



HYGIENETECH

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180
Torrance, California 90503-1643
(310) 370-8370
(310) 370-7026 FAX
www.hygienetech.com

August 29, 2008

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

Document No. 20808001.5

Attention: David J. Gau

Regarding: LaCroix Davis Letter dated August 27, 2008

Dear Mr. Gau:

Yesterday, I received a copy of the LaCroix Davis letter prepared by Stephen Davis, Chris Corpuz, and Benjamin Heckman regarding the HygieneTech fungal growth abatement clearance criteria. Of course, I am clear that LaCroix Davis disagrees with our tape lift clearance criteria and I believe that they also disagree with the use of the tape lift techniques during clearance surveys. I am confused, though, about several of their comments that they offered in support of their positions, at least two of which I expect are unintentionally erroneous, and I also am confused as to why they may have been under the impression that HygieneTech requires zero tolerance. We do not require zero tolerance in a manner that LaCroix Davis described in their letter and their misunderstanding on that point suggests that they did not truly understand the rationale that I expressed in my letter concerning our clearance criteria. I offer the following additional comments to clarify.

In general, during most abatement procedures, contaminants are invariably aerosolized and a portion of those contaminants will come to rest on surfaces—I expect that LaCroix Davis will accept this statement without debate. Certainly the abatement industry, the industrial hygiene community, and regulators understand this concept and consider this concept during abatement work, particularly when that work involves the removal of lead-based paint (LBP) or PCBs. The industry standard during clearance surveys after abatement of LBP or PCBs includes the collection of surface samples and therefore LaCroix Davis was in error when they stated that our *step 5* procedures are inconsistent with environmental science, regulated hazardous materials and professional practice. LaCroix Davis undoubtedly knows that surface sampling is performed during LBP and PCB abatement clearance surveys and I therefore presume that their erroneous statement was unintentional. Note also that LaCroix Davis indicated that our *steps 1* through *4* are consistent with post-abatement clearance procedures, which is also not quite literally true. Air samples, which are described in our so-called *step 4*, are not typically collected during LBP abatement clearance surveys, for example.

Regarding the zero tolerance factor described in the LaCroix Davis letter, I certainly agree that that would be appropriate for abatement of a lethal human pathogen such as *Bacillus anthracis* and I do agree that zero tolerance is not achievable and therefore is not appropriate for mold abatement sites. I am surprised that LaCroix Davis misunderstood our position on the matter given that our tape lift procedure could not possibly be considered sufficiently thorough to confirm that the zero tolerance criterion was achieved throughout fungal growth abatement areas.

If we can accept that airborne marker mold spores will likely settle during abatement, then HygieneTech is of the opinion that verification that reasonable efforts to remove settled spores has occurred during abatement.



To accomplish this, HygieneTech typically collects tape lift samples from two to three square inches of surface area, and if those sample results show no evidence of mold growth or settled marker mold spores, then HygieneTech is in the position to state that reasonable efforts to remove fungal growth and settled spores occurred in the abatement area and that only *de minimis* quantities of settled spores may be expected in the general area (that certainly contains ten to hundreds of thousands of square inches of surface area).

Given that during our clearance procedures only an estimated 0.003 percent of the surface area in an abatement enclosure is sampled by the tape lift method, a zero tolerance criterion for the entire area cannot be applied. Of course, HygieneTech understands that some settled marker mold spores exist in all abatement areas at the time of clearance—such settled spores exist in generally *de minimis* quantities out-of-doors as well. During clearance, HygieneTech is interested in generating data that suggests that settled spore counts do not exceed *de minimis* quantities in indoor areas. And, HygieneTech can reasonably conclude that only *de minimis* quantities of settled spores exist in abatement areas when we show that no marker molds were found at the two to three tape lift sites that we chose to sample.

I understand that LaCroix Davis surveyed seven other industrial hygiene consultants and found that no other such firm routinely uses tape lift techniques during clearance. If true, then I believe that the clearance procedures of those consultants fall below the standard of care in the industry because omitting surface sampling from the protocol will not allow the consultants to address the mold growth and settled marker mold issues that I have described above. As stated previously, on LBP and PCB abatement projects, surface samples are typically collected during clearance surveys so that residual or settled contaminant issues are addressed. I would suggest to you that those consultants should consider applying the same standard techniques during clearance on mold abatement projects as they do on LBP and PCB abatement projects. HygieneTech does that and we will continue to do so, regardless of how many consultants may disagree.

Note also that I was interested to find BioMax listed as one of the consultants that disagrees with our clearance tape lift procedure and our criteria. As you know, Mike Polkabra is BioMax and during one of his clearance surveys in the BOE building, he collected tape lift samples and failed to grant clearance when trace quantities of colorless spores typical of *Penicillium* and *Aspergillus* were found. HygieneTech would have granted clearance under those circumstances.

My last comment on the clearance tape lift matter is that, while some consultants may believe that those tests are unnecessary or overly burdensome, clearance of surfaces is easily achieved when meticulous abatement is performed. And, JLS, the abatement contractor on the BOE site, has met that standard, given that usually clearance is granted on the first attempt, and when re-cleaning is recommended, clearance has always been granted in the BOE building on the second attempt. Simply stated, HygieneTech is pleased with the professionally completed work by JLS in the BOE building.

I hope that the information provided is clear and consistent with your understanding on these matters, and I hope that this information is enlightening to LaCroix Davis, if you choose to provide this document to them. Please do not hesitate to contact me directly at (310) 370-8370 if you have any comments or questions.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Brian P. Daly, CIH, PE
President