

# TSI® FMS 5 SOFTWARE

## HOW TO CONFIGURE IN OPERATION AND CLEANING CYCLE RECIPES

TECHNICAL BULLETIN TCC-123 (US)  
(8/31/2015) Rev A

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### Description

The purpose of this document is to provide instructions on how to setup a Recipe to change a specified Sample Point’s “**Cleaning Cycle**” and “**In Operation**” alarm limits.

To eliminate particle alarms during the cleaning cycle of a Grade A room (ISO 5), we want to simply turn off the alarm parameters without having to reconfigure the sample points when the cleaning cycle starts. In this technical note we will explain how to create two sample points, one for CF and one for m<sup>3</sup>. For each we will set the “**In Operation**” alarm limits per EU GMP Annex 1, and no limits when “**Cleaning Cycle**” is run.



**EU Guidelines to Good Manufacturing Practice: Annex 1**

maximum particles/m <sup>3</sup> 14644-1 equivalent			maximum particles/m <sup>3</sup> 14644-1 equivalent				
Grade	At Rest		Grade	In Operation			
	≥0.5µm	≥5.0µm	ISO	≥0.5µm	≥5.0µm	ISO	
<b>A</b>	3,520	<b>20</b>	5 (4.8)	<b>A</b>	3,520	<b>20</b>	5 (4.8)
B	3,520	29	5	B	352,000	2,900	7
C	352,000	2,900	7	C	3,520,000	29,000	8
D	3,520,000	29,000	8				

**Note**

If you want to create a Recipe for “In Operation/At Rest” the same configuration method applies.

**Requirements**

- FMS 5.0.7 or later must be installed.

**Assumptions**

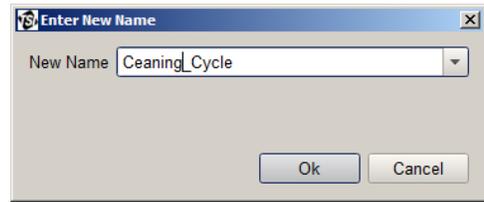
We will assume that the Communication Channel and the Unit are already configured within FMS 5. The configuration example shown in this note will use the following consideration:

- Room Classification: ..... ISO 5
- Communication Channel for a 7510: ..... TCP\_192\_168\_251\_139
- Unit Name: ..... Room28
- Sample Point Name for CF: ..... Room\_28\_Cf
- Alarm Limits for CF “In Operation”:
  - Upper Alarm Limit > 0,5µm: ..... 100
  - Upper Alarm Limit > 5,0µm: ..... 1
  - Sample Point Name for m<sup>3</sup>: ..... Room\_28\_m3
- Alarm Limits for m<sup>3</sup> “In Operation”:
  - Upper Alarm Limit > 0,5µm: ..... 3520
  - Upper warning > 0,5µm: ..... 2000
  - Upper Alarm Limit > 5,0µm: ..... 20
  - Upper Warning Limit > 5, 0µm: ..... 10
- Alarm Limits for CF & m<sup>3</sup> “Cleaning Cycle”: None
- Recipe Name for Cleaning: ..... Cleaning\_Cycle
- Alarm Group: ..... CleaningRoom\_28

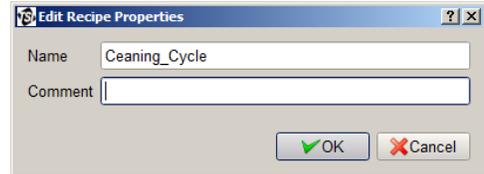
# Configuration Instructions

## A. Configuring Sample Points and Alarms Limits for “In Operation”

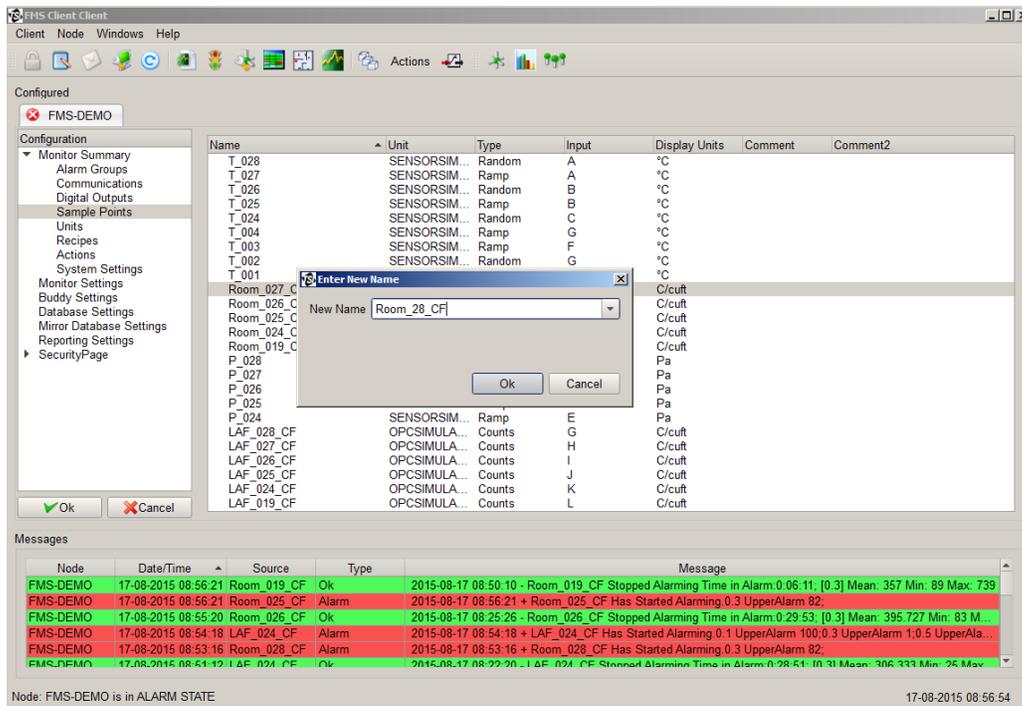
1. Within FMS 5 Configuration create a Recipe called “Cleaning\_Cycle”.



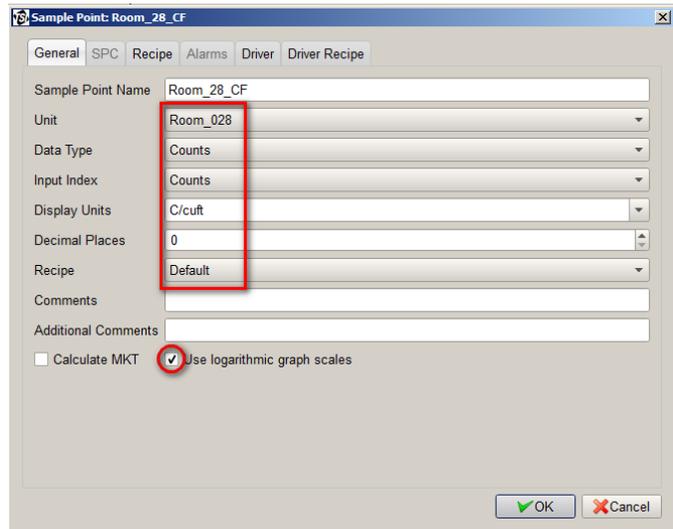
2. Add a comment or description for this recipe followed by “OK”.



