April 21, 2017
Project No. 108182005

Mr. Derrick Johnson
Supervisor, Environmental Health and Safety
Palomar Community College
1140 West Mission Road
San Marcos, California

Subject: Preliminary Mold Report-Conex Box
Student Services Storage
1140 West Mission Road
San Marcos, California

Dear Mr. Johnson:

In accordance with your request and authorization to proceed, Ninyo & Moore has performed a visual inspection and limited airborne microbial assessment of the Conex box identified as *Student Services Storage* at the subject site. Field work was performed on April 14th, 2017. Our scope of work was to perform a cursory visual inspection and air sampling from within the Conex box and outdoors to characterize the air within the box with respect to mold spore concentrations.

VISUAL INSPECTION

The Conex box had been damaged previously and a repair was attempted but obvious signs of water damage were present within the interior. Paper records are being stored within the container. Mold odors (Low molecular weight volatile organic compounds, e.g. alcohols, aldehydes, ketones, organic acids, etc.) were also noted within the interior. These odors are produced by many molds during active growth as gaseous metabolic byproducts. These odors are often useful in indicating the presence of mold infestation even when not visible. The odor tends to vanish over time when the mold colony dies, which typically occurs due to desiccation when the source of excessive structural moisture is removed.

AIR SAMPLING METHODOLOGY

Air samples were collected for the evaluation of total airborne spores using Zefon™ Air-O-Cell sampling cassettes and a high-volume, rotating vane Gast™ sampling pump (calibrated to 15 liters of air per minute). The Air-O-Cell sampler is a particulate sampling cassette designed for the rapid collection and analysis of a wide range of airborne aerosols, including mold spores (to the genus level). This sampling device is useful in providing rapid analysis of airborne contaminants in indoor air quality testing. Samplers were calibrated on site immediately before use and samples drawn for a period of five minutes each, one inside the Conex box (at approximate room center) and two just outside the box (in the outdoor environment). Each collected air sample was labeled with a unique identification number corresponding to the sample location.

Collected samples were documented on a chain-of-custody form and submitted to the laboratory for analysis. Samples were submitted to Environmental Microbiology Laboratory (EMLab) of Irvine, California. EMLab is an American Industrial Hygiene Association Environmental Microbiology Accredited Laboratory.

EXPOSURE GUIDELINES AND INTERPRETATION OF RESULTS

Since there are no regulated exposure threshold levels for molds, the American Conference of Governmental Industrial Hygienists and the United States Environmental Protection Agency guidelines suggest that interpretation of air sampling results should be generally based on comparison of indoor and outdoor spore contents. In addition, it is common industry practice to compare outside bioaerosol concentrations and species to inside bioaerosol concentrations and species. If the indoor concentration is significantly higher than the outdoor concentration, or if different species are present indoors and outdoors, then indoor fungus sources (amplifiers) are presumed to remain or remediation is presumed to be incomplete. These observations are guidelines only. Variation is an inherent part of airborne spore sampling and the presence of a few different genera in small numbers should not be considered abnormal.

ANALYTICAL RESULTS

Results of the spore trap samples collected from the interior of the Conex box were compared to the exterior (background) sample results. While most of the spore types identified in the Conex Box were detected in the background samples collected on the same day within minutes of the interior samples, the total spore counts found within the Conex box were significantly higher than the outdoor samples. The results of sampling were ***not*** considered to be representative of a "normal indoor fungal ecology" and the variation in spore types is ***not*** considered consistent with variation seen in common practice. A copy of the laboratory results associated with spore trap air sampling at the site is provided in Attachment A.

CONCLUSIONS AND RECOMMENDATIONS

The results of visual inspection and odor in the on-site Conex box indicates that remediation of moisture and microbial contamination is necessary. Further, air sampling results within the affected spaces are currently indicative of mold spore levels that may be unhealthy. Professional remediation of the interior of the Conex box is recommended. Restricting access to the Conex box until after completion of remediation is also strongly recommended.

LIMITATIONS

Air sampling results are limited in that they represent airborne concentrations at the time of sample collection only. Changes in weather, operating procedures, ventilation, temperature, humidity, tenant practices and other conditions, including re-introduction of water, may cause variations in anticipated airborne concentrations.

Ninyo & Moore has performed the tasks set forth above in a thorough and professional manner consistent with industry guidelines and under supervision of a certified professional. Ninyo & Moore cannot guarantee and does not warrant that this limited assessment has revealed all adverse environmental conditions affecting the site. Nor can Ninyo & Moore warrant that the assessment requested would satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulations.

The results reported and any opinions reached by Ninyo & Moore are for the benefit of the client. Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge.

We appreciate the opportunity to be of service to you on this project.

Respectfully submitted,
NINYO & MOORE

Nicolas Carpenter, CAC
Project Environmental Scientist

Stephen J. Waide, CIH, CSP, CIEC, CMC
Principal Environmental Scientist

NJC/SJW/gg

Attachment: Attachment A – Spore Trap Sample Results

Distribution: (2) Addressee