User Guide

Praxair®

StarWatch™

Connect Website

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Praxair® *StarWatch*™ Connect Website User Guide

This guide covers the following topics:

- Introduction
- Devices
  - Alerts
  - Groups
- Incidents
- Reports
- Users
- My Accounts

Introduction

The *Praxair StarWatch*™ Cryogenic Monitoring System measures and displays the liquid level of any non-conducting cryogenic liquid including liquid nitrogen, liquid oxygen, liquid argon, and liquid carbon dioxide. The system also measures and displays the current pressure within a cryogenic container. The *StarWatch* Connect system can connect with the *StarWatch* Cryogenic Monitoring System and transfer the liquid level and pressure data to the sensor cloud and the data is accessible through the website and mobile app. The Praxair *StarWatch* Connect Website allows you to view liquid level and pressure measurements on the cryogenic container installed with the *StarWatch* Cryogenic Monitoring System, and configure the monitoring system settings.

This system is accessed using the following URL:

http://praxair.myalertlist.com

1. Log into the *StarWatch* Connect Website using the credentials that were provided separately. Once you have logged in, default settings display on the Device List Screen (see Figure 1 for an example).

Note: All individual and grouped *StarWatch* Connect devices assigned to your *StarWatch* Connect account are listed on this screen.

Note: Select **Logout** to log out of the website. Select **Help** to access help text. These options are located at the upper-right corner of the screen.

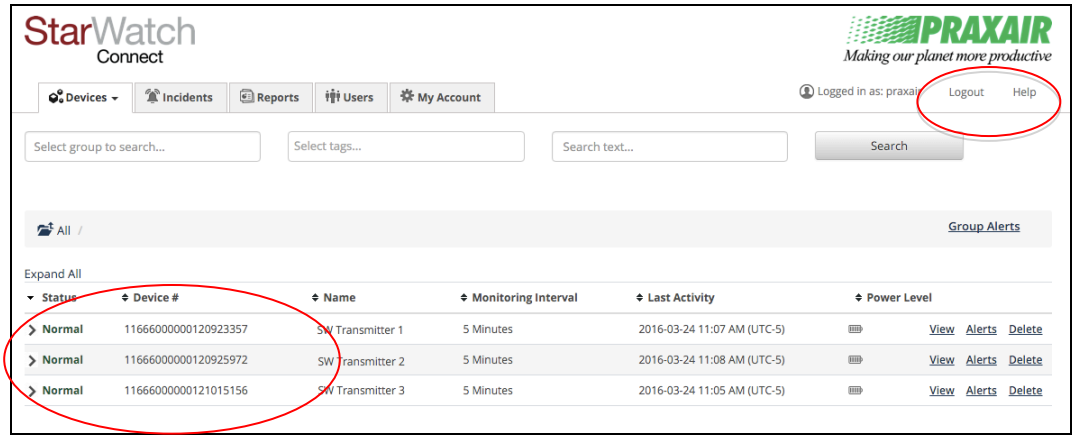

Figure 1: Device List Screen Example

Depending on the level of user access, four or five menu tabs display at the top of every screen.

Table 1 identifies these menu tabs, and describes each tab function. These tabs allow you to quickly navigate to the different areas of the *StarWatch* Connect Website.

Table 1: Menu Tabs	
Devices	View assigned devices and update their settings.
Incidents	View and manage current and historical incidents, which include data about incidents within your account.
Reports	Export and configure device measurement reports.
Users	View and manage settings for other users under the same overall department, company, or organization account. This menu tab is available only for users with Administrator or Owner access levels.
My Account	Manage settings for his/her own account.

Chapter 1— Devices

This chapter covers the following:

- **Device List**
- **Searching for Devices**
- **Device View**
- **Alerts**
- **Organize Groups**
- **Group Alerts**

1. Select the Devices tab, which displays a dropdown menu.
2. Select either **Device List** or **Organize Groups** from the dropdown menu (see Figure 2).

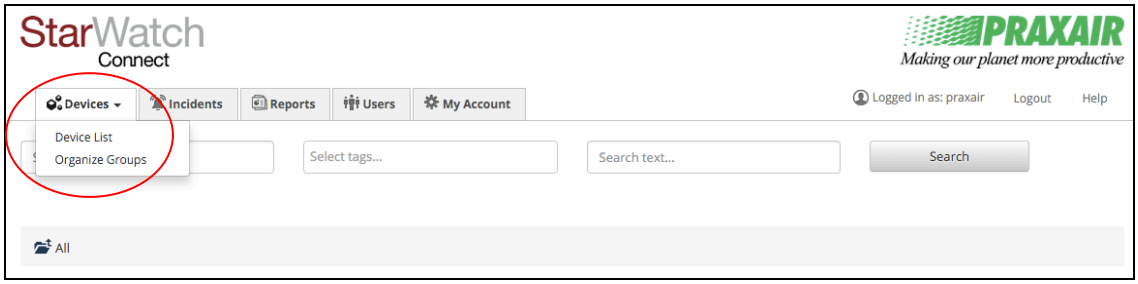

Figure 2: Devices Menu Tab Dropdown Options

<u>Description of Devices Dropdown Menu Options</u>

Device List: Displays a list of all individual devices and grouped devices that are assigned to your account.

Organize Groups: Allows you to create groups to better organize and manage the devices (see section 1.5).

1.1 Device List

When the **Device List** menu option is selected, a list of all the individual devices and grouped devices that are assigned to your account display (see Figure 3). Device groups are shown at the top of the screen (see section 1.5.2 for information on assigning/adding devices to groups).

Individual devices not assigned to a group are listed below the groups. By clicking on a group name, you can view the list of individual devices that have been assigned to that group.

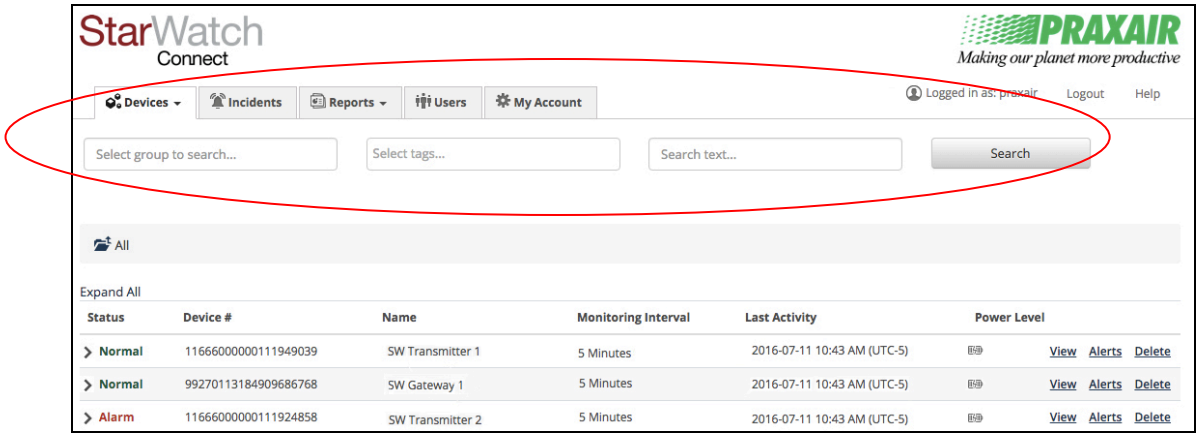

Figure 3: Search Tools on the Device List Screen

<u>Description of how to expand or collapse the displayed information</u>

Expand All: Select to show expanded details for all individual devices.

Collapse All: Select to show only the summary information for each device.

<u>Description of what is listed for each individual device</u>

Status:

- **Normal**: Device and sensors are within their specified acceptable ranges.
- **Warning**: Device and/or sensor(s) have exceeded a specified Alert threshold, but an Alarm Delay threshold has not been met. Notifications have not been sent.
- **Alarm**: Device and/or sensor(s) have exceeded a specified Alert threshold for a number of consecutive readings exceeding the Alarm Delay threshold. The device and/or sensor(s) are in alarm. Notifications have been sent. Select **View** for more details.

Device #: Every *StarWatch* Connect device that communicates with the *StarWatch* Connect Website has a unique device identification number (Device #). Click once to sort in ascending order; click again to sort in descending order.

Name: Each device can be assigned a descriptive name. Click once to sort in ascending order; click again to sort in descending order.

Monitoring Interval: Lists the time specified between each reading. Click once to sort in ascending order; click again to sort in descending order.

Last Activity: Lists the time when the last reading was recorded. Click once to sort in ascending order; click again to sort in descending order.

Power Level: The Grey bar within the battery icon indicates approximate percentage of battery life remaining in the device.

- The battery icon will contain a question mark ( ) if the device misses one transmission interval or if a device is powered off.
- If external power is supplied to the *StarWatch* Connect gateway, the battery icon will contain the power symbol ( ) and display the percentage of charged battery.

The battery icon for *StarWatch* Connect transmitters will indicate how much battery the device has remaining, and will have five grey bars when the battery is at full capacity ( ).

<u>Description of selectable options that each individual device listing also includes:</u>

View: Select to configure the settings of the device, including device name, device time zone, device address, sensor name, sensor data, and device alerts.

Alert: Select to add and edit alerts for the device and the sensors associated with the device.

Delete: Select to permanently delete the device and/or sensor and associated historical data from your account. The users at the Owner and Administrator access levels have this function. **CAUTION**: USE WITH CAUTION; DATA WILL BE LOST PERMANENTLY.

1. Click on any individual device row to show expanded details for that device.

   The Details field for a *StarWatch* Connect transmitter will display the status of:

   - All sensors connected to the transmitter.
   - Corresponding port numbers for each sensor.
   - Assigned sensor names.
   - Last sensor reading values.
   - Last sensor reading times.
   - Maximum, minimum, and average reading for each sensor over the prior 24 hours.

