# XPS1 Automated Multi-Sample Run Procedure

Follow the XPS Operating Procedure to load samples into the SAC chamber. Once the samples are in the SAC chamber, the following procedure can be used to automate the measurement of multiple samples.

Create Sample Position Table

1. Position the first sample using the Autostage Manual Controller while watching the video monitor
   a) Use the Left, Right, In, and Out buttons to position the sample area of interest in the center area of video monitor
   b) Go to the maximum magnification by adjusting the zoom wheel on the video camera. Use the Up and Down buttons to adjust the height of the sample so that the center region of the sample is in focus on the monitor. The corner regions on the monitor should be slightly out of focus.
2. Scroll to the Stage section of the Instrument Manual Control window, and click "Clear All Rows" at the bottom of the table
3. Click "Add" at the top of the table to add the coordinates of the first sample
4. The position Name can be changed to the sample name to make it easier to match the coordinates with the sample. Remember to press Enter after typing in the sample name.

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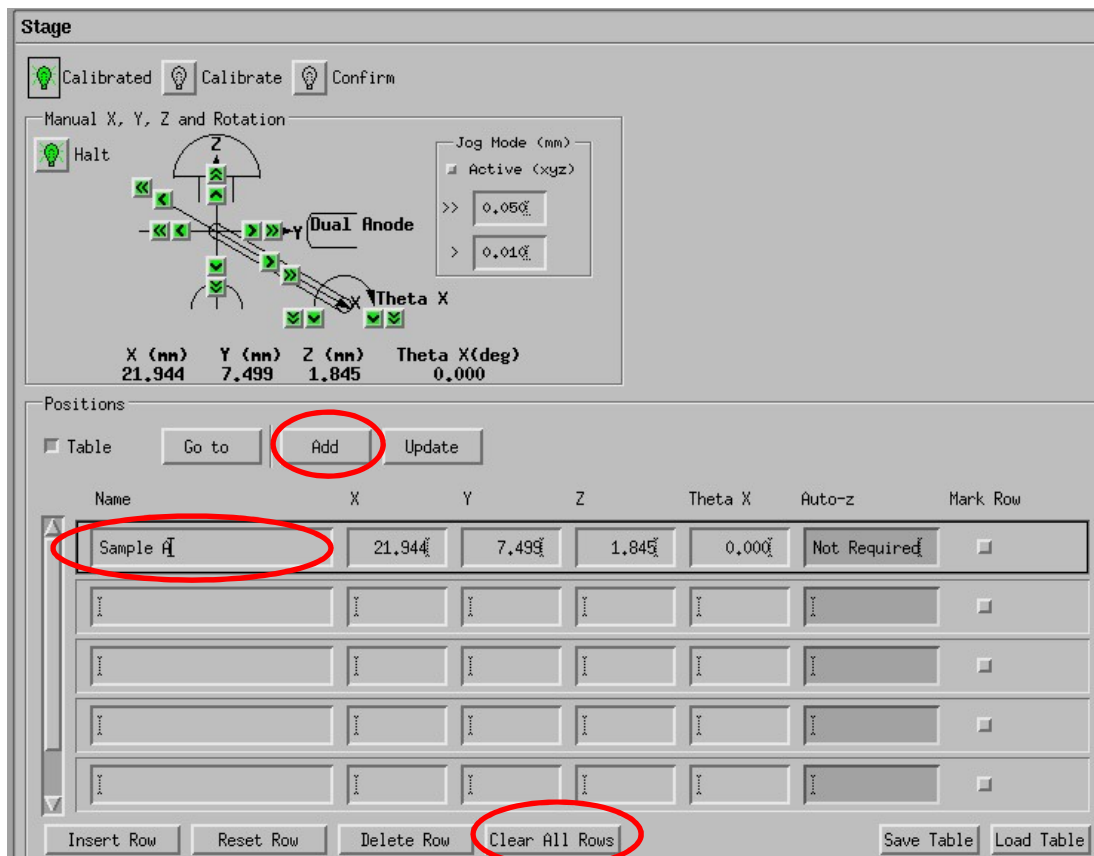
5. Click on the next empty row in the table, and repeat steps 1-4 for each sample to be measured. This will produce a Positions table with the coordinates of each sample.
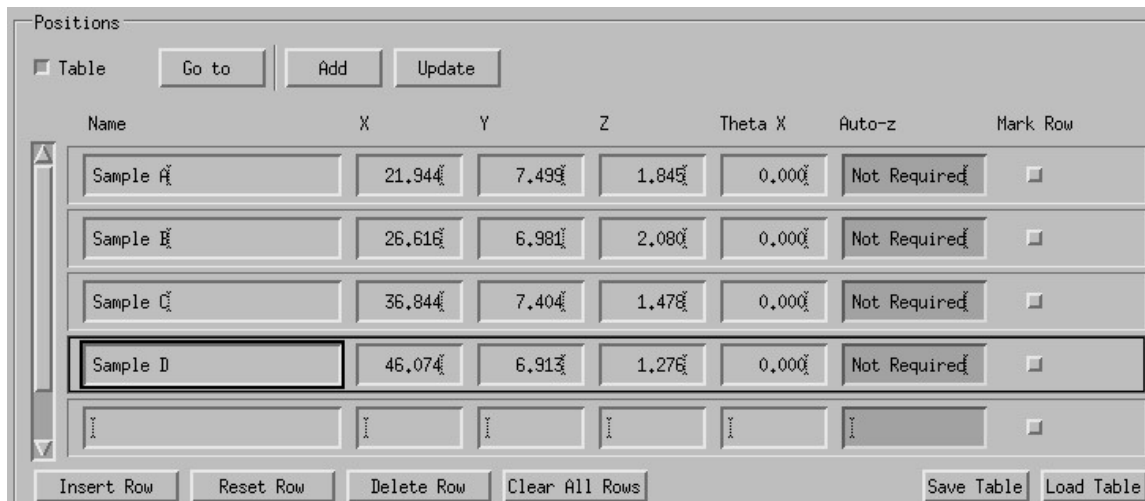
Create Run (Flow Chart)

