

Overall, a review of the air, vacuum, and documents samples, real-time air monitoring and the visual investigation activities described below do not suggest that there are allergens associated with mold, pollen or dust within the specific indoor complaint areas that is negatively impacting the air quality of the building.

### **BSG's Initial Investigation**

On Monday June 18, 2012, a representative of Birdsall Services Group (BSG) under the direction of the state employee Health and Safety Officer obtained air and surface vacuum samples for non-culturable mold and pollen, as well as dust measurements using a real-time air monitoring device.

### **Mold Sampling Results**

Eleven air samples including a sample media blank were obtained from eight complaint areas (i.e., work areas within the west wing rooms 101, 103, 105, 106; east wing room 149 and south wing courtroom 326); one control area (i.e., TCA Meeting room) and the ambient control (i.e., east wing entrance). The ten vacuum surface samples including a sample media blank were obtained within the same indoor locations as the air samples. The vacuum surface samples for molds and pollen were obtained from the general desk work station, the employee fabric chair and the general flooring underneath the desk work space.

The general industry practice for air sampling results is to compare indoor concentrations and types of mold present to that of the ambient air. Generally, indoor concentrations should be similar and preferably lower than ambient air concentrations and the types of mold in the indoor environment should be rank order similar in the outdoor environment (i.e., dominant types of mold in the indoor should be similar to the dominant mold outdoors).

A review of the air sampling laboratory analytical results for molds and pollen identified that the indoor concentrations were similar and were lower than ambient air concentrations and the types of mold in the indoor environment were similar in the outdoor environment.

For non-culturable vacuum surface samples, sampling results are provided utilizing the laboratory's semi-qualitative rating scale of "high, medium, low, or rare". The presence of high, medium, or low mold spores, as well as the presence of hyphal fragments is indicative of mold growth.

A review of the bulk sampling results for molds and pollen identified that the concentrations for both molds and pollen were "rare", which was similar to the indoor control area. When a rare amount of mold spores are observed, it usually indicates that the mold spores is of a surface nature due to the settlement of mold spores from the surrounding environment and it is not considered to be mold growth.

## **Dust Particulates**

The dust particulate measurements were obtained within the same indoor locations as the indoor and ambient air samples described above. The indoor air concentration for dust within the complaint work areas ranged in concentration from 0.243 to 0.281 milligram per meter cubed ( $\text{mg}/\text{m}^3$ ), as compared to the dust concentrations in the indoor control area and ambient air measurements were identified at a higher concentration of 0.281 to 0.289  $\text{mg}/\text{m}^3$ , respectively. A review of the particulate results indicate that the aggressive cleaning operations and engineering controls (i.e., changing the HVAC air filters) were adequate to prevent the atypical aerosolization of dust particulates. Additionally, all of the measured dust particulate measurements are well below the OSHA PEL workplace TWA values of 15.0  $\text{mg}/\text{m}^3$  for Particulates Not Otherwise Regulated.

## **BSG's Supplemental Investigation**

On Tuesday June 19, 2012, a representative of Birdsall Services Group (BSG) under the direction of the TCA office and Monmouth County Buildings and Grounds obtained documents from west wing rooms 101, 103, 105 as well as boxed office paper temporarily stored in the east wing basement corridor for specific pollen allergens (i.e., *Snake plant*, *magnolia species*, *hydrangea*) that were identified either by the County Hazmat team to be on specific court documents or associated with cuttings from bushes and trees brought into the courthouse from the courtyard situated outside of the Hall of Records Annex building. In order to verify the specific types of pollen present, control samples were obtained of the specific papers analyzed by the County Hazmat team, as well as all of the various bushes, trees and plants present within the courtyard.

On Wednesday, July 20, 2012 the project team had requested that the samples be further analyzed for a general make-up of the various particulate matter present on its surface.

A review of the laboratory analytical results identified that the snake plant pollen previously identified on the court papers by the County Hazmat team were not identified on any other documents sampled from within the courthouse complaint areas. All of the paper documents tested for the percentage of combustions particulates, minerals, fibers, biological matter and other matter. Pollens were either identified with less than one percent of the total particulate matter on the document or were not identified to present above the laboratory's minimum level of detection. Additionally, no document was identified to have any fiberglass particulate settled on its surface.