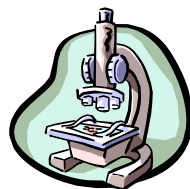


ASBESTOS SCIENCE TECHNOLOGIES, INC.

P.O. Box 505
Bangor, CA 95914
Phone (530) 518-0934
Email - astinc17@yahoo.com

Report for Hoopa Valley High School Modulars Hoopa, Ca.



Mold Report – All 200 wing modulars at Hoopa Valley High School excluding Mrs.
Centonis' Modular
May 3, 2017

This report is based on a request by the CRM group for Asbestos Science Technologies, Inc. to perform services relevant to the water incursion problems and subsequent mold and fungal contamination that may have occurred at the site known as Hoopa Valley High School in the modulars.

This report takes into account mold and fungal contamination in all the areas which were sampled. It does not address areas which were not sampled. This report shall not cover areas of infestation by insects, i.e. termites and/or vermin, etc. It also does not cover any bacterial or viral influences.

This report shall address the anticipated and visually acknowledged source of the water incursion and areas which have been addressed by sampling methodologies.

Plans for remediation and action by the district in accordance with standard health and safety issues shall be addressed as part of this report and protocol.

The extent of actual mold is not indicated as part of this report and protocol as destructive or intrusive physical sampling was not been performed and limited air and tape sampling in areas was performed only as requested.

This protocol shall address the specific measures which shall be taken to address the health and safety risks of all persons that may be occupying the aforementioned school building. There may be significant health risks associated with inhalation of harmful spores.

This plan shall include worker safety recommendations associated with this project.

This project shall be subject to OSHA guidelines involving hazard communication. Reference for communication shall be 29 CFR 1910.1200. Respiratory protection shall be based on 29 CFR 1910.134.

On April 26, 2017 - Jon Warren - Industrial Hygienist, performed an inspection of the modular at Hoopa Valley High School per the districts' request. The school

areas inspected were the modular where the students were moved to as a result of being moved about of the permanent classroom buildings.

After the visual inspection was conducted, air samples were run using (Air-O-Cell) cassettes for mold identification and quantification. The investigation at this juncture was based on air-quality and not on removal of ceiling tiles and observations of areas that were leaking water. The district requested this sampling as a result of water leaks that have occurred inside the modular buildings.

Microscopic examination of air samples collected indicate elevated level of many different species of mold spores. Standard comparison values allow up to 20 percent higher values of spores on the inside of a building than the outside. This was exceeded by much larger percentages in every room except Mrs. Centonis. Exterior spore count at the time of sampling had a total spore count of 80. All rooms had a spore count of at least 279 spores as the count other than Mrs. Centonis' modular. Some of the modular have evn much higher counts than 279. The highest count was 1484 spores in modular 201. There were students and staff inside most of the rooms at the time of the sampling. Therefore, indoor contamination is present. . Mold spores which are found on the interior of a building which are not found in normal environments are a major cause for alarm. Also at issue as well are larger quantities of same types of spores from outside to inside which exceed a standard 20% higher quantity from outside to inside. These modulares as indicated shall not be used from this time forward until the moisture problems are corrected and remediation involving cleaning and treating of affected areas has occurred. The area shall not be entered except by a qualified remediation contractor with adequate respiratory protection. (Note, the air quality is subject to change with the environment. Continual moisture, disturbance, and/or activity associated with mold-infested materials can amplify indoor airborne mold spore concentrations, i.e. student movement and activity throughout the modulares. Based on the above, immediate health and safety measures are being requested to be put into place involving remediation. These findings shall be communicated to all individuals within the said structure and more specifically to all remediation workers. Anytime elevated spore levels occur and are found on the interior of a structure as a result of water incursion issues, health and safety practices shall be put into place.

Because of the history of water intrusions affecting the interior areas of the aforementioned modulares, the water damaged building material is creating mold infestation and is affecting the indoor air quality. The source of mold indoors shall be addressed. The air sample results are elevated to a point that would justify taking

action to not occupy the areas in question until remediation is completed and air sampling brings the areas back into normal mold spore levels. These modular shall be sealed up until remediation activities can occur. All areas shall be placed under full containment guidelines. Individuals that have low or compromised immune systems, the elderly and children especially are allergic to said molds and may show some indication of sensitivity even to low levels of airborne mold spores.)

MYCOLOGICAL SITE REMEDIATION PLAN

Immediate remediation of the structure listed above is necessary. This judgment is based on laboratory confirmation of clinically significant fungal/mold contamination. Furthermore, the ceilings above the ceiling tiles shall be cleaned, treated and sealed according to industry state of the art standards. All areas within the modulars where water incursions occurred shall be treated as mold infested based on the sample results and visual observations. The following recommendations for remediation shall be followed. An experienced competent mold abatement contractor shall perform all remediation activities. Air monitoring for mold shall occur from the start of the project until the completion.

