



HYGIENETECH

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State of California
Board of Equalization
450 N Street
Sacramento, California 94279

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Attention: David J. Gau

Regarding: Meeting with LaCroix Davis

Dear Mr. Gau:

On August 7, 2008, Kenny K. Hsi, CIH, Wes Frey, and I met with Chris Corpuz, CIH, and Benjamin Heckman, CIH, of LaCroix Davis regarding the work that we have performed in the BOE building to date. I understand that LaCroix Davis was hired, in part, to conduct a water intrusion forensic investigation in the building and therefore our discussions were largely focused on issues related to past water intrusion events and on the air and surface sampling that HygieneTech and other consultants have performed that would be helpful to LaCroix Davis in their investigation. Between Kenny, Wes, and myself, we provided answers to each of their questions and when we knew of publicized data that would potentially be relevant, we directed LaCroix Davis to the BOE website. If you would like to receive more specific information on the matters that were discussed, then please advise and I will provide that to you in a separate correspondence.

Note that one discussion issue was concerned with the criteria that HygieneTech uses to grant clearance in fungal growth abatement areas in the BOE building. Apparently, LaCroix Davis received some information before our meeting that some parties involved in this project may not fully understand our clearance criteria or perhaps do not agree with them or do not fully understand the rationale on which they are based. We indicated to LaCroix Davis that our standard clearance criteria were developed more than ten years ago and that we have successfully used those criteria during that entire time; criteria that I believe are consistent with the standards in the industry and that I have outlined below.

- To the degree possible through visual inspection of the post-abatement work area, the abatement procedures that are defined in a protocol or other such document shall be verified as having been completed in a manner consistent with that protocol, based on existing conditions at the time of the inspection.
- The appearance of the work area is required to be orderly, visibly free of settled particulate, and visibly free of suspect fungal growth.
- All materials are required to be *dry* and the cause or causes of water intrusion are either remedied or the involved parties are aware that water intrusion prevention work will be performed in a timely manner at sometime in the future or shall be thoroughly investigated so that corrective measures can be taken promptly.



- All spore trap air sample data recorded from representative areas within abatement enclosure(s) show results of like rank order to the spore count data recorded out-of-doors; with indoor spore count values of individual spores below the outdoor corresponding spore count data. Note that additional air sample types may be collected in high risk receptor site areas, such as hospital operating rooms, cancer wards, and in-patient and out-patient clinics in which immunocompromised individuals are treated; however, those considerations do not apply to the BOE building.
- Surface sample data recorded from a representative number of potentially-affected materials within abatement enclosure(s) show no evidence of fungal growth (i.e. sporulating structures and hyphal fragments) and no evidence of settled *marker* mold spores that were either confirmed or were suspected to have colonized in the area prior to abatement. Typical *marker* molds include *Stachybotrys*, *Chaetomium*, *Ulocladium*, and *Scopulariopsis*.

I would expect that the rationales behind the first four criteria are obvious, so I will not devote any discussion to those matters. The rationale for our surface sample criterion is perhaps less obvious and therefore I offer the following information using a typical abatement area hypothetical. A ten foot by ten foot room has an estimated 14,400 sq. in. of floor surface area, 14,400 sq. in. of ceiling area, and an estimated 46,100 sq. in. of wall surface area. If fungal growth abatement is performed in that room, we expect that, most certainly, airborne spore counts will dramatically increase during the phase of work involving the removal of materials having gross fungal growth contamination. And prior to the detail-cleaning procedures that are typically performed in abatement enclosures having gross removal, we expect that settled spore counts will have increased on building material surfaces (primarily floors) and that remnants of fungal growth may exist on surfaces that were proximate to those contaminated materials that were removed. When an abatement contractor performs thorough detail-cleaning of those surfaces, all such spores should be denatured (rendered non-viable) and should then be removed or encapsulated. When HygieneTech performs a clearance survey, we intentionally select two or three surfaces in an enclosure that we believe had the highest potential for mold spore or growth remnant exposure. If we sample those surfaces (an estimated one sq. in. each) and the analytical results show no evidence of *marker* mold spores or growth remnants, then that clearance criterion is met for the entire 75,000 sq. in. area. If *marker* mold spores or growth remnants are found in one or more of those samples, then those data suggest that some unknown area of the 75,000 sq. in. room may have above-background deposits of settled spores and/or growth remnants. And, since HygieneTech cannot estimate what area of the room may have such deposits and we cannot offer information on future growth potentials posed by the presence of those deposits, HygieneTech typically recommends that additional detail-cleaning be performed when surface sample results fail to meet our clearance criterion.

Note that on several occasions on the BOE project, HygieneTech did not grant clearance because of the surface sample criterion; however, in all cases, after additional detail-cleaning activities were performed, successful clearance was achieved. If you have any comments or questions regarding any of these matters, please feel free to contact me directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Brian P. Daly, CIH, PE
President