   There is no additional information shown in the **Details** field for a *StarWatch* Connect gateway. Clicking on the individual device row again will collapse the expanded details.

1.2 Searching for Devices

Multiple search tools are included in the **Device List** menu option that allows a user to find and show desired devices. The three different tools available for searching are identified below in the Definition of Search Tool section (see Figure 3).

Note: The search tools can be combined to further narrow the search. For example, a user may search a selected group for a selected tag or text string.

Note: To leave the search results and return to the full list of grouped and individual devices, select **Device List** from the **Devices** tab.

Definition of Search Tools

Select group to search: Find devices within a specified group (see section 1.5.2 for information on assigning devices to groups). All the current groups will appear in a separate window for user selection. If it is left blank, it searches the device in all groups and ungrouped devices.

Select tags: Find devices having the specified tag (see sections 1.3.1 and 1.3.3 for information on assigning tags to a device). All the current tags will appear in a dropdown list for user selection.

Search text: Find devices based on the specified text you have entered into the search bar.

1.3 Device View

The Device View selection allows you to view and edit information for a particular device. Figures 4 and 5 show screen examples that display different information that can be accessed.

1. From the Device List Screen, select **View** next to any device to view and edit information for that device. The Device View Screen displays Device Information and Device Alerts (see Figure 4), and sensor information and sensor alerts that are associated with the device (see Figure 5).

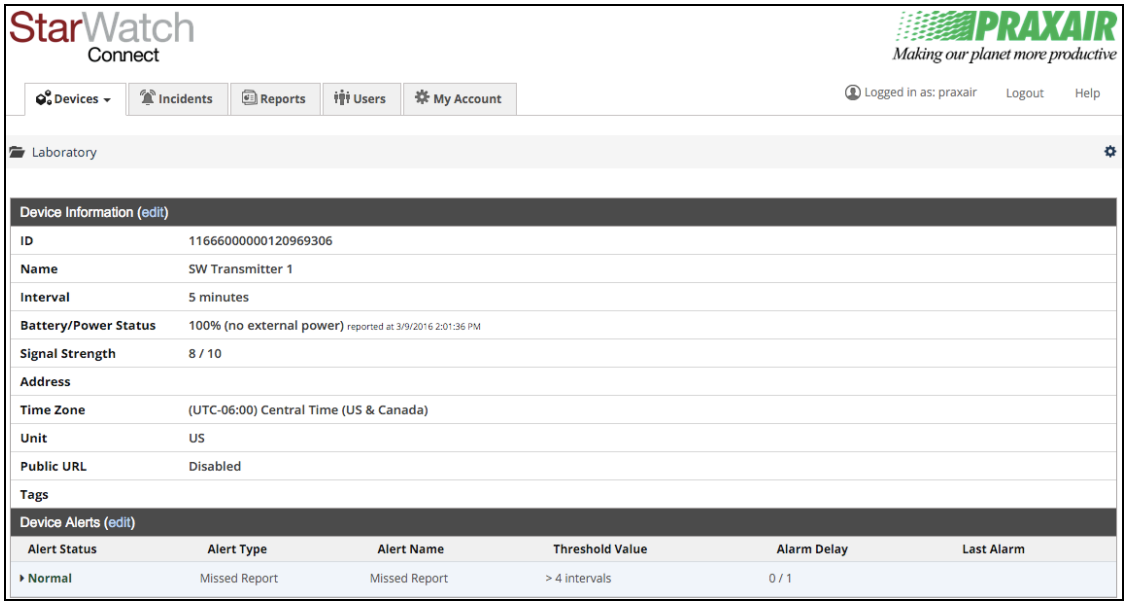

Figure 4: Device View Screen Showing Examples of Device Information and Device Alerts

1.3.1 Device Information

1. Select **edit** to configure the device settings.

   The field values identified below can be viewed or adjusted (see Figure 4)

<u>Definition of the Field Values that can be Viewed or Adjusted</u>

ID: Unique ID given to every device (cannot be edited)**.**

Name: Common name for the device. This name will appear in all device alerts.

Interval:

- If the device is a *StarWatch* Connect transmitter, this parameter defines the interval between sensor readings.
- If the device is a *StarWatch* Connect gateway, this parameter defines the interval between each time the gateway uploads information to the *StarWatch* Connect Website.

Battery/Power Status: Displays the battery level and charging status of applicable devices.

- For the *StarWatch* Connect transmitter, less than 20 percent battery level will trigger a Low Battery reading.

- For the *StarWatch* Connect gateway, loss of AC power will trigger an AC Power Lost reading.

The user can set up an alert that will notify him/her if a Low Battery reading or AC Power Lost reading occurs.

Signal Strength:

- For the *StarWatch* Connect gateway, the numerical value that is displayed represents the communication signal strength between the gateway and cellular network.
- For the *StarWatch* Connect transmitter, the numerical value that is displayed represents the communication signal strength between the transmitter and its respective gateway.

Address: Enter the physical address or coordinates of the device.

Time Zone: Select the time zone of the device; the selection is worldwise. For example:

- UTC-5:00 Eastern time (U.S. and Canada)
- UTC-6:00 Central time (U.S. and Canada)
- UTC-7:00 Mountain time (U.S. and Canada)
- UTC-8:00 Pacific time (U.S. and Canada)

Unit: Select the type of units to use—U.S. Customary (Fahrenheit) or Metric (Celsius)—for the temperature sensor built into the *StarWatch* Connect transmitter.

Public URL: If enabled, the link can be distributed to allow view-only access to this specific device on a web browser.

Tags: Tags can be applied to devices and sensors. When tags are applied to devices, they can be used to filter devices for easy searching (see section 1.2 for an overview of searching for devices). Tags applied to devices can be used to select which devices belong to a group alert (see section 1.6 for how to set up a group alert).

1.3.2 Device Alerts

The Device Alerts window displays the status of all alerts created for that device. Device alerts assess the functionality of the monitoring device. The Device Alerts window displays the Alert Status, Alert Type, Alert Name, Threshold Value triggering the alert, Alarm Delay, and Last Alarm (see Figure 4).

1. Select **edit** to configure the device alerts. See section 1.4 for a detailed description.

Definition of the Available Alert Types for the *StarWatch* Connect Transmitter

Low Battery: The battery level has dropped below 20 percent.

Missed Report: The device has not reported to the *StarWatch* Connect Website at the specified interval. Missed reports can be triggered by one of the following reasons:

- The *StarWatch* gauge is on power conservation (PCO) Mode. No level or pressure data can be transmitted to the *StarWatch* Connect Website.
- The cable between the *StarWatch* Connect transmitter and gauge is not connected, or not connected well. No level or pressure data is transmitted to the *StarWatch* Connect Website.
- Communication between the *StarWatch* Connect transmitter and gateway is lost. Temperature, pressure, and level data will no longer be transmitted to the *StarWatch* Connect Website; however, the gateway is still reporting at the set interval.
- Communication between the *StarWatch* Connect gateway and cellular network is lost. Temperature, pressure, and level data will no longer be transmitted to the *StarWatch* Connect Website, and the gateway is not reporting at the set interval.

Two alert types are available for *StarWatch* Connect gateway:

Power Monitor: External power to the device has been interrupted.

Missed Report: The device has not reported to the *StarWatch* Connect Website at the specified interval. Missed reports can be triggered by one of the following reasons:

- Communication between the *StarWatch* Connect gateway and cellular network is lost.
- The *StarWatch* Connect gateway is failing to communicate with the server.
- The *StarWatch* Connect gateway has become unplugged and the backup battery has completely discharged.
- The *StarWatch* Connect gateway has been turned off and missed reporting into the *StarWatch* Connect Website.
- There is a hardware failure that is causing the *StarWatch* Connect gateway to miss reporting into the *StarWatch* Connect Website.

1.3.3 Sensor Information

The *StarWatch* Connect transmitter possesses a built-in temperature sensor. When the *StarWatch* Connect transmitter is connected to the *StarWatch* gauge, it accesses sensors measuring liquid level and pressure in the cryogenic vessel. The three sensors are displayed on the *StarWatch* Connect Website as:

- Temperature sensor on Port #0
- Pressure sensor on Port #21
- Level sensor on Port #22

Note: The port numbers do not matter.

1. Select **edit** to configure the sensor settings. The following field values can be viewed or adjusted (see section 1.4 for a detailed description):

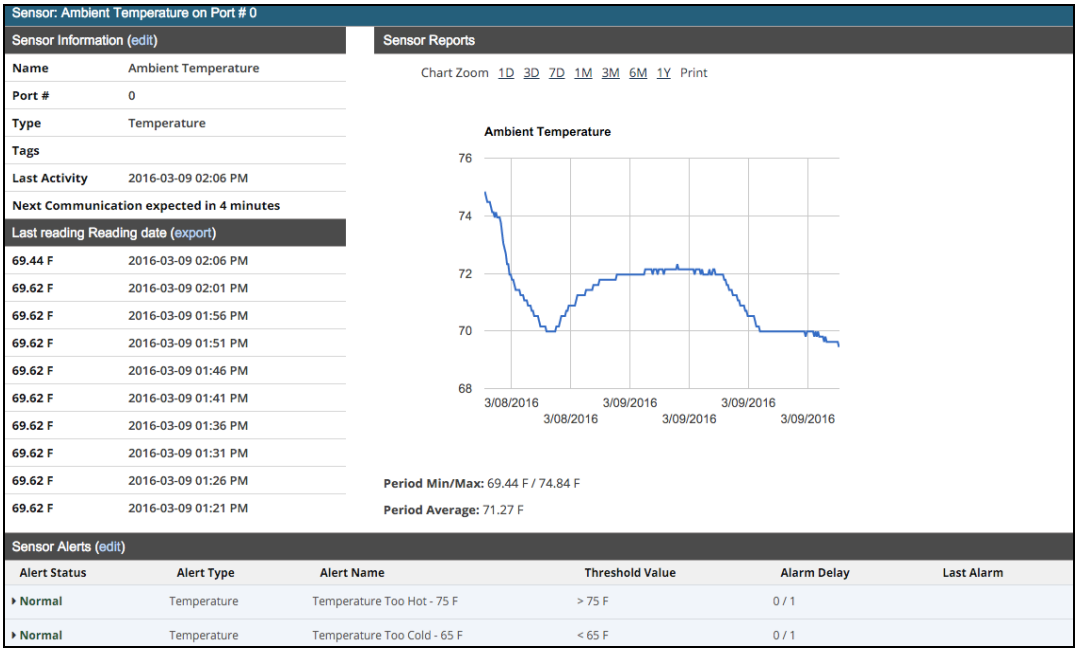

Figure 5: Device View Screen Showing Examples of Sensor Information and Sensor Alerts

<u>Definition of Field Values that can be Viewed or Adjusted</u>

Name: Common name for the sensor. This sensor name will appear in all sensor alerts.