3. Within FMS 5 Configuration, create a Sample Point Name called “Room\_28\_Cf” followed by “OK”.

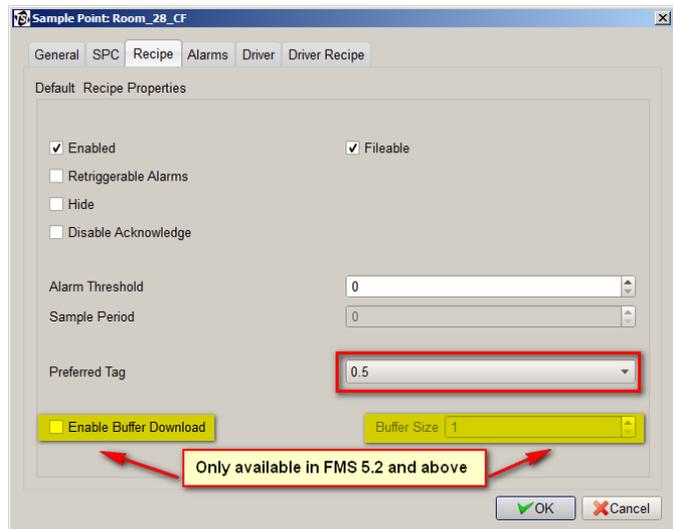


- Set "Unit", "Data Type", "Input Index"...as shown followed by "Ok".



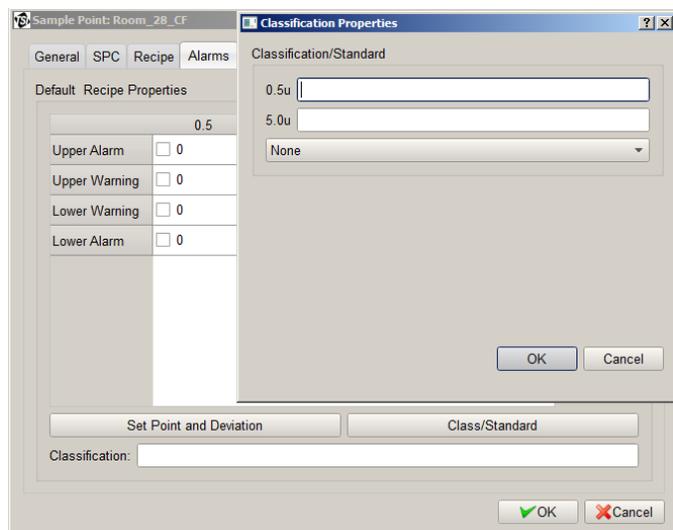
- Edit the new sample point's properties and go to the "Recipe" tab.

For "Preferred Tag" select "0.5".

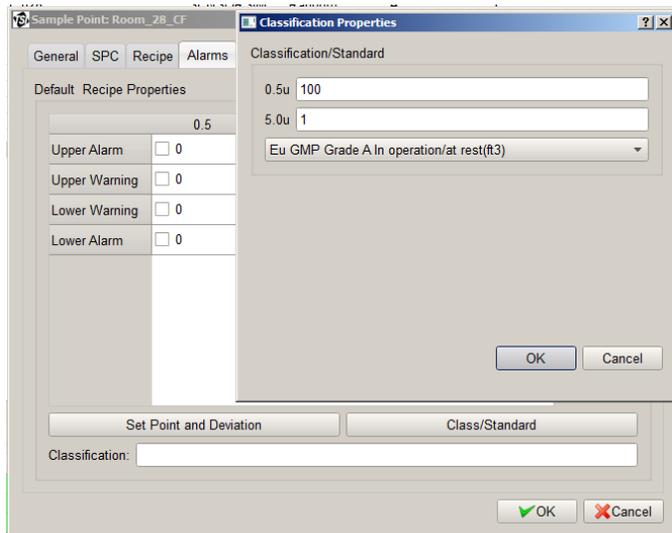


- Go to the "Alarms" tab.

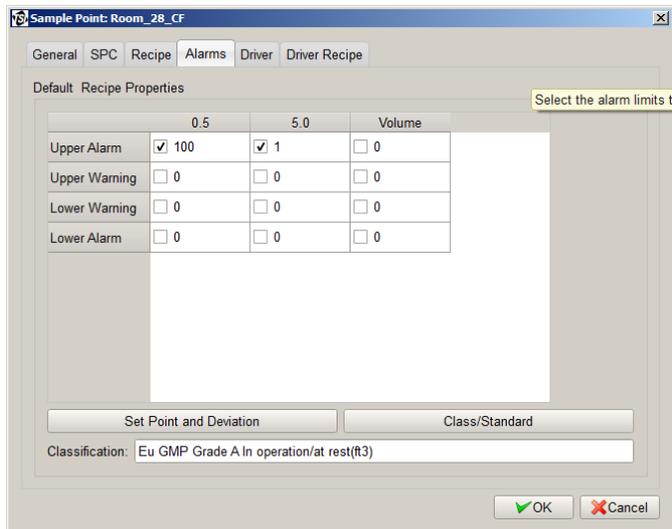
Click on the "Class/Standard" button.



- From the drop-down list select “EU GMP Grade A In Operation/at rest(ft3)” followed by “Ok”.

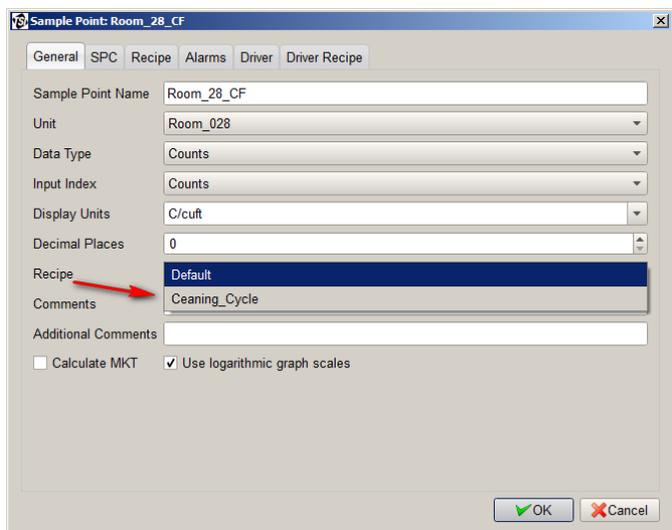


- Click “Ok”.