Health and Safety Procedures

1. Negative air containment shall be set in each modular as indicated above with the exclusion being the modular of Mrs. Centoni. Negative pressure shall be maintained at negative 0.02 using manometric recording. Maintain strict biohazard workers protection procedures (protecting clothing, respirators with NIOSH approved HEPA for particulate filtering and with Carbon/Charcoal filters for CL/Chlorine vapor filtering, safety goggles and gloves). All ceiling areas shall be cleaned, treated and sealed. Walls that contain cellulose materials shall also be followed and observed through standard cut lines to determine mold/fungal contamination that may have entered wall cavities. It may be necessary to open up walls if evidence shows water incursions based on thermal imaging or visual mold growth done by bore scope. All HVAC system filters shall be replaced.
2. Based on the air sample results, all exposed hard contents in the areas tested shall be wiped down after the completion of the remediation process. All hard contents shall be covered prior to remediation. Any item that could be damaged during the remediation process shall be removed.

3. Cut and remove the water damaged ceiling tiles and clean and treat all wood members which show mold infestation above the ceiling tiles. All contents in the modular shall be wiped down with an anti-microbial solution. All carpeted areas shall be cleaned.

4. All work shall be done inside the containment (negative air enclosure). Negative pressure shall be at a minimum negative 0.02 inches of water as indicated on the manometer. If mold, fungi and or any staining is visible, remove the mold infested building material. Follow the mold using standard cut line methodology. Inspect the ceiling cavity for mold on wood members. If visible mold is found, HEPA vacuum, brush, and/or sand visible mold off the wood members located inside the cavity. Follow the water down the walls as necessary. Check all HVAC systems for mold spores and clean as necessary and replace all HVAC filters.

5. All water damaged and mold contaminated building materials shall be removed and discarded. No materials shall be replaced until all necessary venting, roof work, HVAC work etc., has been accomplished. Wood members may be cleaned and remain in place. Removal will continue until no mold growth is visible plus two (2) feet. Demolition of the contaminated construction materials will cause mold spores to be released into higher concentrations into the air. Consequently demolition must be performed only within an area contained by 6 mil poly sheeting, with the constant use of negative air HEPA filtration machines to reduce dispersal of the mold spores. Removal of contaminated materials from containment shall be performed such that contamination is prevented to surrounding building rooms and contents. Such materials shall be bagged in six (6) mil poly, made airtight by double sealing, sufficiently disinfected, air dried and HEPA vacuumed before removal from containment.

6. Following removal of contaminated materials, all cavities (as much as possible) within the contained area shall be disinfected. Disinfections are by liberal application of a 1:5 (or stronger) solution of sodium hypochlorite, using a stiff bristle nylon brush with a scrubbing action, then wiped dry.

7. After cleaning the cavities, HEPA vacuum and then wipe down all remaining exposed walls, floors and ceilings inside the containment area by use of fresh clean rags and a virgin cleaning agent and/or disinfectant (virgin meaning: spray only, no rag to bucket). Repeating this method will minimize residual airborne mold spore settlement that occurs during mold abatement activities.

8. Following abatement, clearance air samples shall be collected in the containment area, outside containment, and compared to baseline samples taken outside of the structure.

9. If testing indicates spore contamination outside of the water damaged area, cleaning by HEPA vacuuming of all exposed contents shall be performed. Those items stored in closed containers (i.e. boxes, cabinets, and drawers) which have not been opened subsequent to the water damage episode, and which were never exposed to water or associated high humidity will not require cleaning. Such HEPA vacuuming will be performed after the completion of mold abatement, including disinfections. Goods and materials which have hard surfaces and which have not sustained water or mold damage, and all internal structural surfaces inside containment should also be disinfected and HEPA vacuumed prior to removal of containment. All water and mold damaged items shall be replaced with virgin equivalent items.

10. Forced airflows through HVAC systems shall not be permitted into or out of contaminated areas (HVAC systems shall be shut down and blocked off with poly in all containments or contaminated areas).

11. Negative air, exhausting to the building's exterior and filtered through HEPA filters shall continue throughout the entire remediation process until clearance samples indicate that the ambient spore levels have been achieved. Further recommendations and/or final project clearance will depend on the results of these tests.

12. Continued moisture in a structure may cause additional mold growth or the recurrence of mold infestation after remediation has been completed.

13. All wood members which are exposed after remediation procedures shall be treated with an approved mold inhibitor and sealed.

Abatement workers shall wear respirators with HEPA and chlorine gas filtration, disposable protective gloves (latex or equivalent), foot coverings and clothing when involved with and demolition of disinfecting activities inside containment.

Before leaving containment, abatement personnel shall remove gross contamination from the outside of respirators and protective clothing by vacuuming with a HEPA vacuum. All disposable clothing shall be removed inside the containment area and treated as contaminated waste.

This report has been prepared by Jon N. Warren
Title 8 CCR 3203 & 5194 Certification