STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

TITLE: **Tecniplast WiFlow AHU with Guardian**
SCOPE: Research and Animal Care Personnel
RESPONSIBILITY: Professional & Administrative Staff
PURPOSE: To outline the Proper Procedures for Use and Maintenance of the Tecniplast WiFlow AHU with Guardian System.

I. PURPOSE

1. This procedure outlines the use and maintenance of the Tecniplast WiFlow with Guardian used to provide ventilation to the rat IVCs.

II. RESPONSIBILITY

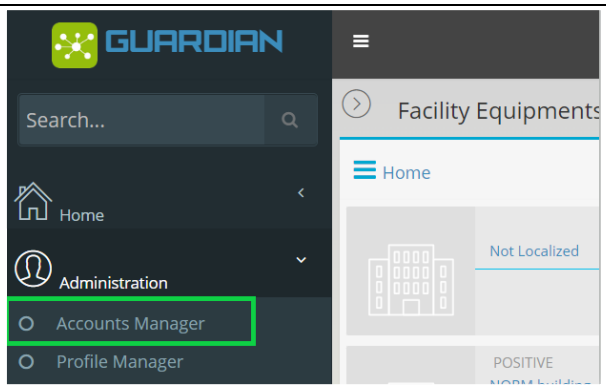
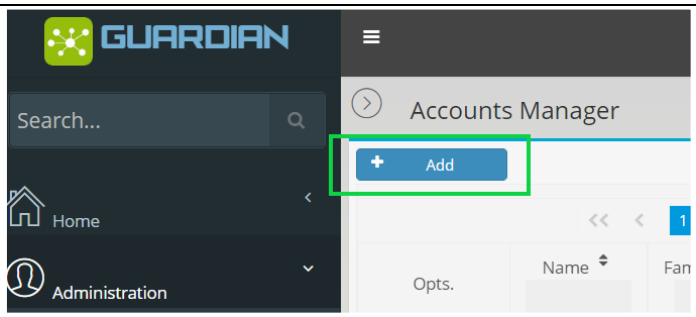
1. It is the responsibility of the Facility Manager to ensure that equipment is appropriately cleaned, maintained in good working order, and available for research personnel as requested.

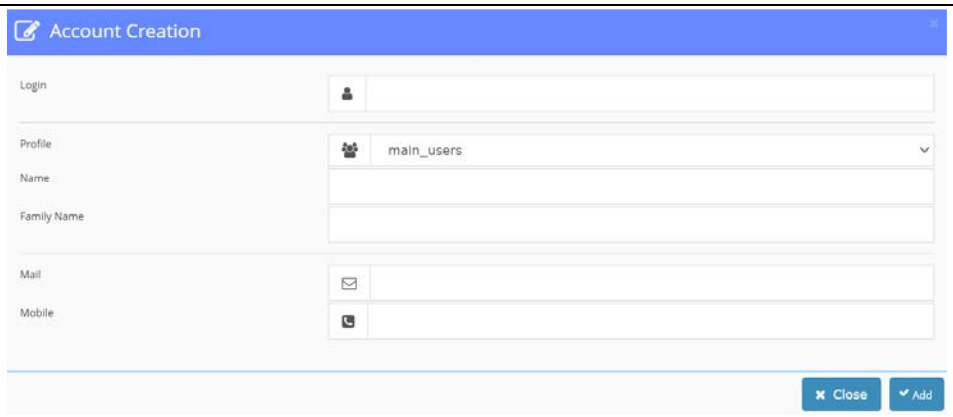
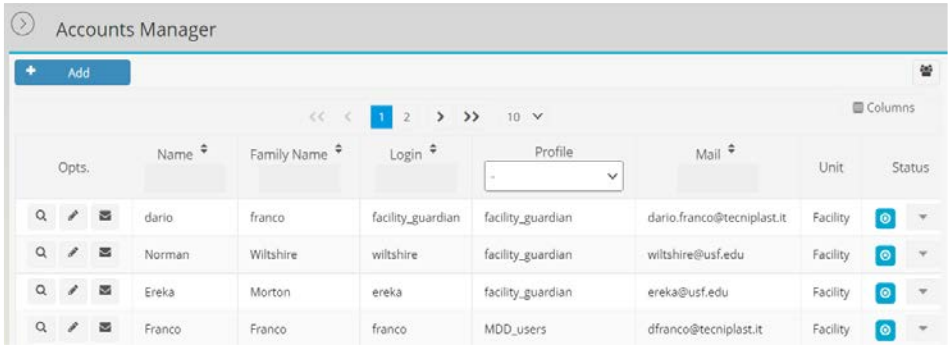
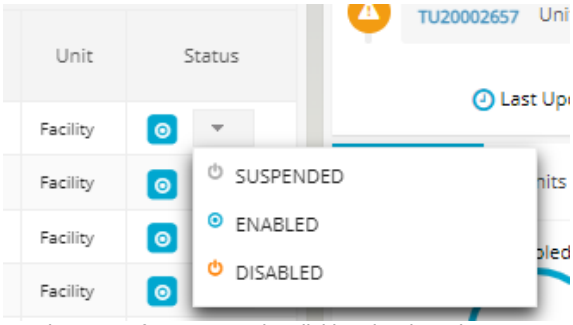
2. It is the responsibility of the veterinary professional, administrative, and managerial staff to ensure that all research and technical staff using this equipment are adequately trained and experienced in the use of the Tecniplast WiFlow with Guardian AHU.