6. Go to the Vision Instrument Manager window
7. Select the State Change button, and then select the Sample Position button (if not already selected).
8. Click "Clear All Rows" at the bottom of the table
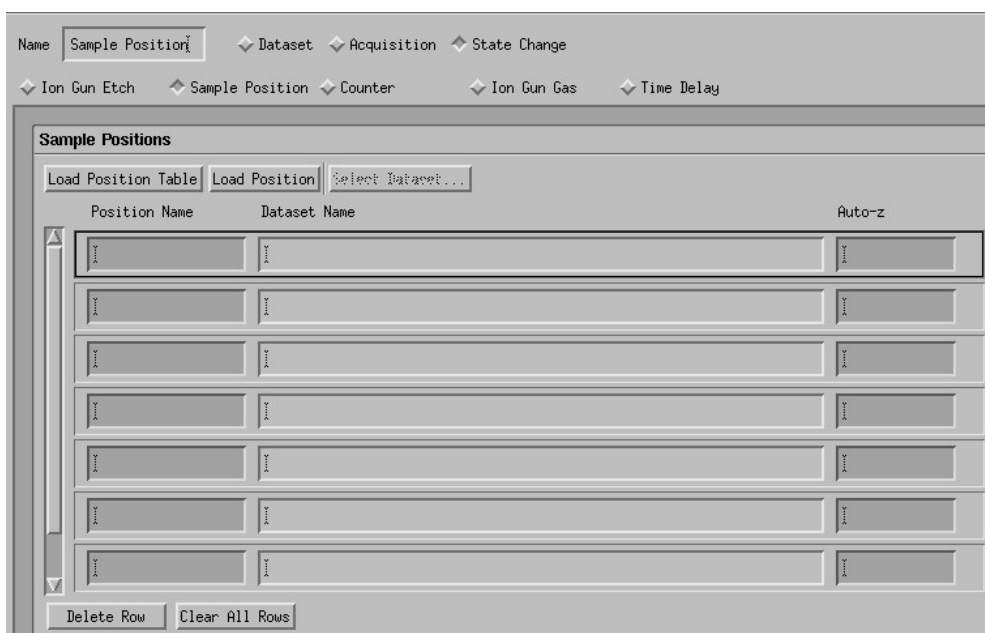
9. Go to the Instrment Manual Control window, and scroll to the stage section. Click on the row of the first sample to highlight that row.