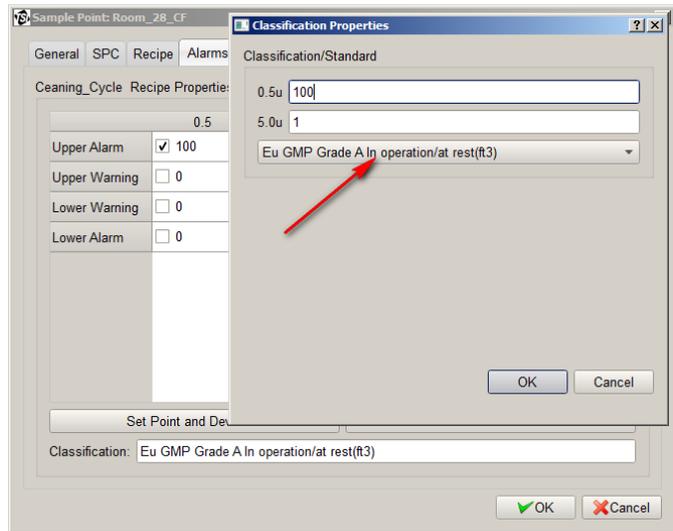
- Go to the “General” tab.

Select “Cleaning\_Cycle” from the “Recipe” drop-down list.

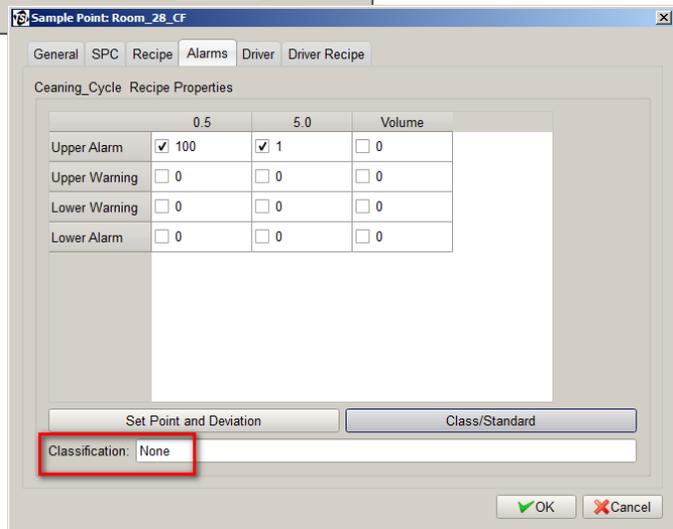
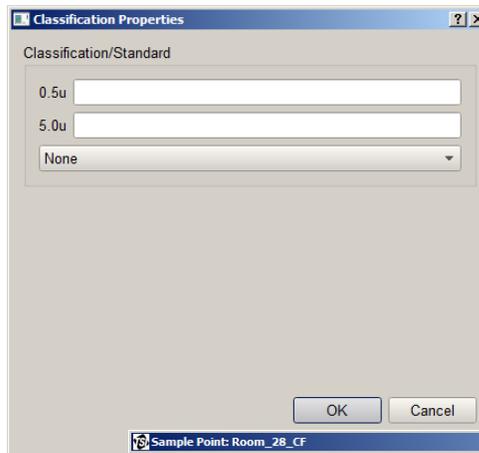


10. Go to the "Alarms" tab.

Click the "Class/Standard" button.

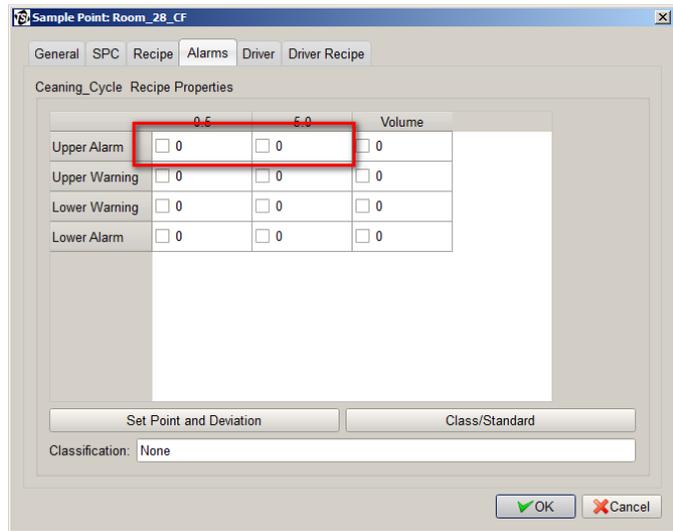


11. From the drop-down list select "None" followed by "Ok".



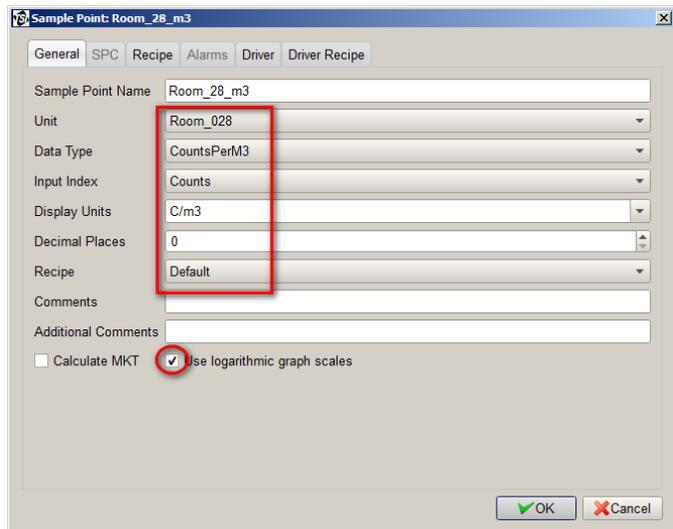
12. Deselect “Upper Alarm” for “0.5” & “5.0”.

Replace both values by “0” (zero) followed by “Ok”.



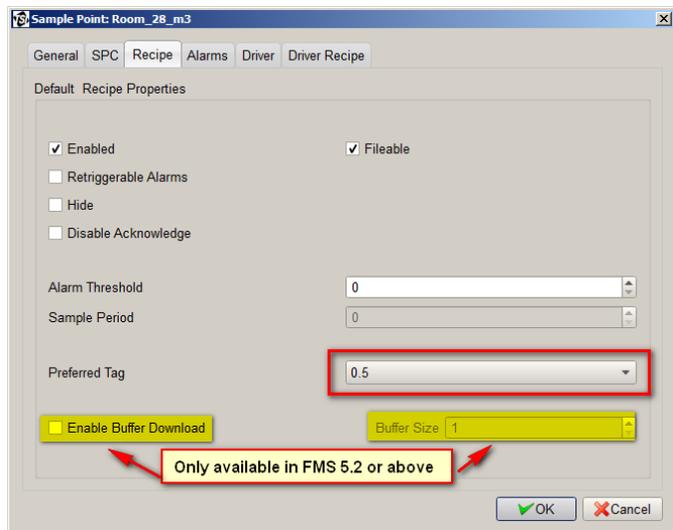
13. Create a “Sample Point Name” called “Room\_28\_m3”.

Set “Unit”, “Data Type”, “Input Index” ...as shown followed by “Ok”.