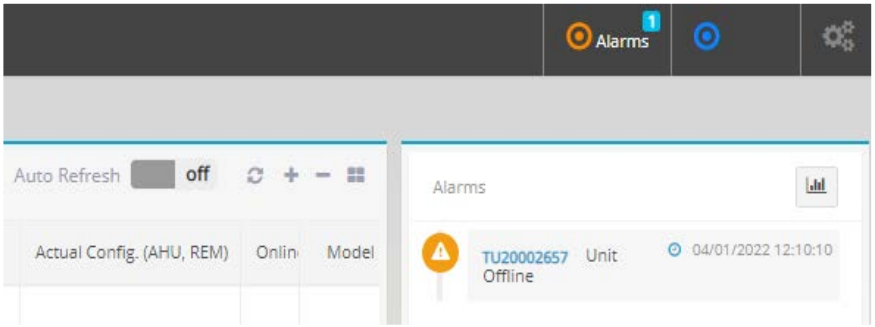
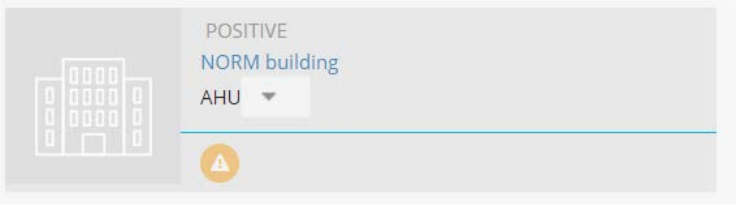
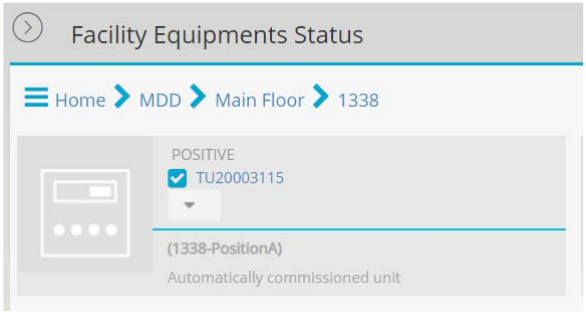
III. GUARDIAN SYSTEM ACCOUNT SET-UP, LOG IN, AND USE

Steps	First Login
1	 Access the Guardian website URL: https://10.43.74.7/WDMWEB Note: You must be connected to the USF network or VPN to access the Guardian website.

