**Narrative**

City of New Haven, Public Schools

Metropolitan Business Academy Interdistrict Magnet High School

115 Water Street

New Haven, CT 06511

Inspection #1477169 - E5404 - 544

An inspection was conducted at the City of New Haven Public Schools (NHPS) Metropolitan Business Academy Interdistrict Magnet High School (MBAIMHS) on March 10, 2020. The purpose of the inspection was to investigate the following allegations:

1. Inadequate air flow/exchange creating health problems for employees.
2. Unsure if chemical hoods are working properly.
3. Eyewash in Room 208 had a broken handle.

During the inspection, the Compliance Safety and Health Officer (CSHO) evaluated the chemical fume hoods located in Rooms 208 and 308. At that time, the "Sheldon Laboratory Systems" fume hoods located in the rooms did not appear to be functioning properly. The motor was running but there was little air movement within the hoods. In addition, each hood was equipped with a "TEL AFA-500" airflow monitor which also did not appear to be functioning in either location. The district did not ensure that fume hoods were functioning properly and did not implement specific measures that will be taken to ensure proper and adequate performance of the equipment. Furthermore, based on information obtained during the inspection, district representatives had been aware that the hoods were likely not functioning properly for some time (documentation going back as far as July 2018). Despite this knowledge, the district had not made any attempts to test the equipment, repair it (if necessary), and/or take the hoods out of service until they were deemed to be functioning properly. As such, a violation of 1910.1450, *Occupational exposure to hazardous chemicals in laboratories,* has been proposed for these conditions.

The employer's chemical hygiene plan should identify which tasks must be performed in the fume hoods and which tasks, if any, may be performed outside the hood in the general classroom space. In this case, the employer's written Chemical Hygiene Plan stated that all flammable, toxic materials should be used within a laboratory hood or with local exhaust ventilation. Based on these criteria, the employer should ensure that the general ventilation in the classrooms is adequate to support those tasks performed outside the hood. Because the general ventilation may be impacted by the use of fume hoods and vice versa, the employer should ensure both systems are working as originally designed and in accordance with consensus guidelines for laboratories such as those published by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) and the American Industrial Hygiene Association (AIHA)/American National Standards Institute (ANSI). The employer also should reference the most current version of the publication *Prudent Practices in the Laboratory: Handling and Managing Chemical Hazards* (National Research Council, 2011). In addition, both systems should be evaluated by professionals knowledgeable about ventilation system design and maintenance, specifically in laboratory settings.

During the walkthrough, the CSHO observed that the handle on a "Bradley" emergency eyewash located in Room 208 was, in fact, broken. Documentation shows that district representatives were notified that this handle was broken at least as of September 2019. Furthermore, the employer was unable to verify that periodic inspections of the eyewashes/showers in Rooms 208, 214B, 308, and 314B had been performed. As such, a violation of 1910.151, *Medical Services and First Aid*, has been proposed for these conditions.

A review of the employer's written Chemical Hygiene Plan identified various deficiencies with the Plan and associated training. Additional violations have been proposed for these items. Details of the violations can be found in the enclosed document, "Citations and Notification of Penalties."

During the inspection, the CSHO observed hazardous chemicals which are carcinogenic and/or are reproductive hazards. These hazardous chemicals include, but may not be limited to, formalin/formaldehyde, sodium chromate solution, and lead nitrate solution. At the time of the inspection, dissection specimens were being stored in Room 314B. The specimens were preserved in formalin and, depending on the manufacturer (two different manufacturers' products were present), contained between 0.1%-3.7% formaldehyde, according to safety data sheets provided to the CSHO directly by the manufacturers. In Room 214B, containers of sodium chromate solution and lead nitrate solution were observed in storage cabinets.

**In addition to posing significant health hazards**, these hazardous chemicals fall within the scope of specific health-based standards including 1910.1048, *Formaldehyde*; 1910.1025, *Lead*; and 1910.1026, *Chromium (VI)*.

According to these standards, each employer who has a workplace covered by these standards shall, among other requirements, determine employee exposure to the contaminants identified in the applicable standard. There will be no violations of these specific health-based standards at this time. However, the employer is strongly advised to determine the necessity of these products and eliminate them or substitute them with less hazardous products, if feasible. If employees continue to use these products, then the employer must comply with all applicable requirements contained in 1910.1450, 1910.1025, 1910.1026, and 1910.1048 as they pertain to employee exposure to these contaminants.

A letter of Significant Findings regarding these concerns was sent to the employer.

A closing conference was held on July 16, 2020. At that time, the violations were discussed, and the abatement dates were set.