Offset: Any number entered here will be added to all future readings. For example:

- Entering 0 (default) will display the reading exactly as transmitted by the device.
- Entering 5.2 will add 5.2 units to the transmitted readings.
- Entering –3.3 will subtract 3.3 units from the transmitted readings.

Tag: Tags can be applied to devices and sensors. Tags applied to sensors can be used to select which sensors belong to a group alert (see section 1.6 for how to set up a group alert).

Sensor Reports: The graph can display historical data from the prior 1 day, 3 days, 7 days, 1 month, 3 months, 6 months, or 1 year. When choosing longer periods, such as 3 months, 6 months, and 1 year, sampled data will be used, and may not show all maximum and minimum values during that time-frame. Use the Export feature to view all sensor data.

Sensor Readings: Displays the last 10 measurements and reading times for the sensor.

Export: This option exports a sensor's historical data as an Excel (.xls) file. Select a Start Date and End Date, and then click [**Export**].

Sensor Alerts: The Sensor Alerts Screen displays the status of all alerts created for that sensor. Sensor alerts display alarms if a sensor reading crosses a specified Threshold Value. The Sensor Alerts Screen displays the Alert Status, Alert Type, Alert Name, Threshold Value triggering the alert, Alarm Delay, and Last Alarm (see example in Figure 5).

1.4 Alerts

Alerts notify users about changes in device functionality or sensor readings. The Alert Configuration Screens can be accessed in three different ways on the *StarWatch* Connect Website:

Selecting on any of the following options will take you to an Alerts List Screen that displays the status of all the alerts created for that device and any sensors it possesses. An Alert List Screen example is shown in Figure 6.

1. From the Device List Screen, select **Alerts** next to any individual device (see section 1.1).

   OR

   From the Device View Screen (see Figure 4), select **edit** located above the Device Alerts window (see section 1.3.2).

   OR

   From the Device View Screen (see Figure 5), select **edit** located above the Sensor Alerts window (see section 1.3.3).

The Alert List displays for each alert. The following information displays:

- Alert Status
- Sensor Name (if the alert corresponds to a sensor)
- Alert Type
- Alert Name
- Threshold Value triggering the alert
- Alarm Delay
- Last Alarm

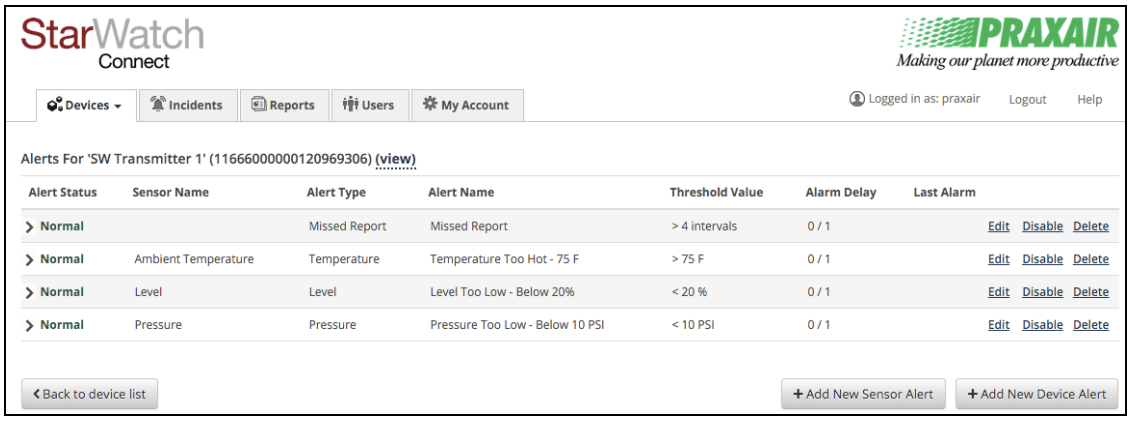

Figure 6: Alert List Screen Example

The Alarm Delay feature can be used to delay alert notifications until a device or sensor has exceeded its specified Threshold Value for a specified number of intervals. For example, if a device's Monitoring Interval is 5 minutes and the Alarm Delay is set to 3, an alert will be sent out after the sensor has remained outside its assigned Threshold Value for 3*5=15 minutes.

When viewing the alert on the Alert List Screen, the Alarm Delay column will show two numbers separated by a slash (/) symbol. The first, left-most number is the actual number of consecutive readings that have remained outside the assigned Threshold Value. The second, right-most number is the specified Alarm Delay, i.e., the number of consecutive readings outside the assigned Threshold Value that would trigger an alert notification.

The default Alarm Delay setting for any sensor or device is 1.

<u>Definition of Alert Status Display</u>

Alarm (color red): The reading has remained outside the assigned Threshold Value for a consecutive number of readings equal to the Alarm Delay.

Warning (color yellow) : The last reading was outside the assigned Threshold Value, but the consecutive number of readings outside the assigned Threshold Value is less than the Alarm Delay.

Normal (color green) : The last reading was not outside the assigned Threshold Value.

Definition of Options that the User can Select for Existing Alerts

Edit: Select **Edit** to modify the alert settings. Users at Owner, Administrator, Editor and Sensor Alert Editor access level can use this function.

Disable/Enable:

- Select **Disable** to disable the alert without deleting it. Once disabled, the option will change to Enable.
- Select **Enable** to enable the previously disabled alert. Once enabled, the option will change to Disable. When an alert is disabled, the alert status will change from Normal, Warning, or Alarm to Disabled.

  Users at Owner, Administrator, Editor, and Sensor Alert Editor access level can have these functions.

Delete: Select **Delete** to permanently delete the alert. Users at Owner, Administrator, and Editor and Sensor Alert Editor access levels can perform these functions, while the Sensor Alert Editor access level can only delete sensor alerts.

1. Click on any individual alert row to show expanded details for that alert. The Details field will display the type of notification (SMS, email, or phone), the phone number or email address for the notification, and whether an additional notification should be sent once the reading is cleared (i.e., no longer outside the specified Threshold Value).
2. Select **Send a Test Message** to send a test notification to test if your notification method is correct.
3. Click on the individual alert row again to collapse the expanded details.

The Alert List Screen also includes [+ **Add New Sensor Alert**] and [+ **Add New Device Alert**] buttons for a *StarWatch* Connect transmitter or gateway. These options are described in detail in sections 1.4.1 and 1.4.2.

1.4.1 Add New Sensor Alert

Sensor alerts can only be created for a *StarWatch* Connect transmitter. As described in section 1.3.3, each *StarWatch* Connect transmitter is connected to three sensors that measure:

1. Ambient temperature.
2. Liquid level in the cryogenic vessel.
3. Pressure in the cryogenic vessel. Alerts can be set up to notify users of changes in these measurements (see Figure 7).