Steps	First Login (continued)
2	Log in with your username. (First letter of first name + full last name). Upon the first login, your password will be the same as your username. Example: *Username: emorton* *Password: emorton*
3	 The system will prompt to create a new password. Type a new password in both fields and click **Enter**.

Steps	Create New Account
1	 Click **Accounts Manager** under the Administration tab
2	 Click **Add**

Steps	**Create New Account (continued)**
3	 Enter in the new user account information and click **Add** • Login: Username • Profile: Permission level for the user. For example, main_users or MDD_users, depending on which building the user needs to manage. • Name: First Name • Family Name: Last Name • Mail: User e-mail address that will receive notifications from the system • Mobile: Not Required
4	 Once the new user is created, the new account will show in the Accounts Manager list
5	 Set the status for accounts by clicking the drop-down menu and selecting Suspended, Enabled, or Disabled. By default, all new accounts are in Suspended status until the user logs in for the first time. • Suspended: The user account is suspended until the user logs in • Enabled: The user account has been activated by the first login • Disabled: The user account is not active **Note**: If a user has forgotten their account password or the password needs to be reset, select the Suspended option for the account status to initiate a first login procedure.

Steps	Notifications
	Notifications occur when a unit goes offline, if minimum or maximum temperatures are breached, or if maximum humidity levels are breached. Users set to receive notifications will get an email from guardian@usf.edu
1	To find more information about the unit you are being notified for, access the Guardian Website URL: https://10.43.74.7/WDMWEB and log into your account.
2	 Alarms will show in the upper righthand corner of the homepage
3	 There will be a blinking orange indicator showing which building has the unit causing the alarm. Click on the building and follow the indicator to find the exact unit causing the alarm.  Example: Building > Floor > Room > Unit **Note**: Alarms will clear from the system automatically once the issue is resolved

IV. WIFLOW AHU START UP

1. **Plug in** the WiFlow air handling unit (AHU) and **turn on** the electrical power. The power switch is located on the top back left side of the AHU.

2. Ensure the WiFlow AHU is **plugged into the correct ethernet port**.

3. A correct association between WiFlow AHU serial number (SN), animal facility acronym and room number, and ethernet port number are required. This is referred to as the buoy location. Consult an Assistant Director or veterinarian for assistance.

4. Log in using One2One by first finding the units SN in your smart device's Bluetooth in Settings.

5. Ensure that the pressure mode and air changes per hour (ACH) correspond to that which is required by the specific animal housing needs served. If not appropriately set, refer to the User Manual. All AHU units should be set on **Positive mode** except those used in ABSL-2 biocontainment or quarantine housing rooms, which should be set on **negative** mode.

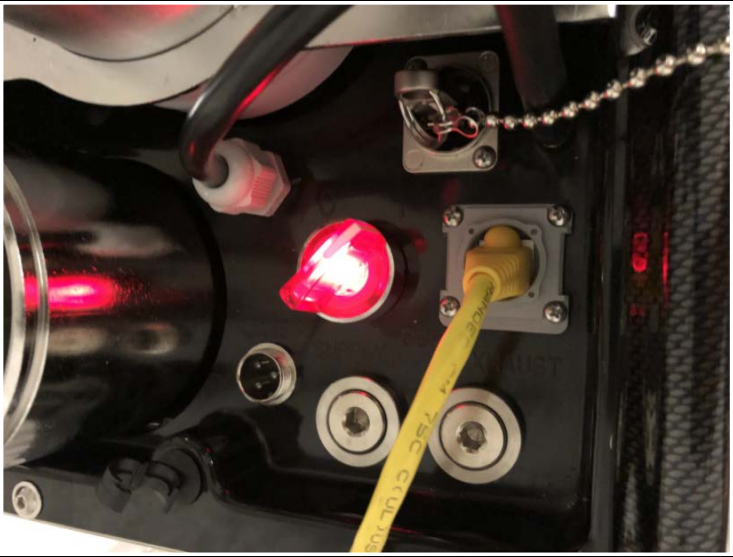
6. **Positive** mode (most rooms) should be set at 70-75 ACH, with the exhaust HEPA filtered at -20-33%. **Negative** mode (biocontainment, quarantine) should be set at 70-75 ACH, with the exhaust HEPA filtered at 20%.