10. Go to the Vision Instrument Manager window
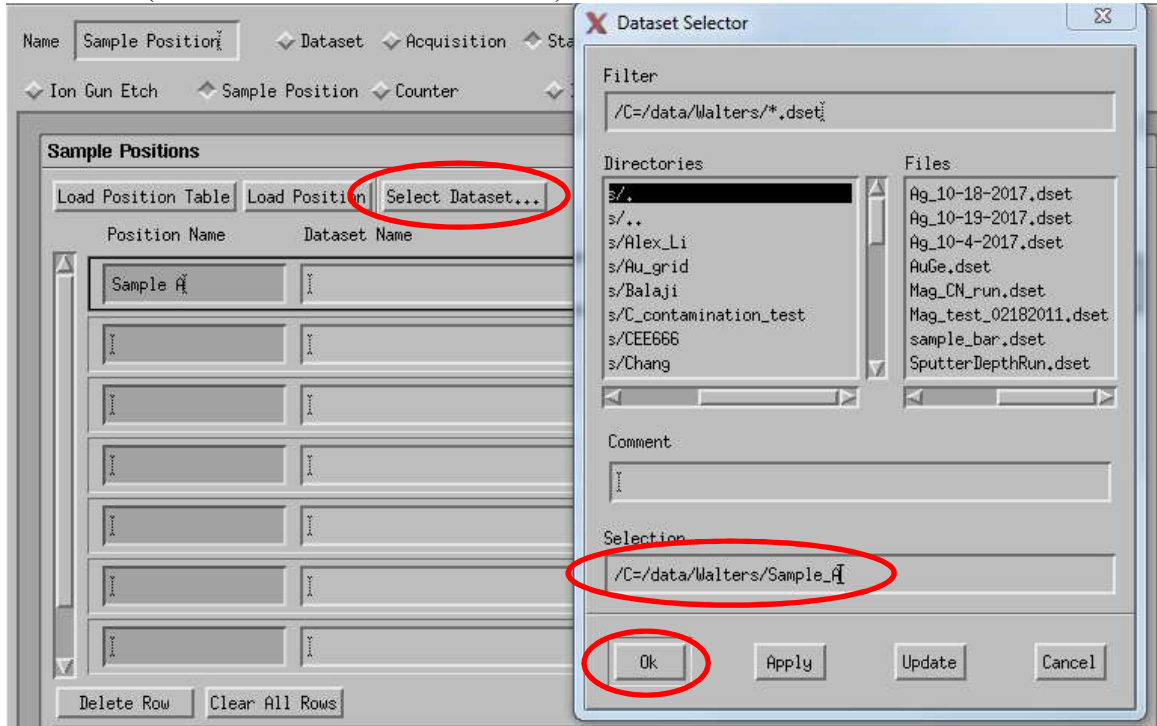11. Click Load Position above the Sample Positions table to add the position of the first sample.

12. Click in the box under Dataset Name to activate the Select Dataset button

13. Click the Select Dataset button and select the directory that you wish to save the data to, and then enter the filename (typically the sample name) in the Selection box. Remember that directories and filenames can not have spaces or odd characters (dashes and underscores are OK).