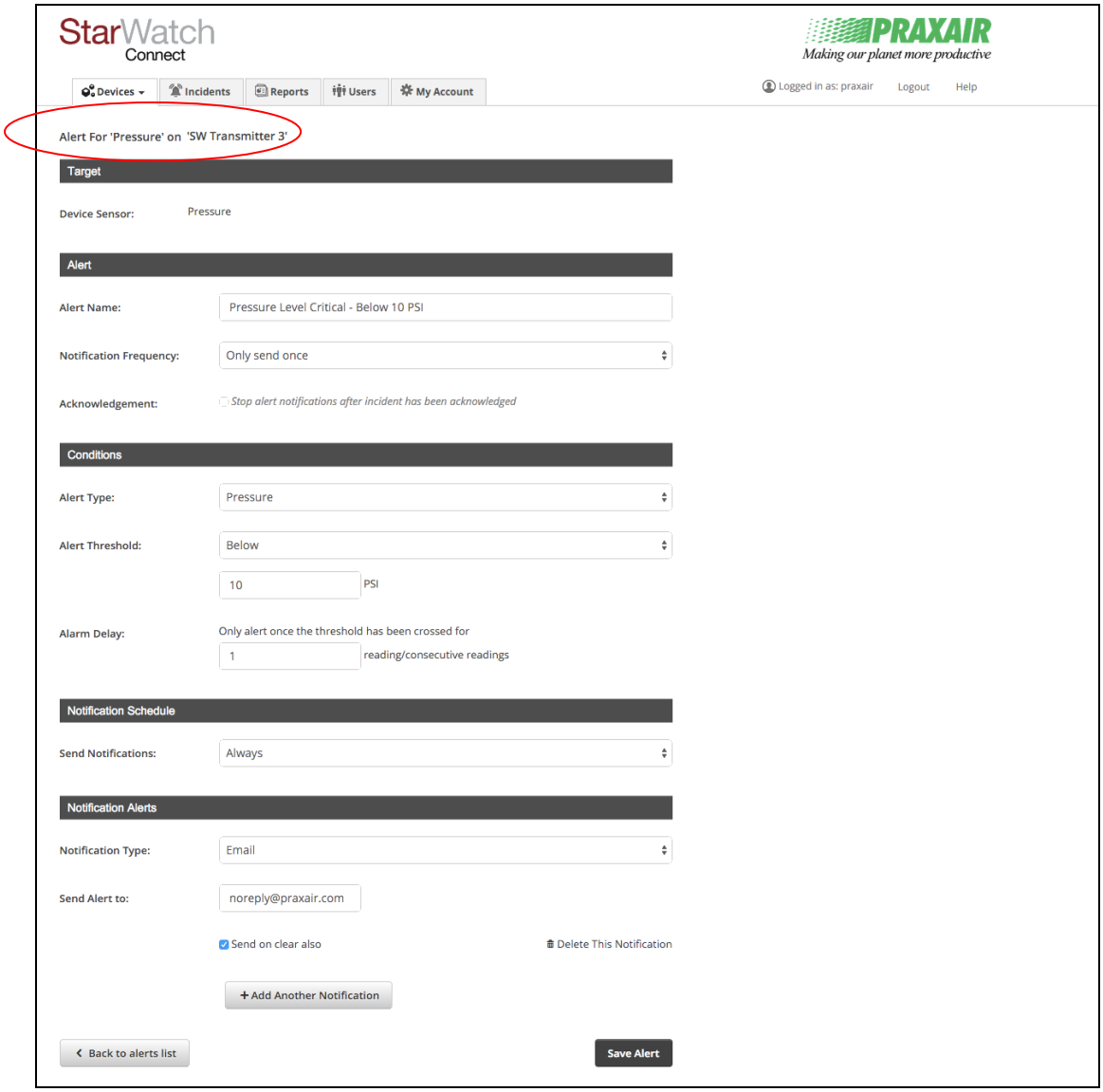

Figure 7: Adding a New Sensor Alert Screen Example

Definition of Fields that are Used to Create Each Alert

Device Sensor: Select the sensor for which you would like to apply the alert

Alert Name: Add a name for the alert. This name will be included in notifications, so it is recommended to use a name that will help you identify the application or location impacted by the alert.

Notification Frequency: With Alert Frequency set to "Only send once," an alert is only sent the first time a sensor reading crosses its Alert Threshold. For the other Alert Frequency settings, an alert is sent at the specified interval as long as the sensor measurement remains beyond the Threshold Value. As a later option, an alert can also be sent if/when the sensor reading returns to normal (see "Send on clear also").

Acknowledgement: If the box is unchecked, alerts will be sent at specified interval until the sensor returns to normal. If the box is checked, alerts will stop being sent when the sensor returns to normal or when a user logs into the *StarWatch* Connect Website and acknowledges the alert.

Alert Type: Each sensor only measures one attribute, so the Alert Type is automatically selected as Temperature, Level, or Pressure based on the selected sensor.

Alert Threshold: Select the Threshold Value for the sensor measurement that will be used to determine whether an alert should be generated. This threshold, along with the current reading, will be displayed in the alert.

Alarm Delay: As explained in section 1.4, the Alarm Delay feature can be used to delay alert notifications until a device or sensor has exceeded its specified Threshold Value for a specified number of measurement intervals. For example, if a device's Monitoring Interval is 5 minutes and the Alarm Delay is set to 3, an alert will be sent out after the sensor has remained outside its assigned Threshold Value for 5*3=15 minutes.

Send Notifications: Select when alerts should be sent using the choices below. For all choices except Always, you will enter an active time window with a start time and end time.

- **Always**: Alerts active 24 hours per day, 7 days per week
- **Everyday**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be earlier in the day than the end time (e.g., 9 a.m. to 5 p.m.).
- **Nights**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).

- **Nights and Weekends**: Alerts are active during the specified time window for Monday through Friday plus all day Saturday and Sunday. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).
- **Weekdays**: Alerts are active during the specified time window for Monday through Friday. Typically, the start time and time are selected to cover business hours (e.g., 8 a.m. to 5 p.m.).

Notification Types: Alert notifications can be sent by phone, email, and SMS (text message).

Send Alert To: Enter the phone number, cell phone number, and provider or email address for the recipient.

Send on clear also: Check this box to have the alert clearance notification sent to the recipient once the sensor has returned back within its normal threshold.

[+ **Add Another Notification**]: Click this button to add another notification recipient to the alert.

Delete This Notification: Select to remove the recipient from the alert.

[**Save Alert**]: Click this button to save the changes.

1.4.2 Add New Device Alert

Device alerts can be created for a *StarWatch* Connect transmitter or gateway. Alerts can be set up to notify users of the power status of a device and whether the device is communicating properly (see Alert Types) (see Figure 8).

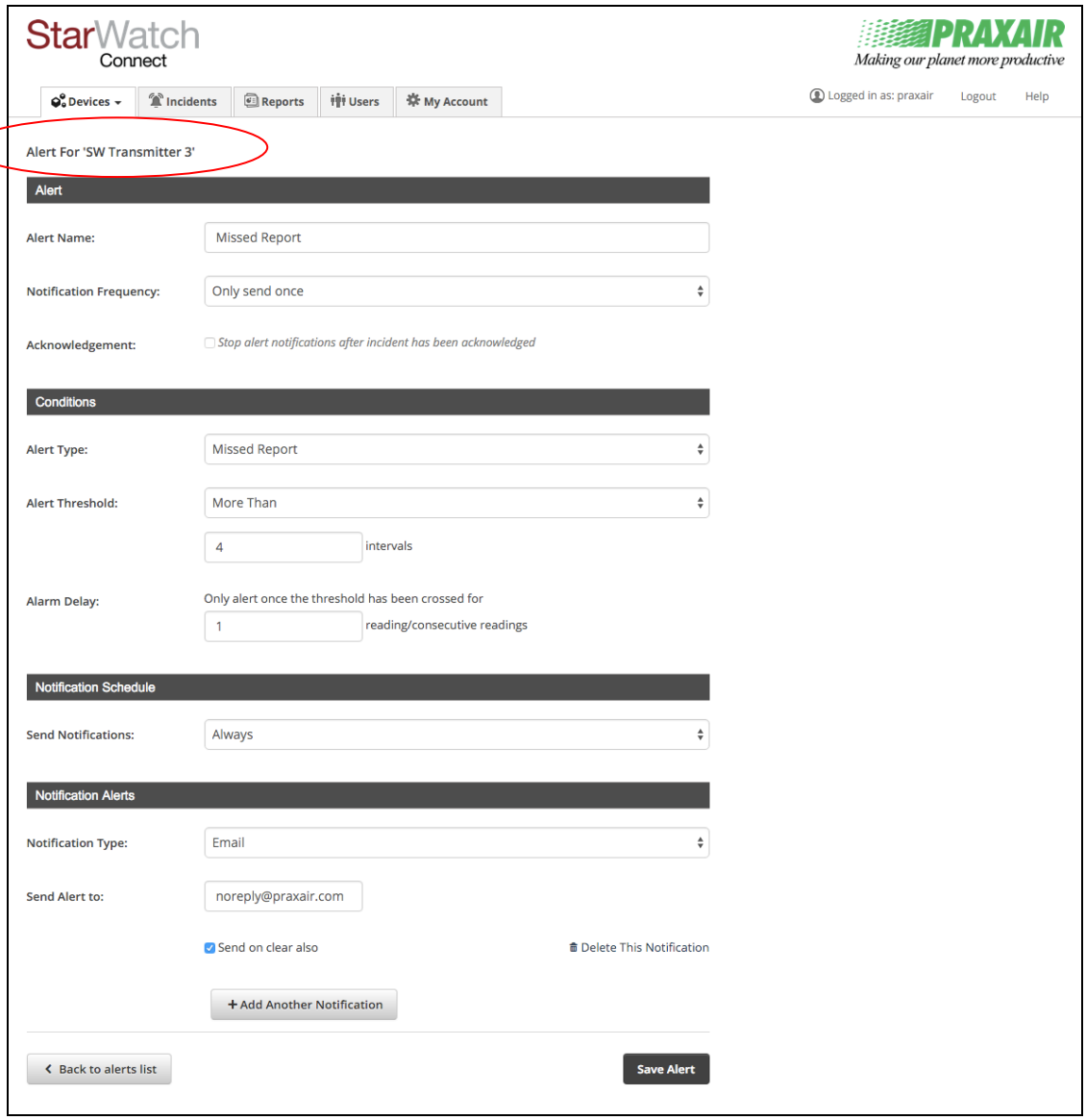

Figure 8: Adding a New Device Alert Screen Example

Definition of Fields that are Used to Create Each Alert

Alert Name: Add a name for the alert. This name will be included in notifications, so it is recommended to use a name that will help you identify the application or location impacted by the alert.

Notification Frequency: With Alert Frequency set to “Only send once,” an alert is only sent the first time the reading crosses the specified Alert Threshold. For the other Alert Frequency settings, an alert is sent at the specified interval as long as the reading remains beyond the Threshold Value. As a later option, an alert can also be sent if/when the reading returns to normal (see “Send on clear also”).

Acknowledgement: If the box is unchecked, alerts will be sent at a specified interval until the reading returns to normal. If the box is checked, alerts will stop being sent when the reading returns to normal or when a user logs into the *StarWatch* Connect Website and acknowledges the alert.