7. **The user passcode for changing default settings is 10.**

8. Complete temperature and humidity settings for the WiFlow AHU. Typical temperature settings for the WiFlow AHU are 64° F minimum and 88° F maximum and typical WiFlow AHU humidity settings are 10% minimum and 90% maximum.

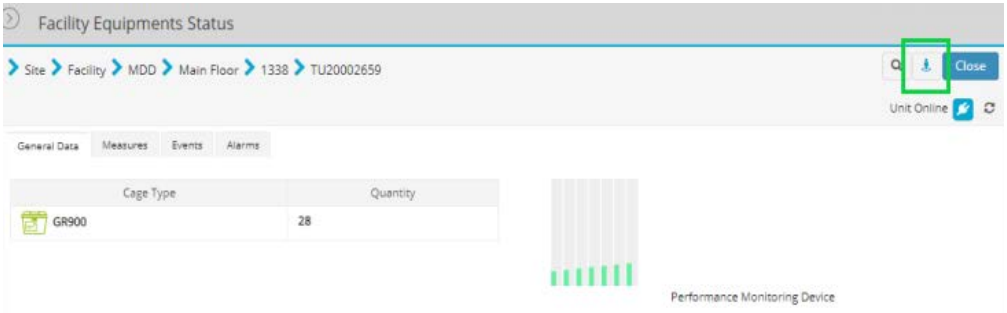
Sections	WiFlow Unit
1	

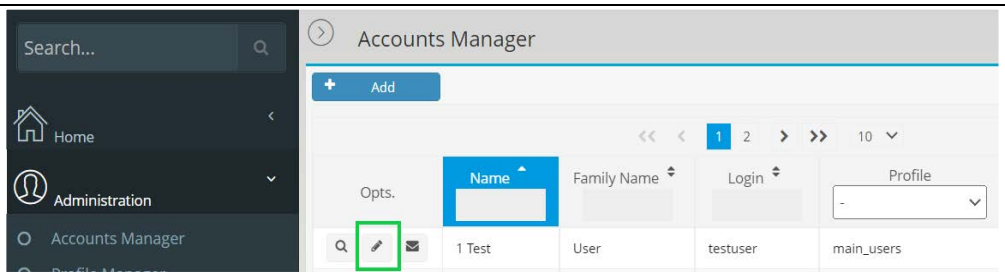
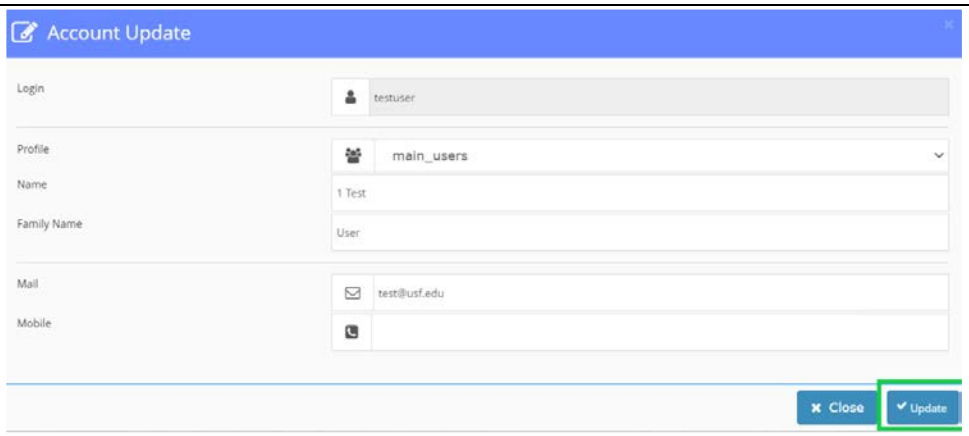
	Guardian Power Indicator • Solid green light: The unit is connected to the Guardian server • Blinking green light: The unit is not connected and is searching for the Guardian server