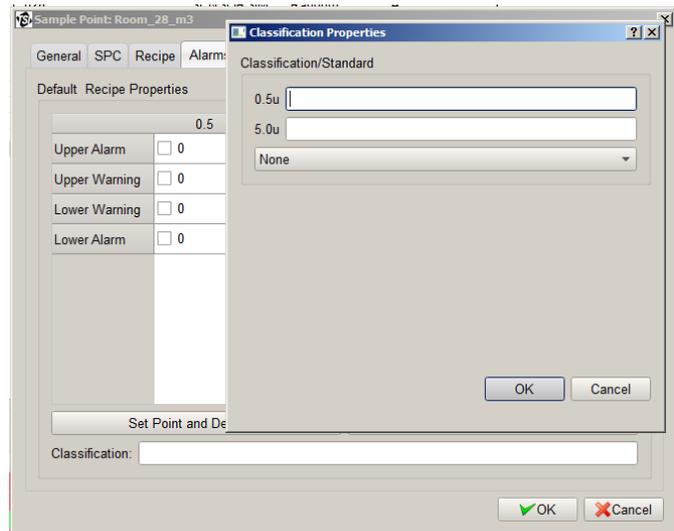
14. Edit the new sample point’s properties and go to the “Recipe” tab.

For “Preferred Tag” select “0.5”.

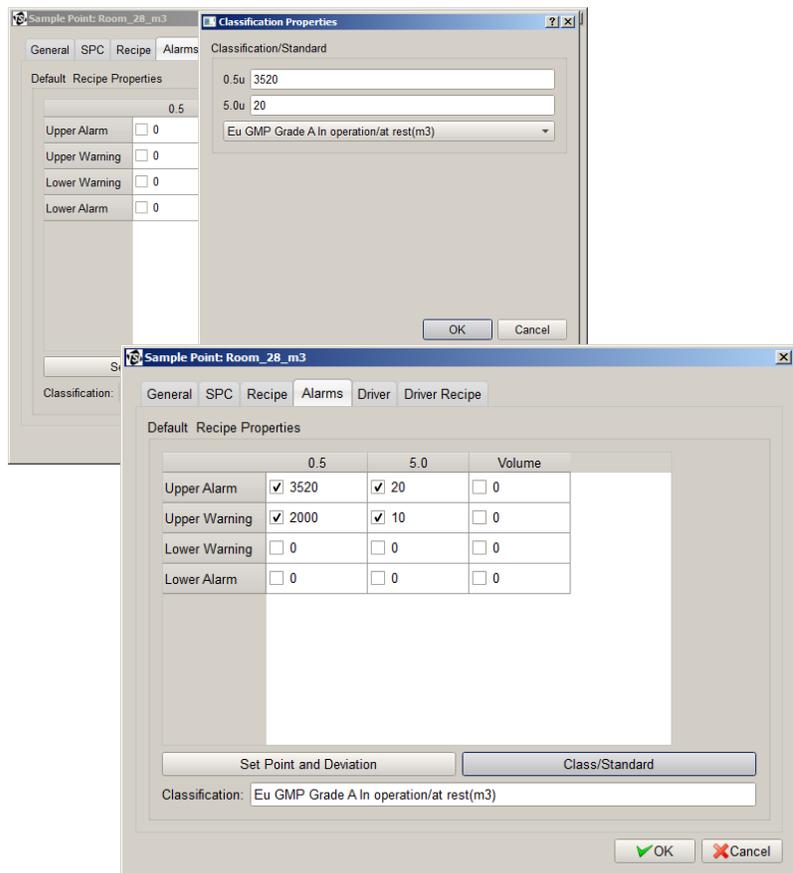


15. Go to the “Alarms” tab.

Click on the “Class/Standard” button.

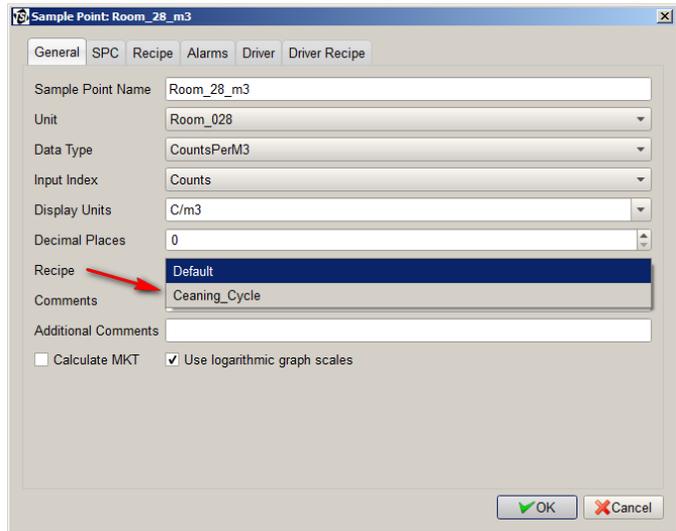


16. From the drop-down list select “EU GMP Grade A In Operation/at rest(m3)” followed by “Ok”. This will set the Upper Warning and Upper Alarm limits value.

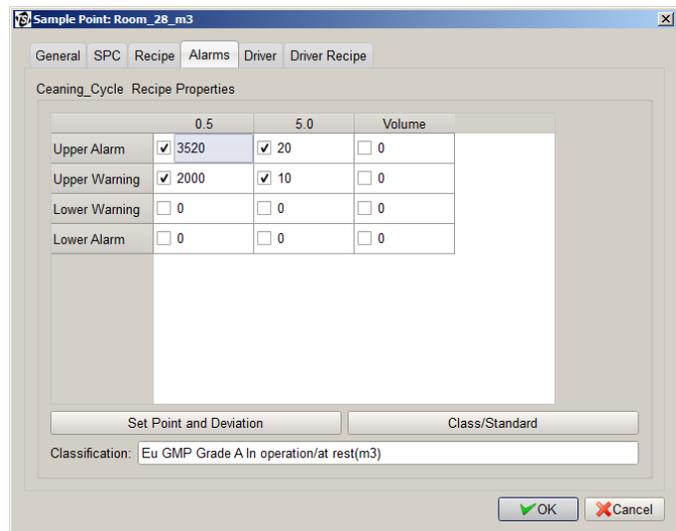


17. Go to the “General” tab.

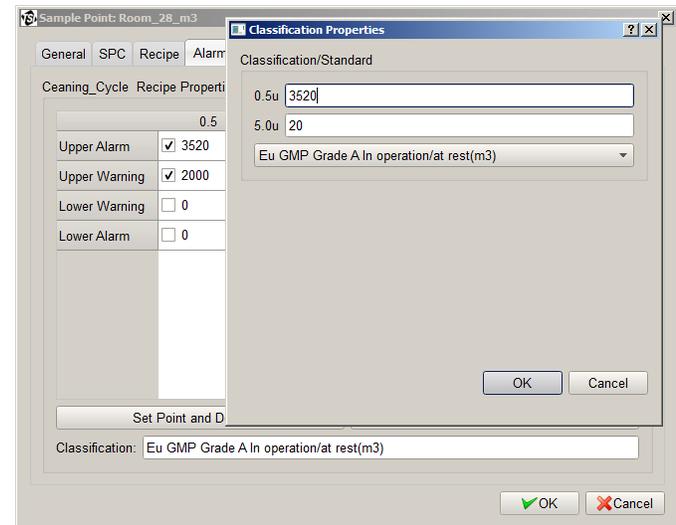
Select “**Cleaning\_Cycle**” from the “Recipe” drop-down list.



