Wellesley College
Science Center

February 6, 2008

Fume Hoods with Phoenix Controls

The chemical fume hoods in the science center have been retrofitted with new controls. The hoods are the same, but the controls, and the fans associated with these controls are different. The hoods are also integrated with each room's ventilation system. Following is a brief description of the each component of the newly installed system.

The Sash

- When in use, place the sash at the level indicated on the sticker on the right side of the hood (approx 18 inches). The hood was adjusted to work optimally when the sash is at this height to best protect the user from hazardous chemicals.
- When not in use, push the sash down to its lowest level. This will decrease the amount of air flow through the hood reducing energy needs by 40%.

Controls

- A "*Presence Sensor*" is situated on the top front face of the hood. It will sense a person at the hood within a six foot radius. If it detects no movement for over 2 minutes, it will reduce the air flow to 60 fpm.
- A "*Light sensor*" will detect when the light levels in the room are low thus assuming no one is in the space. When the light levels are low (lights in the room are turned off except for the egress light) the air flow will decrease to 60 fpm.
- "*Sash Stoppers*" are in place to prevent the sash from moving above the designated working height.
- The "*Emergency Exhaust*" button should be used when a spill or other type of emergency occurs that requires an immediate increase in exhaust for the hood's working surface. It causes the fan exhaust to go to maximum – about 180 fpm.

Alarms

- *Low Flow Alarm* - indicates something is wrong with the fan and or a belt. A red light will appear in the "Flow Box". Maintenance services should be contacted asap when this alarm sounds and use should cease until fixed.
- *Sash Alarm* - if the sash is raised above 18 inches (as designated on the sticker) an alarm will sound until the sash is lowered.
- *Use Alarm* - if the sash is left open (at 18") and room lights are off, an alarm will sound. Shut the sash and the alarm will stop sounding.
- A *Diversity Alarm*, located by the temperature controls, has two purposes, it measures the static pressure in the room and serves as an annunciator for the hood alarm.

Stickers/Plaques

- *Sash Height Sticker* includes information on date tested, the hood identification number, optimal working height, and testing company.
- *Shut the Sash* sticker to remind users to pull down the sash when not in use.
- The Maintenance Service sticker (currently bright green) provides information on the fan number.

Room Ventilation

- Temperature controls for each room are situated by the room lights.
- When the fume hood sash is open, each room gets 2000 cfm of fresh air. When closed, the fresh air decreases to 1000 cfm. The room exhaust adjusts as well.

Other Items of Note

- The bottom section of the fume hood cabinet is also vented.
- Room lights are all manually controlled.
- Fume hoods have been certified by B&V Testing which is good for one year.

Questions/Comments

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