Smart Labs Checklist

1. Was a space-by-space hazard assessment used to set lab minimum ventilation rates?

If yes to the previous question, was the lab minimum ventilation rate set by:

1. Formal space-by-space hazard assessment performance by Environmental, Health, and Safety (EH&S)?
2. Air changes per hour (ACH) recommended by an industry organization (e.g., ANSI)
3. ACH per square foot of lab space.

2. Is a lab ventilation management program in use?

3. Was the lab minimum ventilation rate set by one of the following?

1. Formal space-by-space hazard assessment performance by an EH&S
2. ACH recommended by an industry organization (e.g., ANSI)
3. ACH per square foot of lab space

4. Is the lab minimum airflow rate reduced during unoccupied or night mode?

If so, what is the minimum lab ACH at night? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Has the building fume hood exhaust system been studied either by a computational model or physical wind tunnel model to determine the safe plume dispersion setpoints for the exhaust fans?

6. Does the fume hood exhaust system have an outdoor air bypass (to assist the plume dispersion when fume hood exhaust from the building is low)?

7. Does the facility contain any of the following types of equipment? (Check all that apply.)

High-performance fume hoods (occupied face velocity < 80 fpm, or hood fitted with sliding blast shield?

Automatic fume hood sash closers?

Filtering fume hoods?

Fume hood with occupancy-based face velocity setback?

High-efficiency (ENERGY STAR) -80°C freezers?

8. Is an occupant engagement or other green labs program active?

9. Does the building use monitoring-based continuous commissioning (also called fault detection, building analytics)? Examples include Cimetrics Analytika and KGS.

10. Has a testing and balancing contractor balanced the airflow in the lab in the last 5 years?

If so, what percentage of the gross lab area was balanced? \_\_\_\_\_\_\_\_\_\_\_

11. Have there been any major projects in the building since 2015? Examples include shell space fit out, gut renovations, or renovations to add heating, ventilation and air conditioning (HVAC) systems in response to changing lab needs (e.g., added cooling for a laser).

12. Are there known performance issues with the building automation system or any other HVAC control systems?

13. In the last 5 years, has an ASHRAE Level 2 energy audit or lab ventilation study been performed by a third party?

14. What (if any) energy efficiency measures have been implemented in this building in the past 5 years?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. What is the biggest barrier to more energy efficiency projects at the building?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. Did any of the above questions cause you to investigate or discuss something new about your building?

If so, which questions? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_