Sections	**WiFlow Unit (continued)**
2	 **Filter Status Bar** • The status bar indicates when filters are ready to be changed. • The red light under the yellow bar indicates filters need attention soon • The red light under the red bar indicates filters must be changed or there is an exhaust issue with the unit
3	 **Warning Triangle** • The icon will light up red if there is an exhaust issue or problem with air flow to the unit
4	

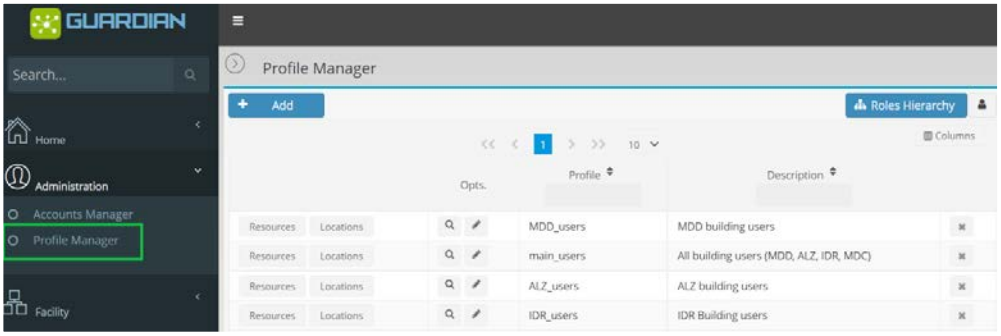
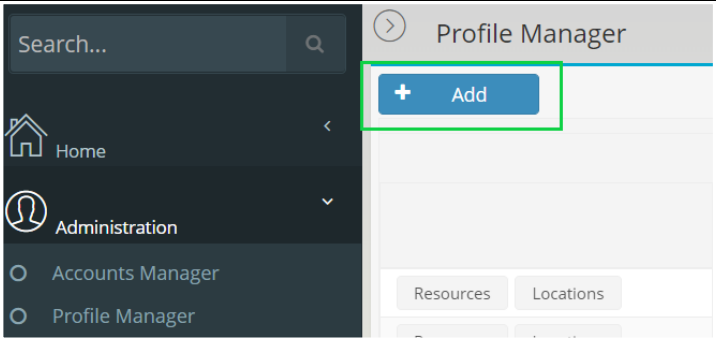
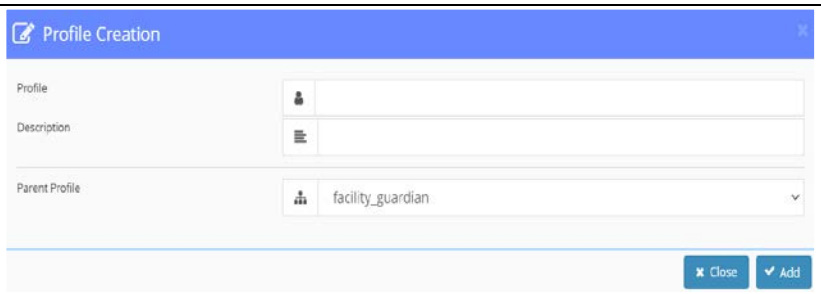
	Top of Unit • Yellow cable: Ethernet cable that connects the unit to the USF network. Cables may differ in color. • Red knob: Turn the knob to power on the unit. The power is on when lit. • Buoy (USB with chain): Anchors the unit to the Buoy associated with the physical location (building, floor, and room number). When a unit moves to a new location, unplug the old buoy from the unit and plug the new location buoy into the unit.