14. Click the OK button in the Dataset Selector window. This will enter the folder and filename in the Dataset Name box of the Sample positions table.
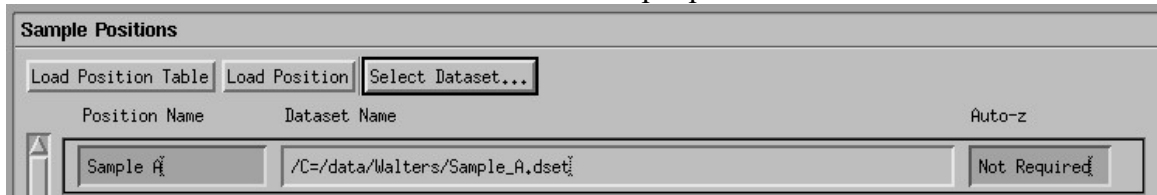

15. Move the cursor to the flow chart section and click on the middle mouse button to paste the "Dataset" sequence in the flow chart section
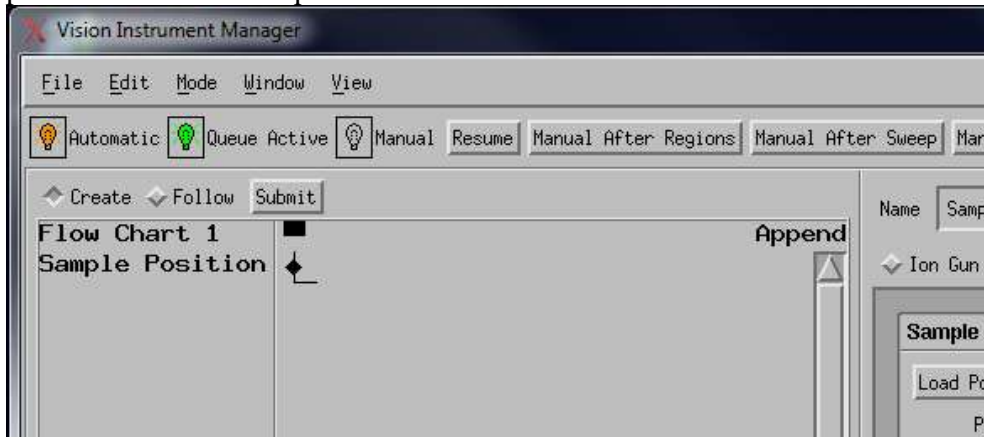
16. Create Survey and Region Scan steps in the flow chart. (See XPS Operating Procedure for creating a Survey Scan and Region Scans). Make sure that under Standby Control the selection for Action On Completion is set to "Leave On".
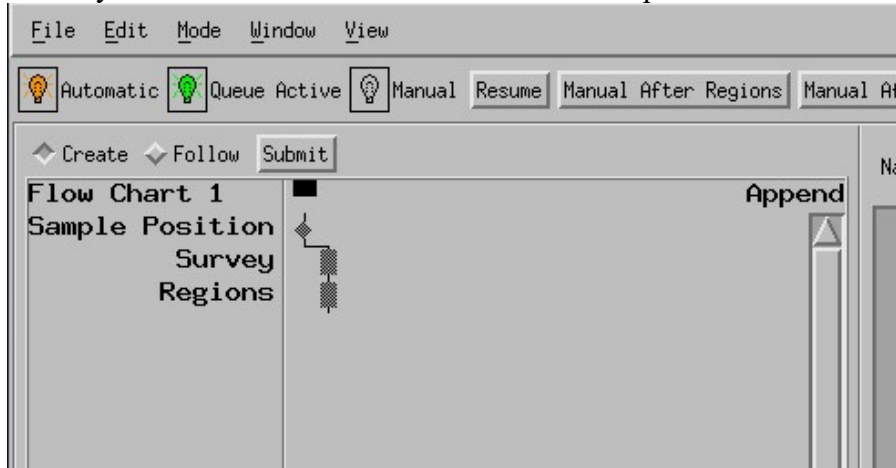
