1. SCOPE
To describe the operating procedures and expectations of department staff for handling a loss air handling/environment control to Bioengineering occupied spaces. Responding to a loss of environment control requires several hours or longer if it has happened outside normal business hours. Note that this occurs as part of a power outage.

2. DEFINITIONS
2.1. Air handling/environment control: also known as HVAC (Heating Ventilation and Air Conditioning). This is the system that circulates fresh air and either heats or cools it to maintain environmental specifications. Especially critical for laboratories as this system also provides the ventilation to Fume Hoods and ducted Biosafety Cabinets.
2.2. BSC: BioSafety Cabinet. The filtered controlled air workstation that allows for clean and safe handling of biohazardous or sensitive materials and samples.
2.3. Fume Hood: The actively controlled ventilated workstations for work on chemicals that may expose the user to dangerous chemical vapors. The sash is the movable glass window that can be raised or lowered for access.
2.4. Johnson Controls: The manufacturer of the HVAC controller computer and software. This system has had problems with automatic restarts especially after power outages.
2.5. FM: Facilities Management. The campus facilities support department.

3. OPERATING PROCEDURE
3.1. HVAC loss for EBU1, SERF and BSB Bioengineering spaces
3.1.1. Department safety and facilities personnel will contact affected labs and inform them to close all chemical supplies in fume hoods and ducted BSCs and close the sashes. These will need to remain unused until HVAC has been restored.
3.1.2. Department safety and facilities personnel will contact affected offices in the building and determine if lack of air conditioning or heating will affect current operations.

3.1.3. If safety personnel determine there is an immediate risk for labs or offices continuing to operate, the safety staff will contact the MSO and/or Chair and apprise them of the situation and order a shutdown.

3.2. **HVAC loss for PFBH**

3.2.1. **During normal business hours**

3.2.1.1. Department safety and facilities personnel will contact FM to see if the cause is known and to get an estimated time for reactivation.

3.2.1.2. Department safety and facilities personnel will contact affected labs and inform them to close all chemical supplies in fume hoods and ducted BSCs and close the sashes. These will need to remain unused until HVAC has been restored.

3.2.1.3. Safety personnel will contact representatives from the Animal Care Program (ACP) to let them know about risks to the PFBH Vivarium inhabitants.

3.2.1.4. Department safety personnel will check the computer Cluster room in basement room 021 to determine heat load and notify Bioengineering and NBCR IT personnel to shut down computers if necessary and check status of the 1st floor server room (PFBH 162).

3.2.1.5. Safety personnel will contact users of the Biotech Core cold room (PFBH 342) to have them determine if they need to remove their materials or equipment.

3.2.1.6. Then safety personnel will let all building inhabitants know that the air conditioning or heating will be off.

3.2.1.7. If safety personnel determine there is an immediate risk due to the lack of air circulation for labs or offices continuing to operate, the safety staff will contact the MSO and/or Chair and apprise them of the situation and order a shutdown.

3.2.1.8. When HVAC is restored, safety personnel will issue an “all clear” to all parties and follow up with FM for monitoring any potential damage or losses. Especially noteworthy is that the
3.2.2. After normal business hours or on weekends and holidays

3.2.2.1. FM should contact department safety personnel when a utility interruption has occurred. The contacted individual should ask what service has been interrupted and in what buildings, how long it will be unavailable, and if FM personnel are already working on a repair.

3.2.2.2. The contacted safety personnel should immediately call the MSO and Chair (if possible), using the emergency contact information, and coordinate who will respond to the campus as quickly as possible.

3.2.2.3. Department safety and facilities personnel will contact affected labs and inform them to close all chemical supplies in fume hoods and ducted BSCs and close the sashes. These will need to remain unused until HVAC has been restored.

3.2.2.4. Safety personnel will contact representatives from the Animal Care Program (ACP) to let them know about risks to the PFBH Vivarium inhabitants.

3.2.2.5. Department safety personnel will check the computer Cluster room in basement room 021 to determine heat load and notify Bioengineering and NBCR IT personnel to shut down computers if necessary and check status of the 1st floor server room (PFBH 162).

3.2.2.6. Safety personnel will contact users of the Biotech Core cold room (PFBH 342) to have them determine if they need to remove their materials or equipment.

3.2.2.7. Then safety personnel will let all building inhabitants know that the air conditioning or heating will be off.

3.2.2.8. If safety personnel determine there is an immediate risk due to the lack of air circulation for labs or offices continuing to operate, the safety staff will contact the MSO and/or Chair and apprise them of the situation and order a shutdown.

3.2.2.9. When HVAC is restored, safety personnel will issue an “all clear” to all parties and follow up with FM for monitoring any
potential damage or losses. Especially noteworthy is that the exhaust fans have lost programming in the Johnson Controls controller for some of the previous HVAC failures.