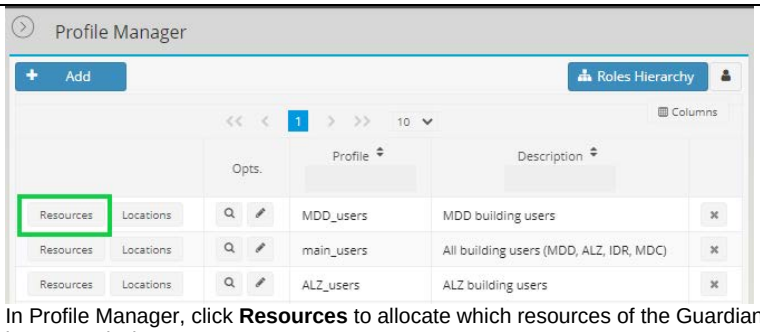
Steps	**One2One**
	 The One2One button will enable an online local interface of the unit that can be accessed through any mobile device such as a smartphone (iOS and Android), tablet, or laptop.
1	To turn on the One2One interface, press and hold the button for 2 seconds. The One2One button on the unit will turn blue.
2	 Locate the serial number found on the left side of the unit. *Example Serial #: 20002657*
3	**Connect to the One2One network** From your mobile device, connect to the SSID (Wi-Fi Name) matching the serial number of the machine. The Wi-Fi password for all units is **tecniplast** Example: *Wi-Fi Name: 20002657 Password: tecniplast* **Note:** Once your device is connected to the Wi-Fi successfully, there will be no internet connection

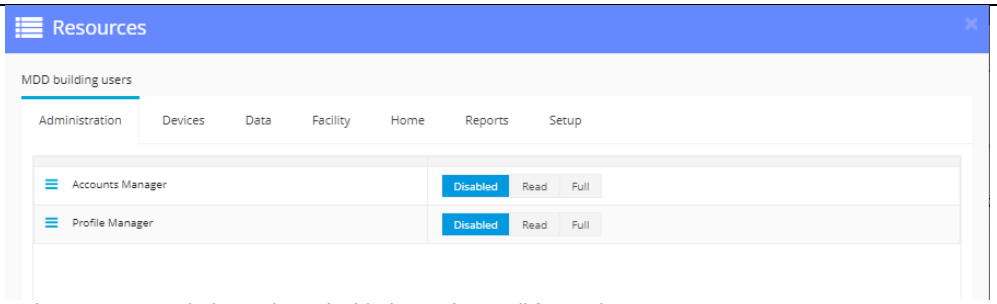
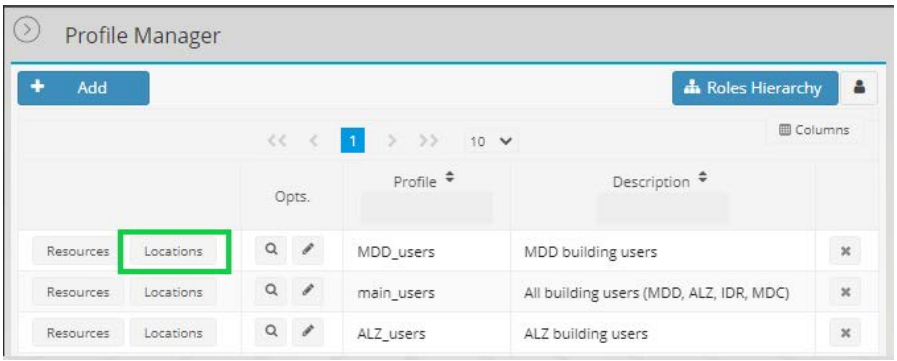
Steps	One2One (continued)
4	 Open your internet browser such as Safari or Chrome. Type in any URL address such as www.guardian.com or www.yourname.com You will then be connected to the One2One interface of the unit where you can manage settings and unit configurations such as temperature or number of cages.
5	After 5 minutes of inactivity, the One2One interface will turn off automatically. To manually turn it on, press and hold the One2One button for a few seconds until the blue light turns on.
6	 The One2One interface can also be accessed through the Guardian website. Click the One2One icon on the equipment status page of the unit to open a new browser window to the One2One interface webpage.