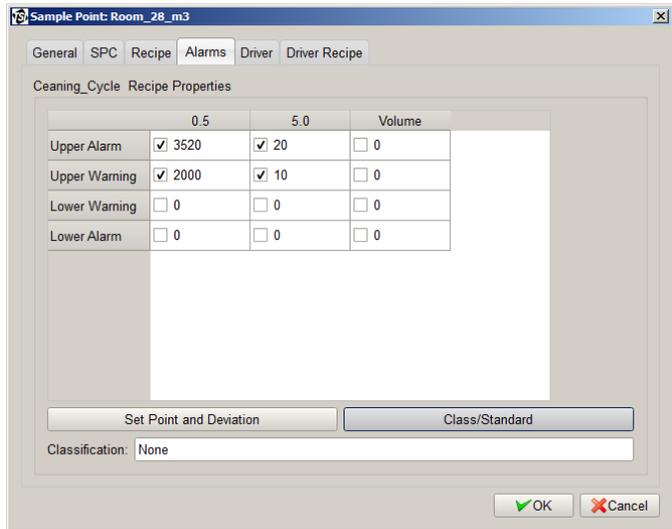
18. Go to the “Alarms” tab.



19. Click the “**Class/Standard**” button.



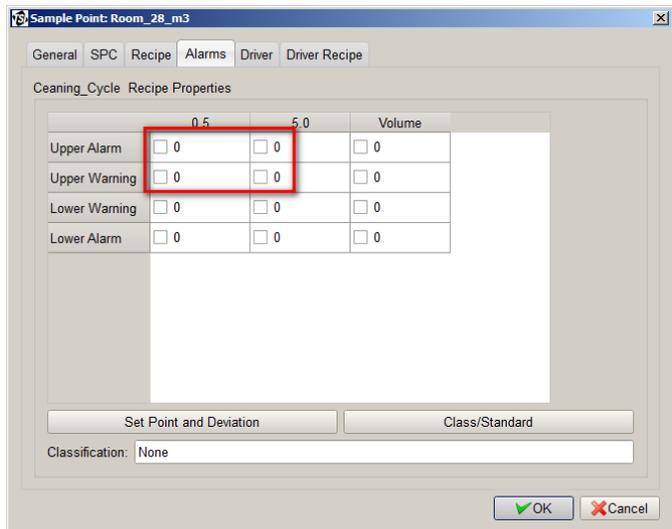
20. From the drop down list select “None” followed by “OK”.



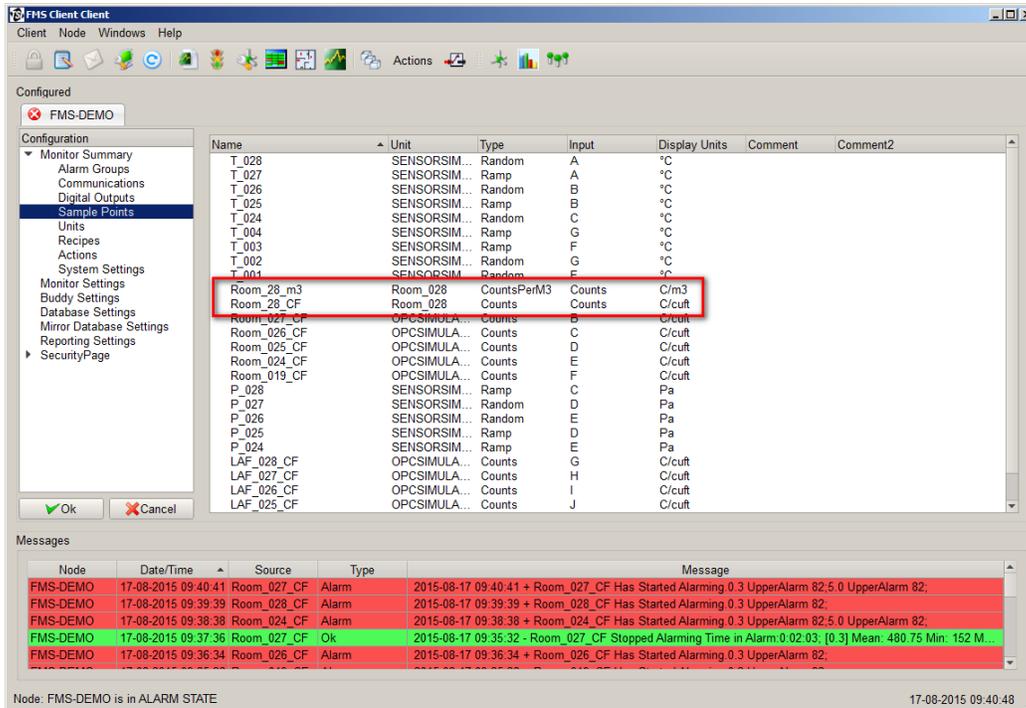
21. Deselect “Upper Alarm” for “0.5” & “5.0”.

Replace both values by “0” (zero) followed by “OK”.

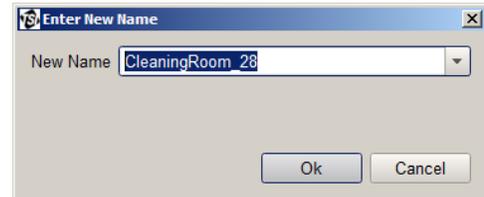
22. Click **OK**.



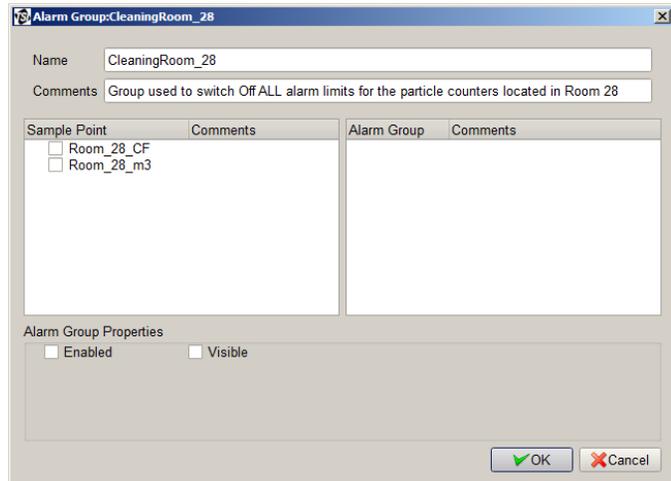
23. Two new sample points for Room\_28 are now created with alarm limits for “In Operation” and “Cleaning\_Cycle”.