Alert Type and Alert Threshold: The following alert types are available:

- **Missed Report**: Available for both *StarWatch* Connect gateway and transmitter. An alert notification will be sent if the *StarWatch* Connect Website fails to receive readings from a device for the number of intervals specified in the Alert Threshold. The minimum number of intervals is 4. For example, if a device’s Monitoring Interval is set to 5 minutes and the Alert Threshold is set to 4 intervals, the *StarWatch* Connect Website will send an alert notification after 20 minutes of the device not reporting.
- **Power Monitor**: Available for the *StarWatch* Connect gateway only. An alert notification will be sent when the device has lost AC power and is running on battery power.
- **Low Battery**: Available for the *StarWatch* Connect transmitter only. An alert notification will be sent when the device has less than 20 percent battery remaining.

Alarm Delay: As explained in section 1.4, the Alarm Delay feature can be used to delay alert notifications until a device or sensor has exceeded its specified Threshold Value for a specified number of measurement intervals. For example, if a device’s Monitoring Interval is 5 minutes, the Missed Report Alert Threshold is set to 4 intervals, and the Alarm Delay is set to 3, an alert notification will be sent out after the device has failed to communicate with the *StarWatch* Connect Website for (5*4)*3=60 minutes.

Send Notifications: Select when alerts should be sent using the choices below. For all choices except Always, enter an active time window with a start time and end time.

- **Always**: Alerts active 24 hours per day, 7 days per week
- **Everyday**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be earlier in the day than the end time (e.g., 9 a.m. to 5 p.m.).
- **Nights**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).
- **Nights and Weekends**: Alerts are active during the specified time window for Monday through Friday plus all day Saturday and Sunday. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).
- **Weekdays**: Alerts are active during the specified time window for Monday through Friday. Typically, the start time and time are selected to cover business hours (e.g., 8 a.m. to 5 p.m.).

Notification Types: Alert notifications can be sent by phone, email, and SMS (text message).

Send Alert To: Enter the phone number, cell phone number and provider, or email address for the recipient. Each phone number is entered as 10 digits. Each phone number, cell phone number, or e-mail address is entered as one alert notification.

Send on clear also: Check this box to have the alert clearance notification sent to the recipient once the sensor has returned back within its normal threshold.

[+ **Add Another Notification**]: Click this button to add another notification recipient to the alert.

Delete This Notification: Select to remove the recipient from the alert.

[**Save Alert**]: Click this button to save the changes.

1.5 Organize Groups

Grouping is a powerful tool that you can use to organize all your devices for easier management. Shown in Figure 2, this tool is accessed by selecting **Organize Groups** from the **Devices** menu tab located near the top-left of the screen.

1.5.1 Create a Group

1. Select the Devices tab, and then select **Organize Groups**.
2. Click [**Create New Group**] to create a group.
   - If the folder labeled “All” is highlighted, the group will be created in that folder.
   - If the folder corresponding to an existing group is highlighted, a sub-group will be created within that existing group.
3. Name your new group while the new folder is highlighted. You can rename the group at a later time by using the Rename button.
4. Select the group at any time, and click [**Delete**] to remove the group. If the deleted group has devices, the devices within the deleted group will be moved to the **All** bucket again.

1.5.2 Add Devices to a Group

1. Select **Device List** from the **Devices** tab (see section 1.1), and then click on the group which the device(s) will be added to.
2. Once you have selected the group, click [**Add Devices**].
3. A selectable list of all devices within your account will appear. You can either scroll through the list to find the device(s) you want to add, or simply search for a device in the open-text search bar

1.5.3 Move Devices Within Groups

1. Select **Device List** from the **Devices** tab (see section 1.1) to find the device in the group, and then select **View** beside the device you want to move.
2. Click on the gear icon located in the upper left-hand corner of the Device Information view (see Figure 4).
3. Choose the group where you want to move the device. Selecting **All** returns the device to a general pool of devices not assigned to a group.
4. Click [**Save**] to move the device to the selected group.

1.5.4 Group Permissions

Owners and administrators of the *StarWatch* Connect Website can restrict which groups a user is allowed to see. See section 4 for more details on user management.

1. Select the Users tab at the top of the screen.
2. Select **View** for the specific user.
3. Under Group Permissions, select **edit**, and then select the groups available to you.

1.6 Group Alerts

A group alert is a single alert that applies to all devices or a subset of devices within a group. To create a group alert:

1. Select **Device List** from the **Devices** tab (see section 1.1), and then click on the group that contains the devices for the group alert. The resulting page will display all devices and sub-groups within the selected group.
2. Select **Group Alerts** located at the top, right side of the device list. The resulting page will display all existing group alerts for the selected group.
3. **Click** [**Add New Alert**]. The resulting page allows you to create the group alert by completing the following fields (see Figure 9)

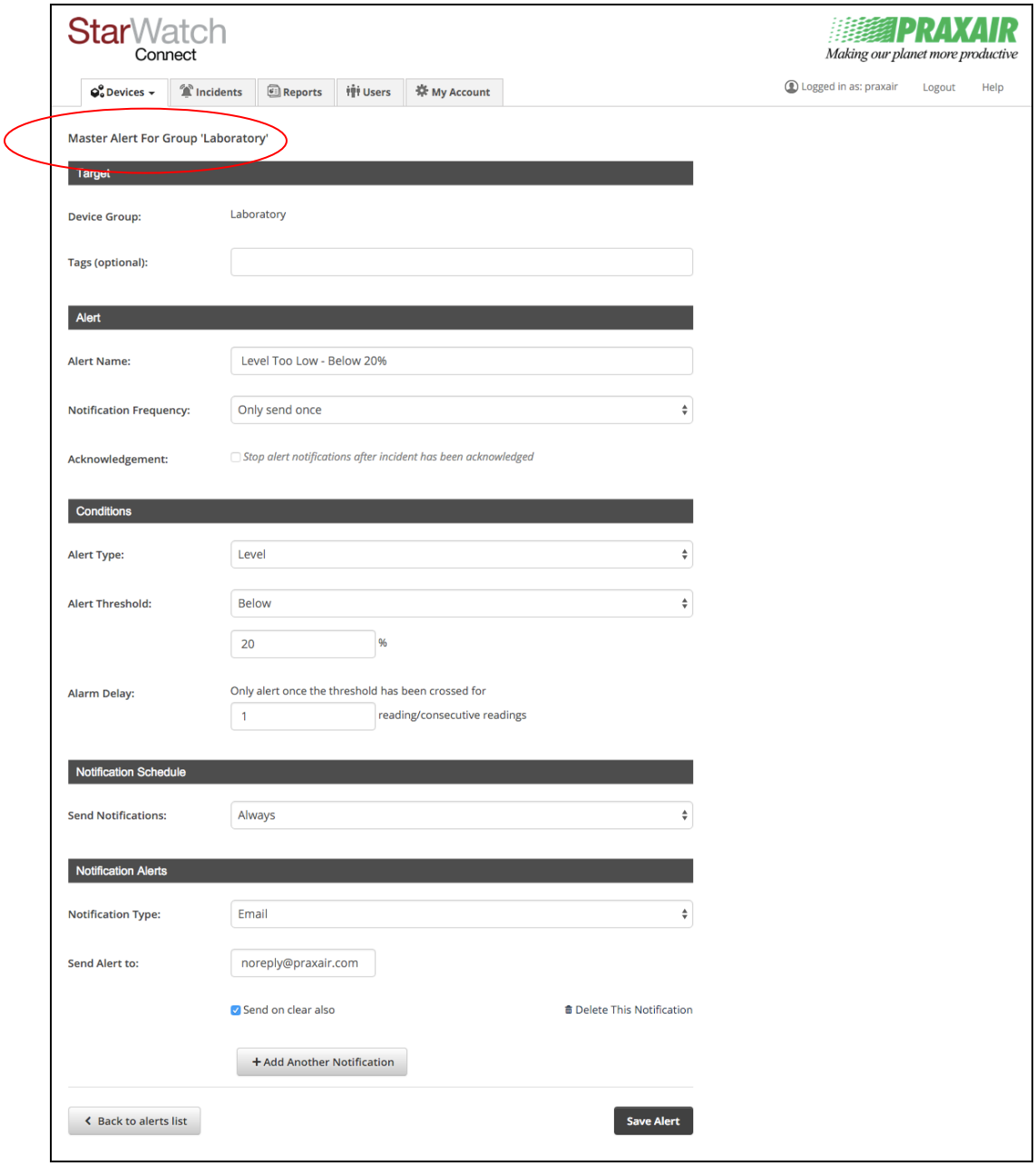

Figure 9: Adding a New Group Alert Screen Example

Definition of Fields that are Used to Create Each Alert

Device Group: This displays the name(s) of group(s) that the single alert will be applied to.

Tags (optional) : As mentioned above, tags can be applied to devices (see section 1.3.1) and sensors (see section 1.3.3). Adding tags to a group alert will restrict the alert to only those devices or sensors within the group that possesses the selected tag.

Alert Name: Add a name for the alert. This name will be included in notifications, so it is recommended to use a name that will help you identify the application or location impacted by the alert.

Notification Frequency: With Alert Frequency set to "Only send once," an alert is only sent the first time the reading crosses the specified Alert Threshold. For the other Alert Frequency settings, an alert is sent at the specified interval as long as the reading remains beyond the Threshold Value. As a later option, an alert can also be sent if/when the reading returns to normal (see All Clear).

Acknowledgement:

- If the box is unchecked, alerts will be sent at a specified interval until the reading returns to normal.
- If the box is checked, alerts will stop being sent when the reading returns to normal or when a user logs into the *StarWatch* Connect Website and acknowledges the alert.

