construction phase is ultimately the responsibility of Big Ox Energy senior management, all who are involved in the construction of the structure have a responsibility for complying with its provisions. To this end, internal training on the policy has been provided to senior management, project managers, superintendents and foremen. Additionally, all site workers, including our subcontractors, shall be informed of this policy as part of the job site orientation process. This training will be documented by the site superintendent, or designee, and will be retained in the project files. Big Ox Energy will notify the project's Construction Manager of this plan and our intent to comply with it in the event mold is encountered during normal construction operations. Compliance with the provisions shall be enforced by the site project manager and the management chain-of-command. It is the responsibility of all site personnel to report observed water ingress and mold growth to the project's site supervisory personnel.

All training records will be maintained in IndustrySafe and retained by the Safety Office.

Periodic Program Review

The Safety Team will conduct an annual review to assess the program's effectiveness. The review will consider any new substances, changes in processes, facility layout changes and the cost and frequency of incidents.

All standard operating procedures and methods will be reviewed annually by the Safety Team. If any inadequacies are identified, the Safety Team will take all necessary steps to update the procedure or safeguarding method.