24. Create a new Alarm Group called “CleaningRoom\_28” followed by “OK”.

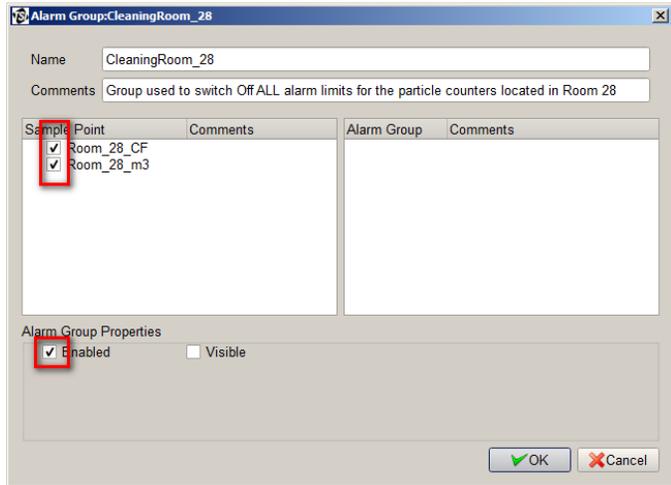


25. Edit the new alarm group and enter a comment describing the use of this alarm group.

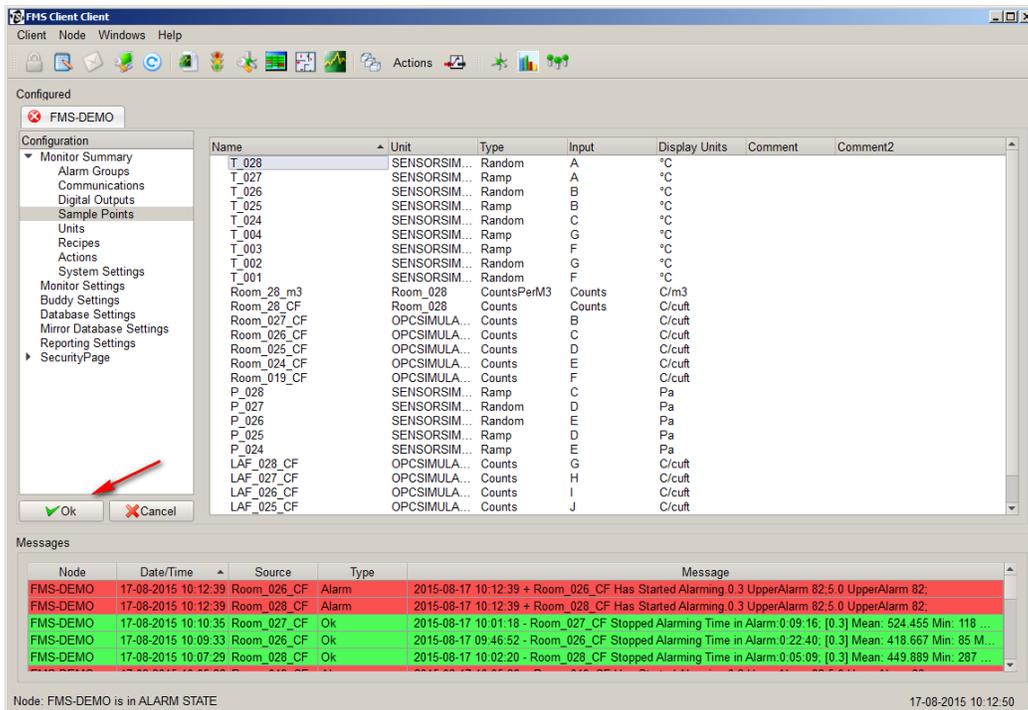


26. Select both sample points for Room 28 and select **“Enabled”**.

27. Click **“Ok”**.

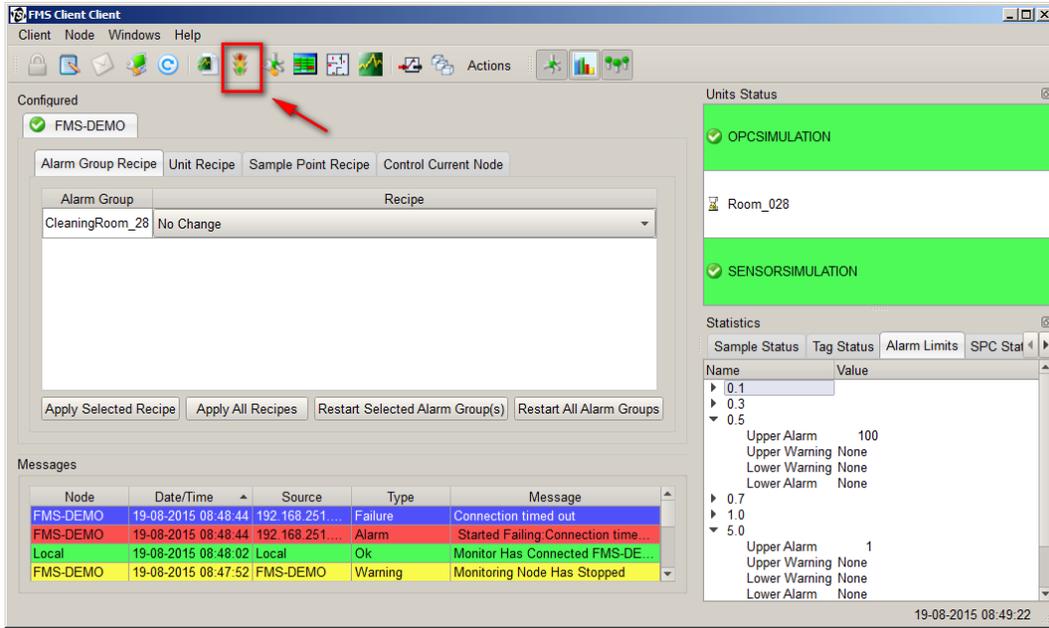