Alert Type and Alert Threshold: The following alert types are available:

- **Level**: Available for *StarWatch* Connect transmitters only. An alert notification will be sent when the level sensor reading crosses the Alert Threshold value.
- **Low Battery**: Available for *StarWatch* Connect transmitters only. An alert notification will be sent when the device has less than 20 percent battery remaining.
- **Missed Report**: Available for *StarWatch* Connect gateways and transmitters. An alert notification will be sent if the *StarWatch* Connect Website fails to receive readings from a device for the number of intervals specified in the Alert Threshold. The minimum number of intervals is 4. For example, if a device's Monitoring Interval is set to 5 minutes and the Alert Threshold is set to 4 intervals, the *StarWatch* Connect Website will send an alert notification after 20 minutes of the device not reporting.

- **Power Monitor**: Available for *StarWatch* Connect gateways only. An alert notification will be sent when the device has lost AC power and is running on battery power.
- **Pressure**: Available for *StarWatch* Connect transmitters only. An alert notification will be sent when the pressure sensor reading crosses the Alert Threshold value.
- **Temperature**: Available for *StarWatch* Connect transmitters only. An alert notification will be sent when the temperature sensor reading crosses the Alert Threshold value.

Alarm Delay: As explained in section 1.4, the Alarm Delay feature can be used to delay alert notifications until a device or sensor has exceeded its specified Threshold Value for a specified number of measurement intervals. For example, if a device's Monitoring Interval is 5 minutes, the Missed Report Alert Threshold is set to 4 intervals, and the Alarm Delay is set to 3, an alert notification will be sent out after the device has failed to communicate with the *StarWatch* Connect Website for 5*4*3=60 minutes.

As another example, if a device's Monitoring Interval is 5 minutes and the Alarm Delay is set to 5, an alert will be sent out after a sensor has remained outside its assigned Threshold Value for 5*5=25 minutes.

Send Notifications: Select when alerts should be sent using the choices below. For all choices except Always, you will enter an active time window with a start time and end time.

- **Always**: Alerts active 24 hours per day, 7 days per week.
- **Everyday**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be earlier in the day than the end time (e.g., 9 a.m. to 5 p.m.).
- **Nights**: Alerts active during the specified time window, 7 days per week. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).
- **Nights and Weekends**: Alerts are active during the specified time window for Monday through Friday plus all day Saturday and Sunday. Typically, the start time will be later in the day than the end time (e.g., 7 p.m. to 7 a.m.).
- **Weekdays**: Alerts are active during the specified time window for Monday through Friday. Typically, the start time and time are selected to cover business hours (e.g., 8 a.m. to 5 p.m.).

Notification Type: Alert notifications can be sent by phone, email, and SMS (text message).

Send Alert To: Enter the phone number, cell phone number, and provider, or email address for the recipient. Each phone number is entered as 10 digits. Each phone number, cell phone number, or e-mail address is entered as one alert notification.

Send on clear also: Check this box to have the alert clearance notification sent to the recipient once the sensor has returned back within its normal threshold.

[**Add Another Notification**]: Click this button to add another notification recipient to the alert.

Delete This Notification: Select to remove the recipient from the alert.

[**Save Alert**]: Click this button to save the changes.

Chapter 2— Incidents

This chapter covers the following:

- **How to display a record log of all incidents.**

1. Select the Incidents tab, which displays a record log of all incidents (see Figure 10).
2. Click on the row for any incident to display expanded details.

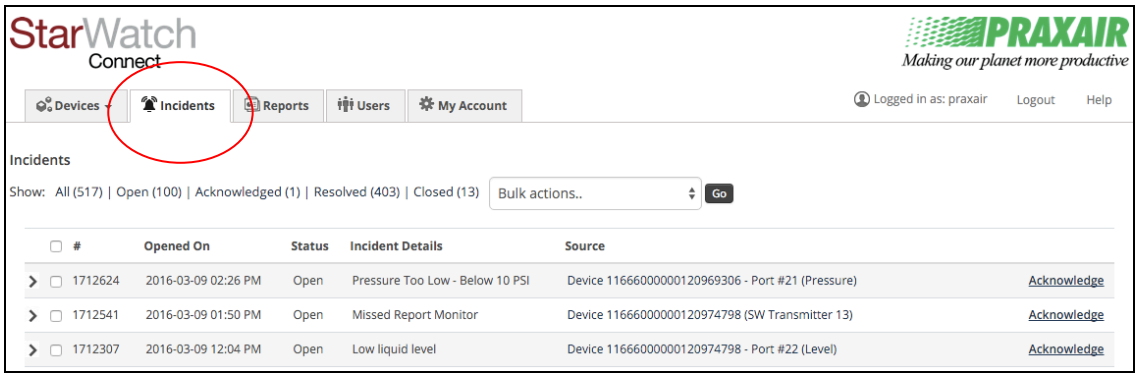

Figure 10: Incidents Screen Example

<u>Description of Details provided for each Incident</u>

ID Number (#): Each incident is automatically assigned a unique number.

Opened On: The time and date that the incident first occurred.

Status: Current status of the incident. Incidents can be viewed in groups according to their status – Open, Acknowledged, Resolved, and Closed using the options located below the **Status** title (seeFigure 10).

- **Open**: The device or sensor is currently in alarm. If the alert that generated the alarm has been deleted by the users at Owner, Administrator, Editor, and Sensor Alerts Editor (sensor alerts only) access level, the Incident will need to be closed manually.
- **Acknowledged**: A user logged in and manually acknowledged the incident.
- **Resolved**: The device or sensor has returned to normal; the incident self-corrected.
- **Closed**: A user logged in and manually closed the incident.

Incident Details: Displays the name of the alert that created the incident.

Source: For device alerts, the source displays the device ID number and the device name from which the alert originated. For sensor alerts, the source displays the device ID number, the port number, and the sensor name from which the alert originated. The ID number is also an active link to the device.

Acknowledge: Users can log in and acknowledge an alert. If the Acknowledge box was selected when creating the alert (see alert set-up in sections 1.4.1, 1.4.2, or 1.6, selecting **Acknowledge** will prevent the specific alert from generating any subsequent notifications, until the incident is resolved or closed.

Chapter 3—Reports

This chapter covers the following:

- **Create scheduled reports.**
- **Download on-demand reports that provide a summary of data recorded by the *Praxair StarWatch* Connect System.**
- **Record report history.**

1. Select the Reports tab, which displays a dropdown menu with three report options (see Figure 11).

Note: Reports can be run only on data that is less than 30 days old. For sensor data older than 30 days, select **Export** located under Sensor Information (see section 1.3.3). It is recommended that account owners set up daily, weekly, or monthly reports to retain records of all account activity. Users can generate as many reports as necessary.

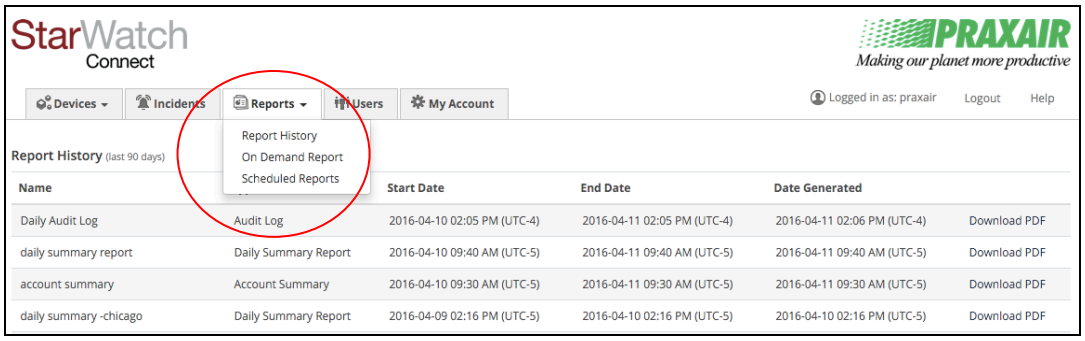

Figure 11: Reports Screen Example

<u>Description of the Reports Dropdown Menu Options</u>

Report History: Provides a list of all reports issued within the past 90 days.

On Demand Reports: Enables you to create one-time reports that are downloaded within seconds into a PDF report.

Scheduled Reports: Provides a list of scheduled reports, and enables you to set a subscription for a report that will be emailed to you based on the designated report frequency. Scheduled reports are emailed to you with a link to download the report within the body of the email. In addition, you can also choose to include the report as an attachment on the email by checking the "Send Report as an email attachment box." Figure 12 shows an example to set a subscription for a scheduled report.

Report Types

Description of Report Types

Account Summary: Lists every device in the account and provides data on the device's respective sensors during the specified reporting period, includes a graph of sensor readings, minimum reading, maximum reading, and the average reading of each sensor in the reported period.

Audit Log: Provides a summary of the actions performed by each user in the account within the specified reporting period. The information includes time that the action was completed, what action was taken, and a detailed description of the action.

Device Report: Lists an individual device in the account and provides data on the device's respective sensor(s) during the specified reporting period.

This report contains the time and measurement of every reading in the reporting period for each sensor associated with a specific device. It also includes a graph of sensor readings, minimum reading, maximum reading, and average reading for each sensor in the reported period.

Selecting this report will open an additional dropdown menu to select the specific device.

Alarm History: Provides a list of all devices and associated sensors in the account and any alerts that have occurred for each device and associated sensors within the report period. If no alert occurred for the sensor or the device, it is recorded as "There is no data for this device" or "There is no data for this sensor."

- For each alert that occurred for the device, the Alarm Date and Alarm Type are listed.
- For each alert that occurred for the sensor, the Alarm Date, Triggering Value, and Reading Type are listed.

