AHU-1 (Air Handling Unit No. 01)

This air handling unit is the lead supply fan that provides make-up air within the laboratory’s space for the new building addition. There are two air-handling units, AHU-1 and AHU-2, which provide 100% make-up outside air. These air-handling units would run continuously during business hours (occupancy period). However, the lag air-handling unit will be turned off after business hours (unoccupancy period) to save energy. Plant Facilities has to shut off this unit in order to perform required preventive maintenance. During the shut down period, the space will be under higher negative pressure. The building’s temperature will be higher than cooling set point and lower than heating set point temperature. The existing fume hoods face velocity will be decreased due to lack of make-up air quantity. Lack of adequate face velocity could result in triggering the fume hoods local alarm system.

AHU-2 (Air Handling Unit No. 02)

This air handling unit is the lag assigned supply fan that provides make-up air within the laboratory’s space for the new building addition. During the shut down period, the building space and fume hoods operation will be the same as air handling unit no. 01 as described above. AHU-1 and AHU-2 will not be shut off simultaneously during the preventive maintenance work in order to reduce interruption to the building operation.

AHU-3 (Air Handling Unit No. 03):

AHU-3 supplies ventilation air, primary heating, and cooling, for the southern portion of the existing building. During the shut down period, the building temperature will be higher than the cooling set point and there will be no air circulation within this portion of the building. The heating set point temperature would be satisfied where baseboard heating units are provided along the exterior windows and walls.

AHU-4 (Air Handling Unit No. 04):

AHU-4 provides ventilation air, make-up air within the laboratories, and primary heating and cooling for the north portion of the existing building. During the shut down period, there will be no air circulation, the cooling set point would not be satisfied, and the space within the laboratories would not reach the required static pressure (space would be much more negative). The heating and cooling
set points within these laboratories would not be satisfied. The heating set point for offices and classrooms supplied with the baseboard hot water heating system along the windows and exterior walls will be maintained as programmed.

**RTU-1**
RTU-1 provides ventilation air and cooling for special computer room 440. During the PM period, there will be neither air circulation nor cooling to satisfy the cooling set point. The computer equipment in this room shall be turned off by the department to prevent any computer damages. The heating set point for this room is provided by the baseboard hot water heating system along the windows and exterior walls.

**Fan Powered VAV Boxes:**
These fan-powered VAV boxes provide ventilation for different spaces as indicated on the preventive maintenance schedule.

**Drilling Laboratory make-up air Unit: (Currently is not used in this laboratory)**
This unit supplies make-up air with the laboratory when the Cannon laboratory exhaust fan runs at its highest speed only. During the preventive maintenance period scheduled for this fan, this unit would be shut off.

**EF-7 and EF-11 (Fume hood Exhaust Fans No. 7 and No. 11):**
These fans exhaust the fumes generated within the fume hoods located within the Alderson Hall building addition. During normal operation, these exhaust fans run continuously. Shutting off these exhaust fans will result in unsafe conditions for the user due to the lack of face velocity across the fume hood openings. Therefore, during these exhaust fan shut off periods, there should be no harmful chemical remaining within the fume hoods.

**EF-6 and EF-12 (General Exhaust Fan No. 6 and No. 12):**
These fans run continuously during business hours. These fans are provided to exhaust air from the laboratory space within the building addition. These fans are interlocked with the lag AHU-2 to control building static pressure and keep the laboratories under negative static pressure. During the unoccupancy period, these exhaust fans will be shut off to save electricity.

**EF-13**
EF-13 provides exhaust air for the fume hood located in laboratory # 294. The exhaust fan is turned off at the campus temperature control front end per PE Department’s request.

**EF-8 (Exhaust Fan No. 8)**

This is a two-speed exhaust fan to serve the drilling laboratory. This unit exhausts the space within this laboratory only. This unit operates continuously at the low speed for this laboratory. During the preventive maintenance period, there should be no drilling experiments in this laboratory.

**EF-9 (Chemical Storage) and EF-10 (Hydrocarbon Storage):**

EF-9 & EF-10 provide ventilation exhausts for these storage rooms.

**Fume Hoods Exhaust Fans 22, 23, 24, 25 and 26:**

EF-22: This fan provides exhaust ventilation for chemical fume hood located in Laboratories 453, 462, 463 & 468.
EF-23: This fan provides exhaust ventilation for radioisotope fume hood located in Laboratory 468.
EF-24: This fan provides exhaust ventilation for chemical fume hood located in Laboratory 468.
EF-25: This fan provides general exhaust ventilation for Laboratory 463.
EF-26: This fan provides general exhaust ventilation for Laboratory 462.

**Dust Collectors:**

DC-1: This dust collector serves Wood Shop 194.
DC-2: This dust collector serves Rock Lab 282.
DC-3: This dust collector serves Rock Lab 288.
Plant Facilities department will only maintain the equipment. The dust and particles collected within the dust containers shall be emptied by the users as needed.

**Building Support Equipment and Systems:**

There are many other units and devices associated with the building’s heating, ventilating, and air conditioning that would affect the building operation if such a unit and system shut off for a long period of time. However, we will keep the shut down period to a minimum to reduce any changes to the building’s indoor air quality.