28. Click **“Ok”** to restart the Monitor.

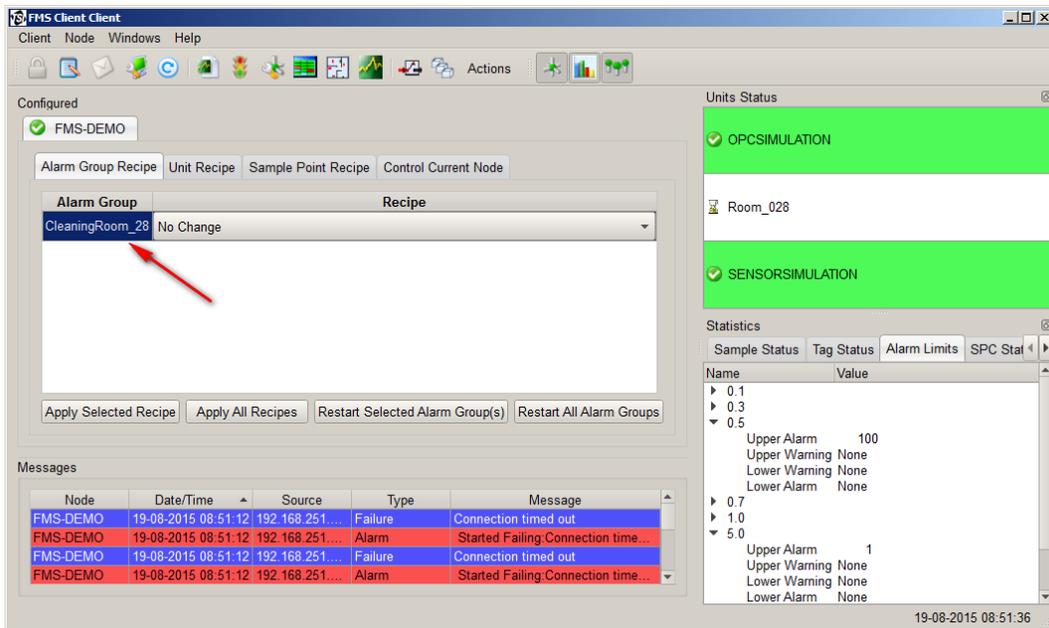


## B. How to Run the Recipe “Cleaning Cycle”

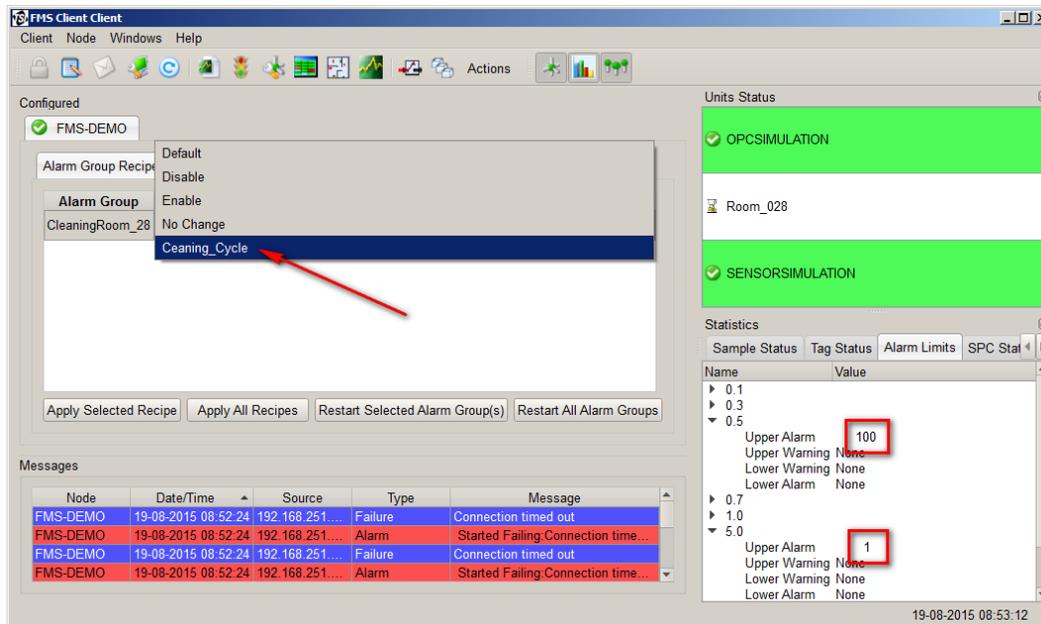
1. Go to the “Control” page.



2. Select the Alarm Group Recipe named “CleaningRoom\_28”.



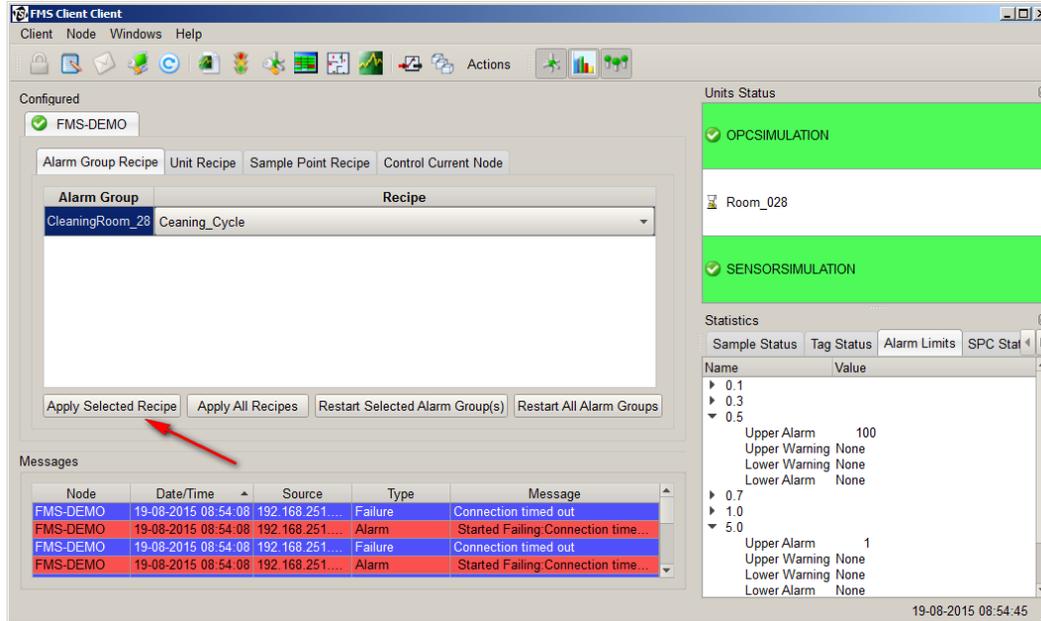
3. Select “Cleaning\_Cycle” from the “Recipe List” drop-down list.