Incident Report: Provides all incident (see Chapter 2) details within your account that have occurred during the selected period of time. A group can be selected for this report, but this only includes the devices within that group, and does not include any devices in sub-groups.

This report includes incident information on the incident ID, time the incident opened on, incident status, incident details, and source of the sensor. In details, it includes information for that sensor such as the date and time the incident occurred, the event happened for that incident such as notification was send, the description of the incident.

Daily Summary Report: This report provides daily high, daily low, and daily average readings for each sensor in the selected group. Devices in sub-groups will not be included in your report**.** At least one reporting time must be selected to complete the report subscription saving process, but tags and notes can also be included to this report.

The Scheduled Report screen displays information on the scheduled report, such as Report Type, Name given to this report, e-mail Address(es) which the report will be sent to, Report Frequency, Next Run Date/Time for the scheduled report, and Time Zone selected.

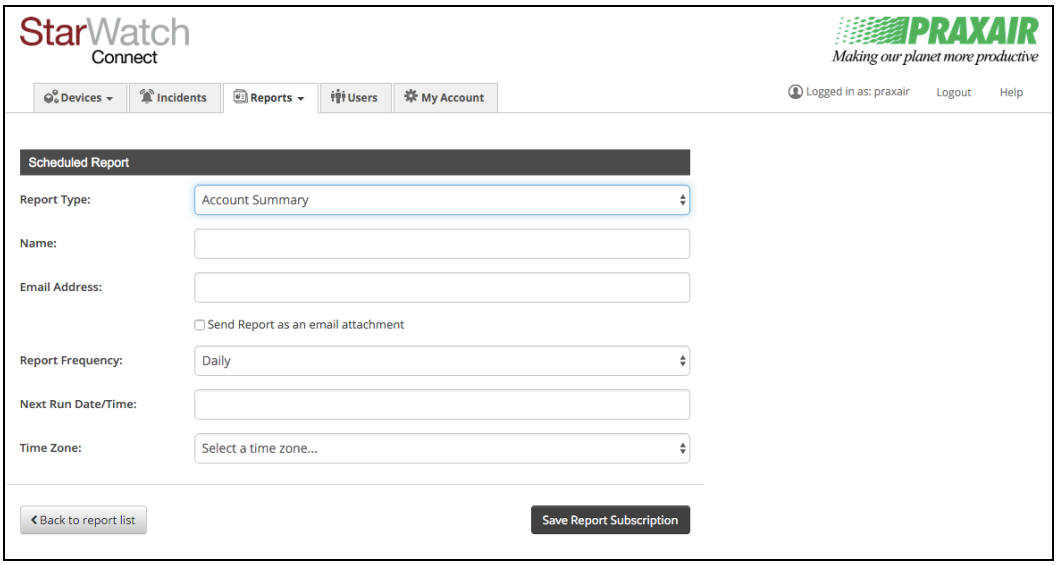

Figure 12: Generating a Scheduled Report Screen Example

<u>Description of Scheduled Report Screen Items</u>

Name: Each report must be given a name during the report schedule creation.

Email Address: The report will be sent to the email address(es) entered here. Multiple emails can be added as report recipients, and must separated by commas within this field.

Report Frequency: Defines how often the report will be sent (Daily, Weekly, Monthly, or Once).

Next Run Date/Time: Select when the next report will be sent out. A calendar tool will open. Select the date within the calendar. Click on the clock icon at the bottom of the calendar to select the time.

Time Zone: Select the time zone used for the report.

[**Save Report Subscription**]: Click this button to enable the report.

Chapter 4—Users

This chapter covers the following:

- **Display a list of all *StarWatch* Connect account users.**
- **View and manage user settings.**

1. Select the Users tab, which displays a list of all users that have access to the *StarWatch* Connect account (see Figure 13).

   This screen allows you to view and manage settings for other users under the same department, company, or organization account.

Note: The Users menu tab is only visible for users with Administrator or Owner access levels.

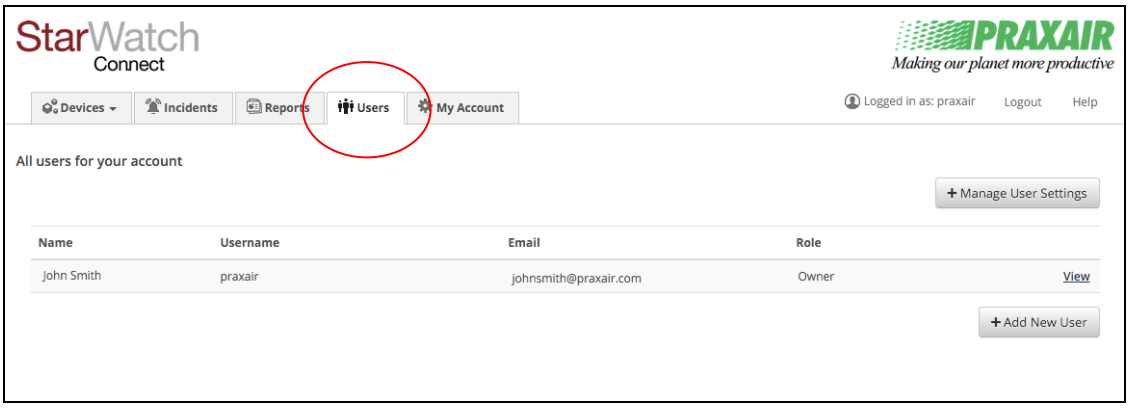

Figure 13: Users Screen Example

<u>Description of Screen Items and Links</u>

Name: The first and last name of the user.

Username: The user name that has been assigned to the user.

Email: The email address associated with the user.

Role: The role that has been assigned to the user. The following access levels are available:

- **Owner**: An Owner can add and delete user accounts and modify all system settings. An Owner can also transfer ownership to another user account.
- **Administrator**: An Administrator can perform the same actions as Owner, except make changes to the account billing information or change the role of the Owner.

- **Editor**: An Editor can view and modify most system settings, with the exception of deleting devices and sensors, and seeing or editing other users.
- **Sensor Alert Editor**: A Sensor Alert Editor can view all assigned devices **and** modify sensor alerts for those devices. This user cannot modify device alerts.
- **Incident Responder**: An Incident Responder can view all data for assigned devices and can edit incidents (change status, write notes, acknowledge), but cannot make changes outside of incidents.
- **Viewer**: A Viewer can only view assigned devices.

View: Select to edit a user's preferences or profile (see Figure 14):

- **Preferences**: Select **edit** to select the default view that the user sees on logging into the *StarWatch* Connect Website. Only the "List" view is active for *StarWatch* Connect.
- **Profile**: Select **edit** to change the following attributes for the user: Username, First Name, Last Name, Email Address, and Role.
- **Group Permission**: Select **edit** to select which device groups the user can access.

Delete: Select to permanently delete a user and their access to the account.

[**Add New User**]: Click this button to create a new user (see Figure 15):

- **Preferences**: Select the default view that the user sees on logging into the *StarWatch* Connect Website. Only the "List" view is active for *StarWatch* Connect.
- **Profile**: Enter the following attributes for the user: Username, First Name, Last Name, Email Address, and Role.
- **Password**: Enter the new password and re-enter the password to confirm it.

[+ **Manager User Settings**]: Click this button to change the maximum days for the password to change. Only the account owner has this funtion.

- **Max Password Age**: Only the Owner and Administrator can set the maximum password age for all users.
- **Account Owner**: Only the Owner can re-assign the Owner role.