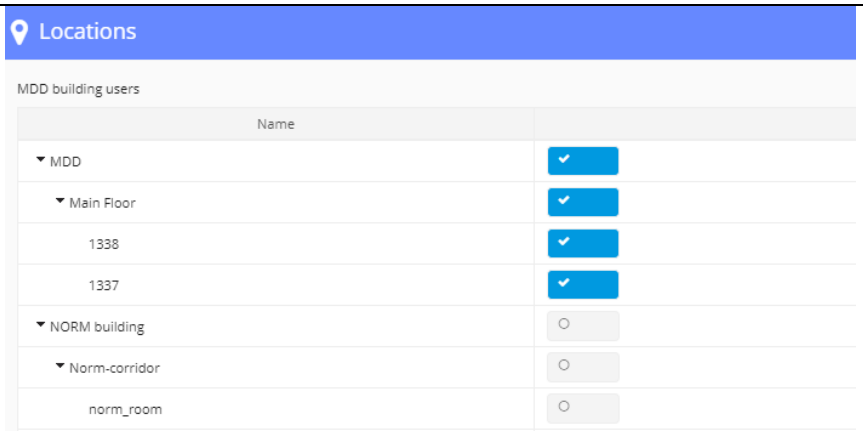
Steps	**Associating Users with Facilities (Profiles)**
	A profile can be assigned to each user to indicate what permissions the account has within the Guardian system as well as which facilities the user can view and manage.
1	 The profile type can be assigned when first creating the user account or by clicking the edit icon next to the user in the Accounts Manager list.
2	 Click the drop-down menu next to **Profile** to choose which profile to assign to the user
3	 Click **Update** to save changes

Facility Guardian Functions

Steps	Manage Profiles
1	 Click **Profile Manager** under the Administration tab
2	 Click **Add**
3	 Enter in the new profile information and select **Add** to save changes. • Profile: Profile name • Description: Description of profile permissions • Parent Profile: Keep as default facility guardian
4	

	 In Profile Manager, click **Resources** to allocate which resources of the Guardian website the profile will have permission to.

Steps	**Manage Profiles (continued)**
5	 In the Resources window select Disabled, Read, or Full for each resource. • Disabled: profile user will not be able to view or make changes to resource • Read: profile user will only be able to view resource • Full: profile user will be able to view and make changes to resource **Recommended Resources Setting** Select Full permission for the below resources: • Structure Editor (under Facility tab) • Facility Equipment Status (under Home tab) • Equipment Configurations (under Setup tab) Select Disabled permission for all other resources
6	 In Profile Manager, click **Locations** to allocate which facilities each profile can manage.
7	



Click on the icon next to each label to add or remove locations for each profile.

V. MAINTENANCE

1. Inspect condition of WiFlow AHU and its electrical cord/plug to ensure safe operation. Equipment determined to be unsafe will be removed from service immediately.

2. See Maintenance Schedule in User Manual.

3. Filters are replaced as described in the User Manual.

4. Pre-HEPA filters should be monitored every week and changed as needed in accordance with SOP 400 entitled “Rodent Husbandry”, SOP 408 entitled “Biosafety Level-2 (BSL-2) Rodent Husbandry”, or SOP 413 entitled “Isolation Rodent Husbandry”, as appropriate.

