

June 18, 2017

Faith Alkhatib Flagler County Public Works 1769 East Moody Blvd., Bldg.2 Bunnell, FL 32110

RE:

Project:

Sheriff's Dept. Bunnell FL Inv.

ESI File #:

63367F

Ms. Alkhatib,

I have prepared this brief update per consensus of the investigative team members that were able to participate during our closing meeting on June 15, 2018.

First, I would like to thank you personally for taking away the time from your scheduled vacation with your family to attend the meeting. I truly believe that your participation was critical to the process of finding answers. I would also like to thank the employees of the county and the Sheriff's office who provided their support whenever we requested it. I am grateful for their dedication and vigilance of staying with us every moment of our investigation, providing information and asking questions of what we were doing so they would understand our methods and scientific basis of our approach.

After you initially talked to me about the concerns at the Flagler County Sheriffs Operation Center on May 15, 2018, your office provided me with a lot of historical information and the investigations that were done to date. I first inspected subject building on June 4 and after the initial walk through I participated in the County public workshop held the same day. I spoke at that meeting and answered some of the questions posed to me. I listened to the concerns of the number of people that came forward and spoke. During the June 4 walk through we noted a strong odor of chlorine based cleaning chemicals and several locations smelled of air freshener chemicals. Prior to the next test we asked that the use of those chemicals be stopped and to keep some of the areas of the offices from being dusted so we could get a better sample of what was settling out of the air.

With limited information available and concerns raised about potential health risk to employees the decision was reached sometime after the meeting to move the people and the operations out of the building until we were able to obtain more information and test the building with respect to the particular complaints. This conservative approach to protect the health of the employees appears to me as a sound approach until we can advance the investigation and find some answers.

The representatives of the employees stayed with us throughout the investigation during the day and night and volunteered to come in on their own time into the night so that we could have access to security sensitive areas of the building so that we could complete the tests that were running. It is because of the dedication and effort of all of the people involved in our investigation that we were able to advance the investigation but also gain valuable insights of people that occupied the building since the Sheriff's operations moved in. As a scientist, I have found that the most efficient way to resolve an air quality issue is if we keep open communication between all involved in the investigation process. In this project this means that the people who built and maintain the building, as well as those occupying the building, need to communicate and stay informed.

Derrek Verlaan and I arrived at the building at 10 am on June 14 and began setting up tests and collecting samples. This investigation coincided with the investigation by the State for radiation that was conducted on the same day. Everything Derrek and I did was witnessed by the employees assigned to us. We asked questions to focus the testing in the right areas of the building that coincided with the employee complaints. We took care to explain the purpose of the tests, the methodology and the process

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that we used. We encouraged the employees to ask questions and participate in the hypothesis development so that we conducted the appropriate tests in the appropriate locations to evaluate the hypothesis. The employees took notes and documented our entire investigation with photographs. We continued the testing until 11 PM that night in order to test all the areas in question and obtain adequate sample volume for accurate laboratory analysis.

We collected ambient air in canisters for laboratory analysis of Volatile Organic Compounds (VOCs) in 5 locations of the building. We also drilled through the slab in two of those locations to collect VOC samples from below the slab, one near the former plumbing that reportedly leaked, and one below a carpeted area (carpet tiles). A carpet tile was removed to access the slab. In the two areas where we drilled through the slab we found it to be at least 6 inches in thickness. We also collected some of the dust from the drilling for further analysis. A total of 7 cannister samples were collected, 5 ambient air and 2 sub-slabs. The collection time at each sample location was between 7.5 hrs. to 8 hrs. We timed the sampling in June when it was hot and ran the sampling in the afternoon and into the night to capture the hottest part of the day and the subsequent cool down of the building during which any off-gassing would be highest. The exact sampling locations will be identified in our report. At the conclusion of the tests, canisters were boxed, sealed and remained in the building the rest of the night to maintain the chain of custody.

We also collected dust samples for mold analysis in 23 different locations in the building. The locations included those that the employees suggested that we test. We concentrated on locations with heavy dust settlement to evaluate worst case condition and representative of multiple days that it took for the dust to settle. We specifically did not test areas that were recently cleaned. 4 of the samples included the air handler filters that were preserved as evidence.