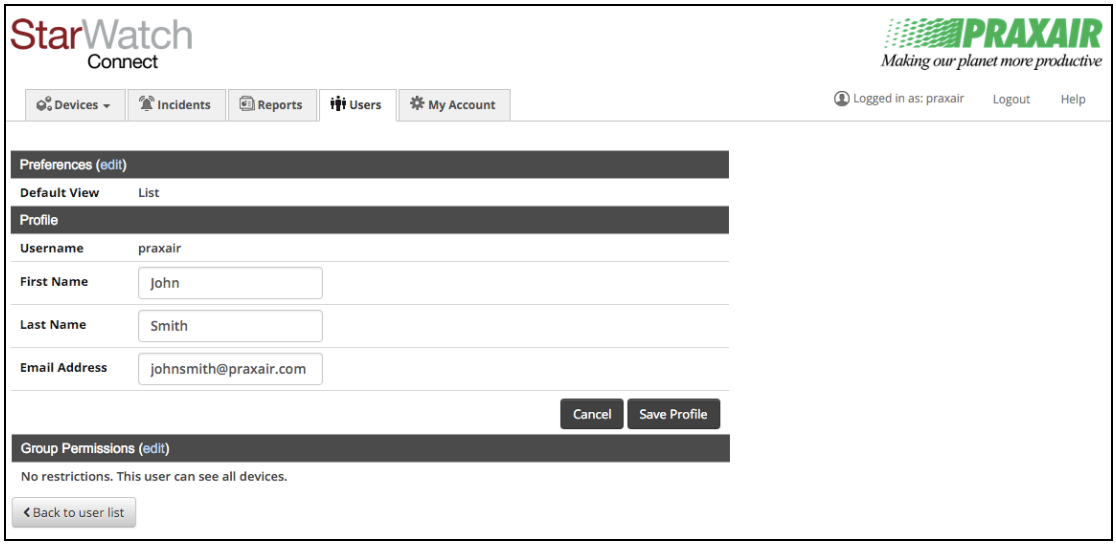

Figure 14: View User Screen Example

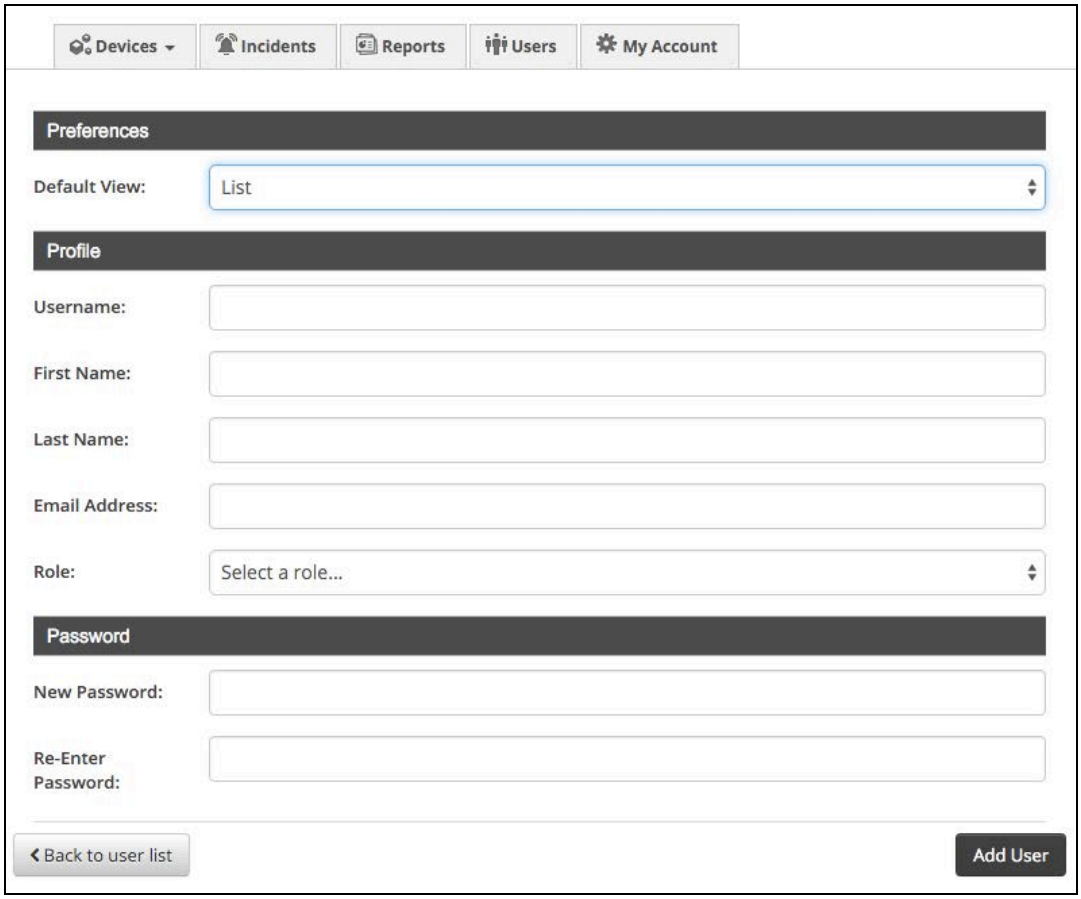

Figure 15: Add New User Screen Example

Chapter 5—My Account

This chapter covers the following:

- **Modify individual account settings.**

1. Select the My Account tab to modify your individual account settings (see Figure 16).

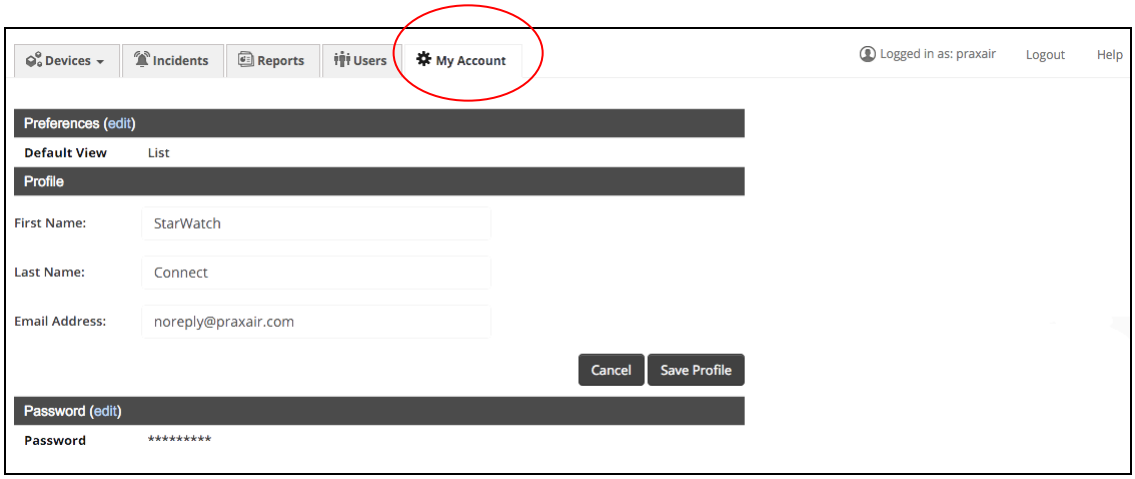

Figure 16: My Account Screen Example

Description of Screen Items

Preferences: Select **edit** to select the default view that you see on logging into the *StarWatch* Connect Website. Only the "List" view is active for *StarWatch* Connect.

Profile: Select **edit** to change the following attributes: First Name, Last Name, and Email Address.

Password:

1 Select **edit** to change the password.

2. Enter the old password.

3. Enter the new password again, making sure that both new password entries are the same.

Chapter 6—Help

This chapter covers the following:

- **How to Access Technical Support Information**
- **Resources for User Manual and Operational Guide.**

1. Select **Help**, located at the upper-right corner of the screen, to access technical support information (see Figure 17).

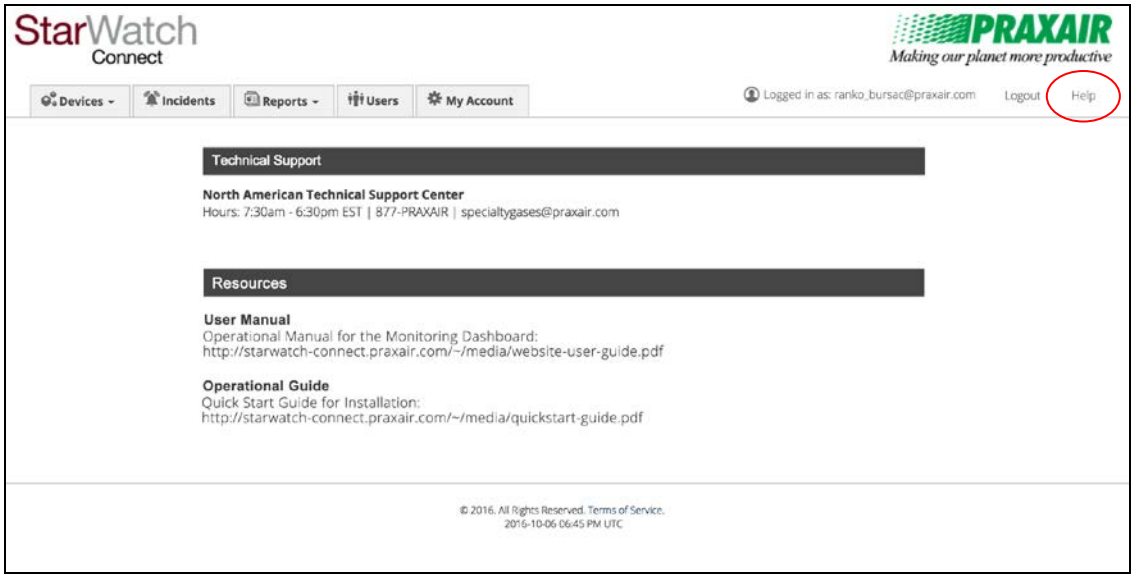

Figure 17: Help Screen Example

APPENDIX A—STARWATCH CONNECT REGULATOR STATEMENT

StarWatch Connect Regulatory Statements

The following regulatory statements apply to the StarWatch Connect system, consisting of a (1) StarWatch Connect wireless transmitter (FCC ID: SZ9ZPOINT; IC: 10940A-ZPOINT), (2) StarWatch Connect CDMA cellular gateway (FCC ID: RI7CE910-DUAL), and (3) StarWatch Connect GSM cellular gateway (FCC ID: RI7HE910, S4GEM35XB; IC: 10940A-GWGSM). All statements below apply to all devices, unless otherwise specified.

Federal Communications Commission (FCC) Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Industry Canada (IC) Statement:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

StarWatch Connect wireless transmitter
This device has been designed to operate with the antennas listed below, and having a maximum gain of 2.5dBi. Antennas not included in this list or having a gain greater than 2.5dBi are strictly prohibited for use with this device. The required antenna impedance is 50Ω.

- External 2.4GHz dipole, male RP-SMA antenna with maximum gain of 2.3dBi.
- External 900/1800/1900MHz omni CDMA male SMA antenna with maximum gain of 2.5dBi.

StarWatch Connect GSM cellular gateway
This device has been designed to operate with the antennas listed below, and having a maximum gain of 3.0dBi. Antennas not included in this list or having a gain greater than 3.0dBi are strictly prohibited for use with this device. The required antenna impedance is 50Ω.

- External 2.4GHz dipole, male RP-SMA antenna with maximum gain of 2.3dBi.
- External 850/900/1800/1900MHz quad band omni GSM male SMA antenna with maximum gain of 3.0dBi.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication

WARNING!
FCC and IC Radiation Exposure Statement:
This equipment complies with FCC's and IC's RF radiation exposure limits set forth for an uncontrolled environment under the following conditions:

1. This equipment should be installed and operated such that a minimum separation distance of 20cm is maintained between the radiator (antenna) & user's/nearby person's body at all times.
2. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.