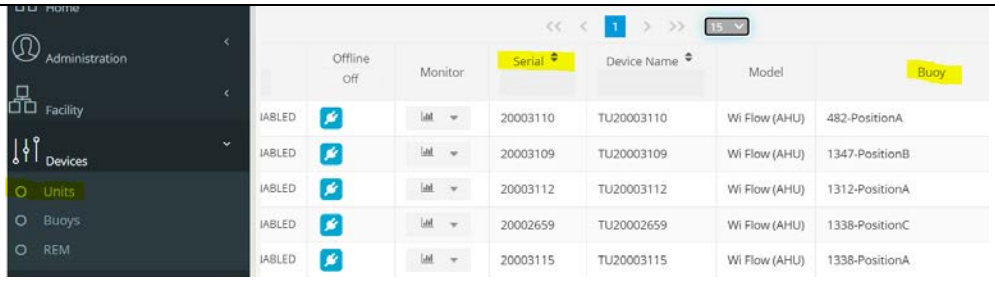
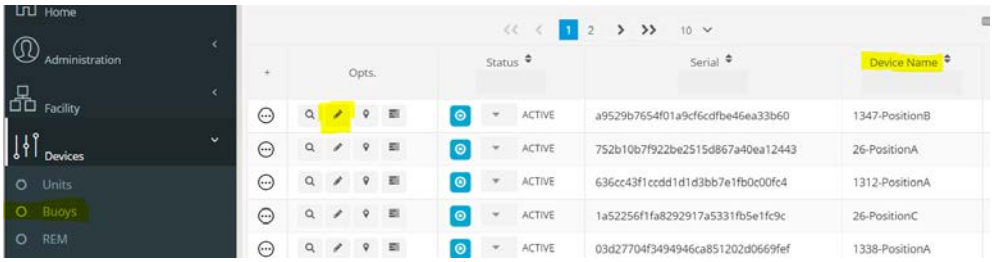
5. Hoses should be appropriate length to prevent it from curling or bunching up.

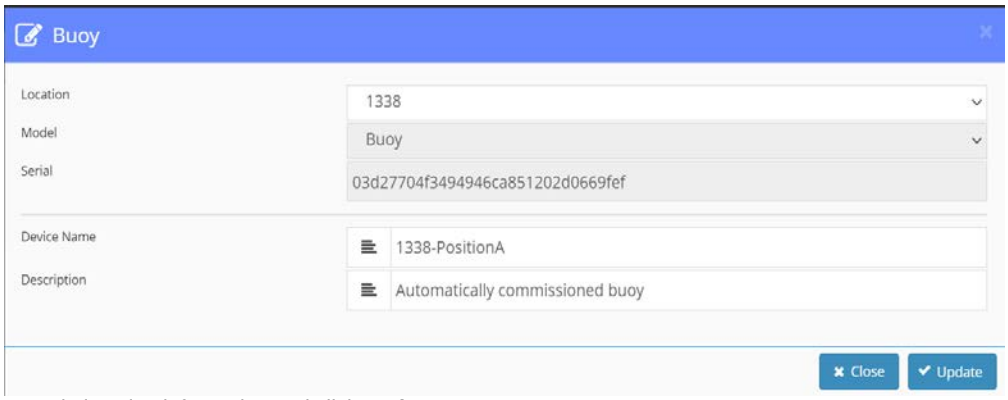
6. Notify Facility Manager immediately if WiFlow AHU does not operate properly.

7. The WiFlow AHU should be inspected and airflow calibration performed by a qualified technician, as needed, based on performance.

8. If the unit is moved to a new location, please be sure to update the AHU and buoy location in the Guardian System by following steps below.

Steps	**Updating Unit and Buoy Location**
	When a unit or buoy is moved to a new location, the Guardian system needs to be updated.
1	

	 Navigate to the **Units** section located under Devices. Here you can find the serial number of the machine and the buoy name connected to the unit.
2	 To update the location information, navigate to the **Buoys** section under Devices and click the edit icon next to the unit. You can determine which unit needs to be edited by the Device Name which will correspond with the buoy name from the **Units** section.

Steps	**Updating Unit and Buoy Location (continued)**
3	 Enter in location information and click **Update** • Location: Room number • Device Name: Network port number and position Note: Model and serial number cannot be edited on this screen.

V1. REFERENCES

1. Manufacturer's User Manual