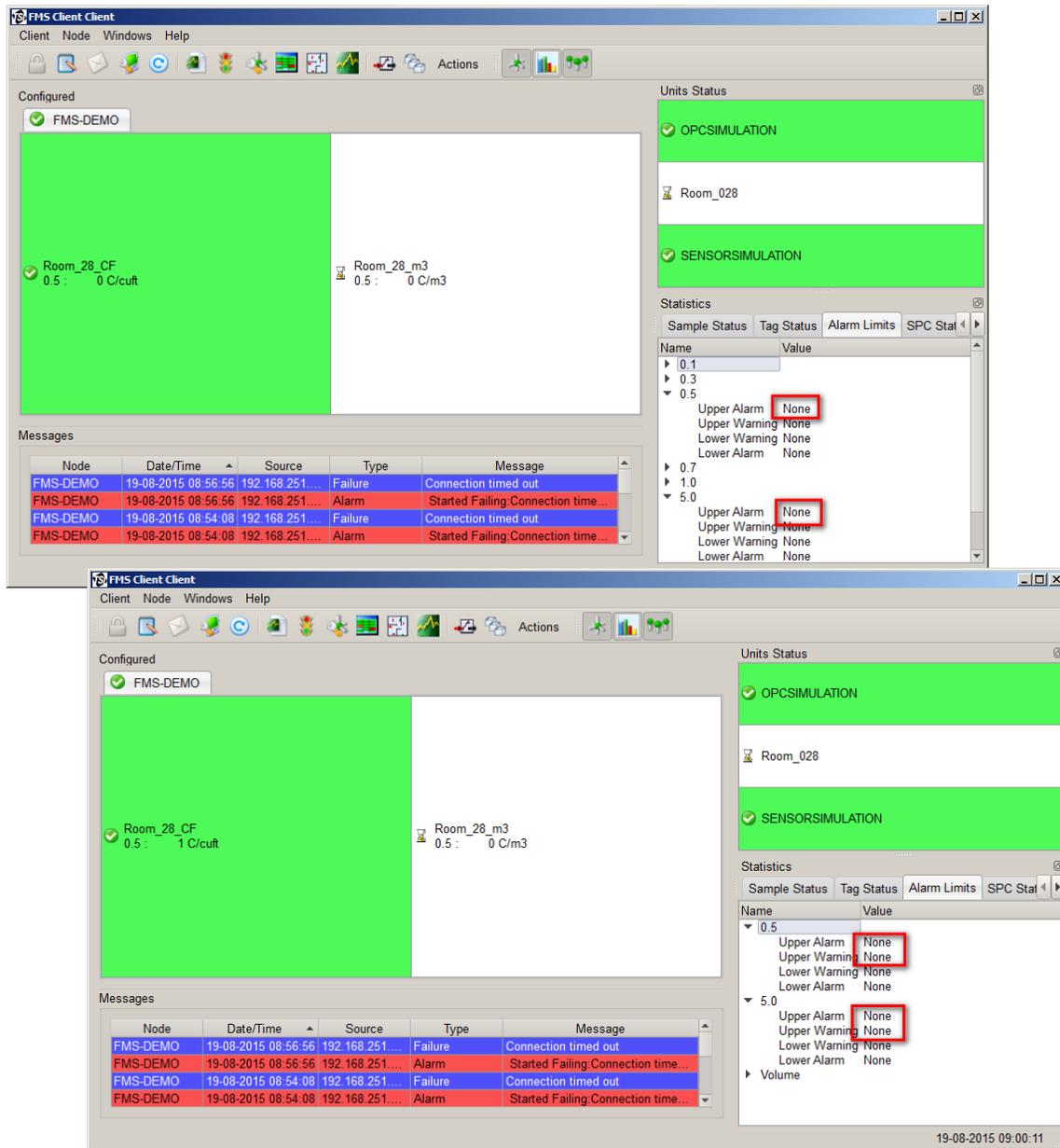
4. Click “Apply Selected Recipe” and you will see the alarm value in the statistics windows change per the configuration.

**Note**

You may click “Apply All Recipes” if you have more than one group for which you want to run a recipe.

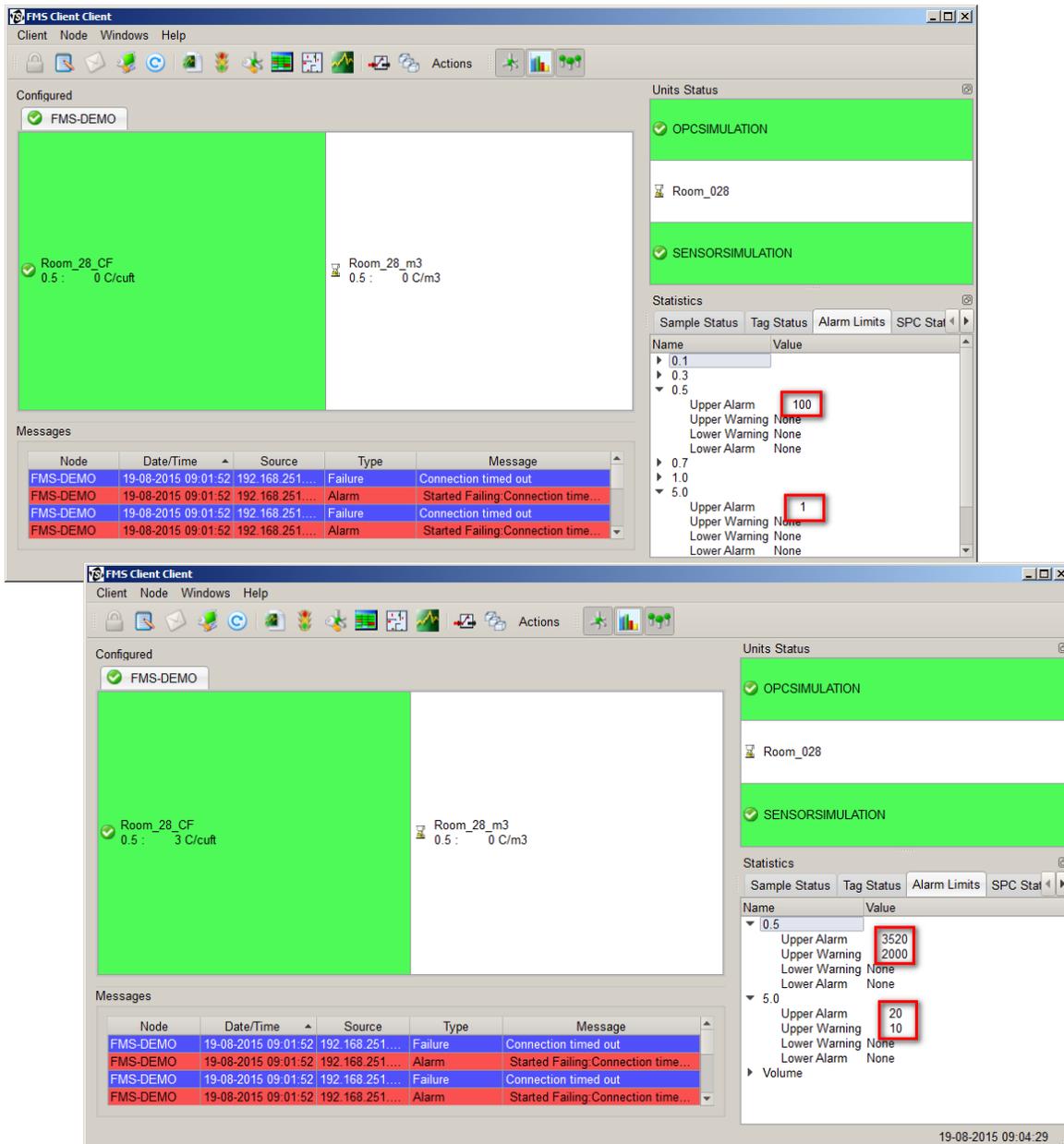


5. Alarm levels for each sample point have now been changed as shown below.



6. After the cleaning cycle is finished you may want to set back the alarm levels by repeating from [step B-2](#) above and selecting **Default** for the recipe.

7. Alarm levels will be set back for both sample points per the configuration.



**Note**

If you installed a switch within the cleanroom to switch from “In Operation” to “Cleaning Cycle”, you can use the “Recipe Switch” functionality to run the recipe automatically by triggering an Event on one digital input.

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