During the testing on June 14 we also measured temperature and relative humidity. The generally accepted target comfort range of relative humidity in a building is typically between 40 to 60%. We will provide specific references in our report. We noted that the relative humidity in portions of the building was around 60% with higher excursions in some areas of the building. With temperature settings around 72 degrees we noted that the conditions appeared clammy and in some of the areas we noted a light odor of VOCs. We were shown the mechanical room that houses the HVAC units for the building and the computer that monitors the conditions. The operator also stated that he has been essentially operating the system in the same manner it was turned over to him and the only changes that were made were to adjust the temperature of individual rooms at the request of the employees. He also stated that when he first heard of the complaints he created a form and periodically documented the parameters. We requested a copy of the records so that we could include a better analysis in our report.

When we were collecting the dust samples we noted a disproportionate amount of white specks in some of the dust. During our investigation we inspected several areas above the drop ceiling and we did not find the white specks in the area above the ceiling. Then I noted that from handling the ceiling tiles I was getting white specks on my hands and clothing that were readily coming off from the ceiling tiles. I suspect that the white specks in the settled dust may have come from the ceiling tiles. I collected samples from the space above the ceiling to compare with samples from the office space. I also cut a sample from the ceiling tile so that I could do a microscopic comparison and further analysis to evaluate the hypothesis.

We also drilled the slab and obtained some relative moisture content readings in the slab.

We also identified portions of the building that had a block wall and the precast wall from the old building and analyzed these areas using the XRF analyzer to obtain elemental information on the building materials. Slab testing was also included in the XRF evaluation and we also tested the drywall both painted and unpainted. The result of the analysis will be provided in our report.

We found a leak and condensation issues in the Bio evidence room between the freezer and the cooler. The wall between the units was wet and stained with what appeared to be active mold growth.



The floor between the units had water on the floor. Even though the area is relatively small, the leak will have to be repaired and the impacted wallboard replaced.

On June 15 we returned to the office and met with the employee representatives. Ms. Alkhatib was also present. We summarized our work and agreed that we can expect the final report from our testing at the end of July. We also removed two outlet covers to enable inspection of copper wire for any evidence of corrosion. We found them to be in excellent condition. We conducted an outside perimeter inspection and noted one of the gutter end caps leaking causing staining to the outside finish.

During the meeting we requested and Ms. Alkhatib agreed to provide the following additional records:

- 1. Information on the wall paint used
- 2. Information on the ceiling tiles
- 3. Floor paint used on the concrete in the evidence area of the building
- 4. Information on the carpet tiles and the glue used to secure the carpet tiles to the concrete floor
- 5. Information on the filters that were replaced and preserved as evidence. We are to determine how many days they were in the units before they were taken out of service.
- 6. Wall insulation information

The information from these records will be beneficial when we receive the VOC analytical data from the laboratory which is expected in two weeks.

At the meeting on June 15 we also discussed photos of the building and the email sent to me from Mr. Dennis McDonald. The employee's representatives showed us the same photographs and we confirmed that they matched the photos provided to me by your office. Your office has previously provided those photographs and the records related to the subsequent investigation. I agreed that we will review all of the pertinent information regarding this issue and address our findings in our final report.

On June 15 during the closing meeting we also reinspected the room 129A. The employee representatives informed me that the occupant reported black substance dripping off the vent onto the desk. The HVAC maintenance operator was present and I asked him and the employee representatives if that information was ever confirmed and or documented in photographs. He stated that he investigated the complaint and the area, including the supply vent and ductwork, was also reportedly inspected by an HVAC contractor. The Maintenance operator and the HVAC contractor did not ever see any black material on the vent or dripping onto the desk. The employee representative stated that there was no documentation. At that point I expressed that I was not going to be able to address matters where I have no verifiable evidence to investigate and that I can only report of what I found in the building at the time of my investigation.

It should be noted that at the time I inspected the building, the majority of the employees were relocated out of the building. There was significant evidence of dust due to the moving of the employees and the sampling that we conducted will likely represent worst case scenario of the building. This is why the previous investigation and the HVAC records that the HVAC operator decided to start keeping are going to be valuable documents that will help supplement our data. The upside of the partially occupied building during our testing is that the VOCs that come into the building as a result of occupants bringing it in will be minimized in our test results. Our data will reflect the building conditions with relatively small occupant load.

At the conclusion of the meeting we finished packing the equipment and proceeded to Fedex in Daytona to ship the VOC cylinders to the laboratory.

If there are any questions please do not hesitate to give me a call.

Zdenek Hejzlar, PhD, CSP Senior Managing Consultant