17. Highlight these steps by drawing a box around them (or clicking on them while holding down the Ctrl key), and then right click and choose Copy
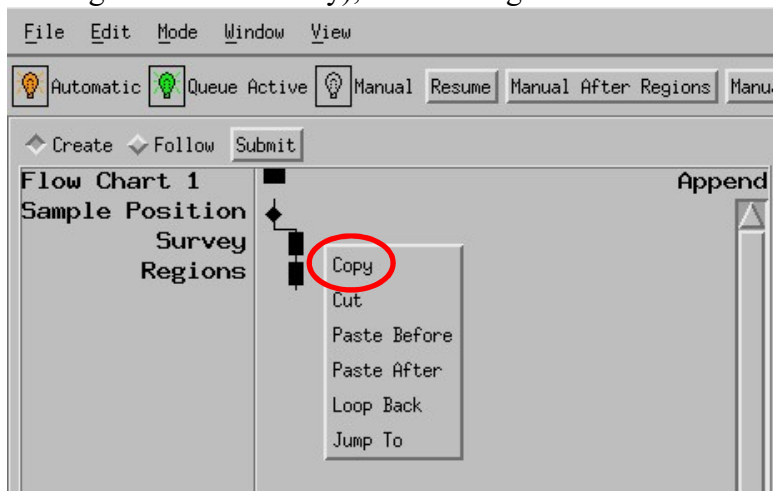
18. Click on the last step in the flow chart (Regions) to highlight it, then right click and choose Paste After
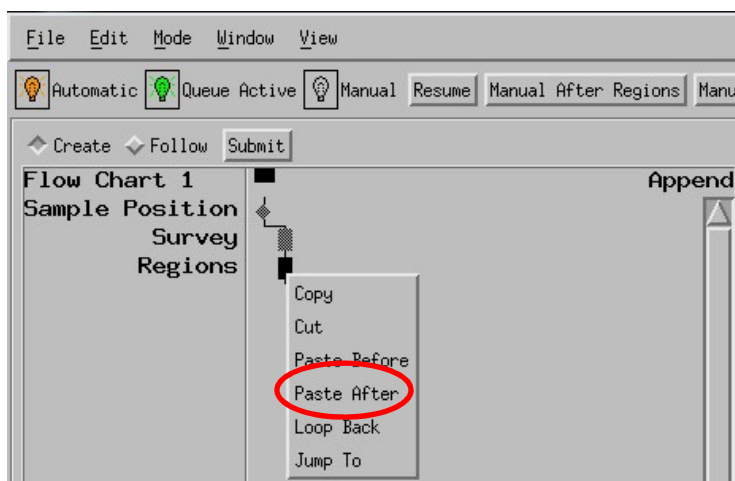
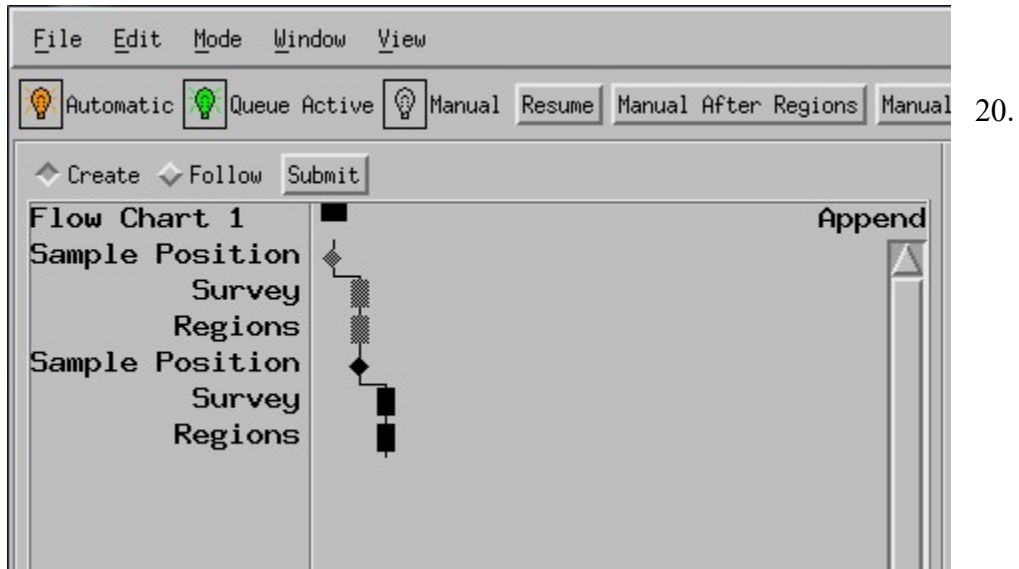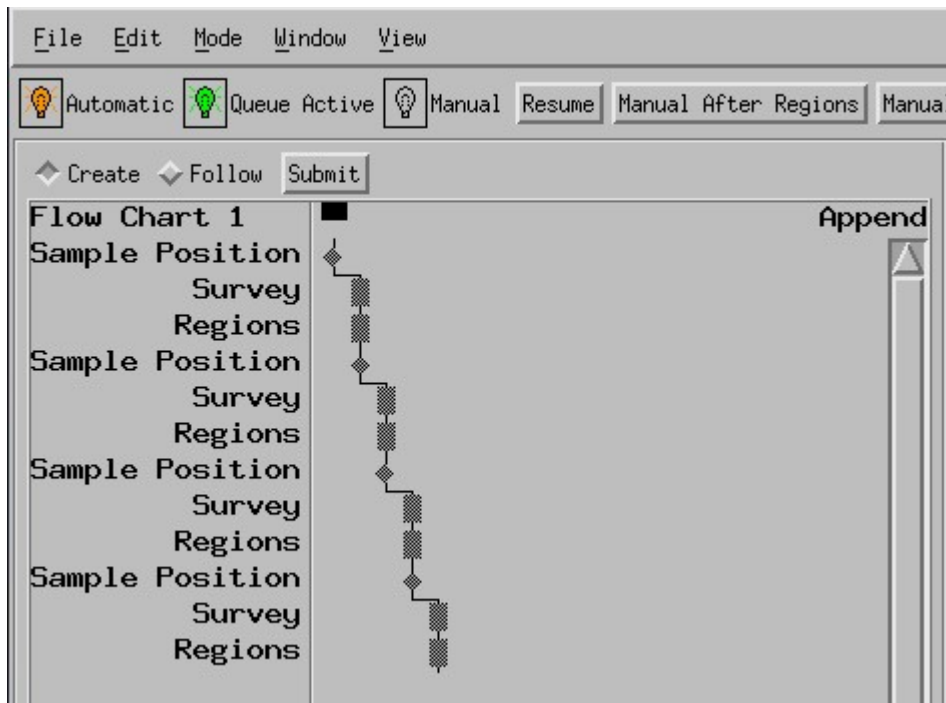19. This will copy the steps you created for the next sample

File Edit Mode Window View

Automatic Queue Active Manual Resume Manual After Regions Manual

20.

Create Follow Submit

Flow Chart 1   Append
Sample Position
        Survey
        Regions
Sample Position
        Survey
        Regions

21. Repeat step 18 (highlight the last step in the flow chart, and then right click and select Paste after) for each sample.

File Edit Mode Window View

Automatic Queue Active Manual Resume Manual After Regions Manual

Create Follow Submit

Flow Chart 1   Append
Sample Position
        Survey
        Regions
Sample Position
        Survey
        Regions
Sample Position
        Survey
        Regions
Sample Position
        Survey
        Regions

22. Highlight the second Sample Position step in the flow chart to edit it, and then click Clear All Rows at the bottom of the Sample Position table to clear the first sample position.
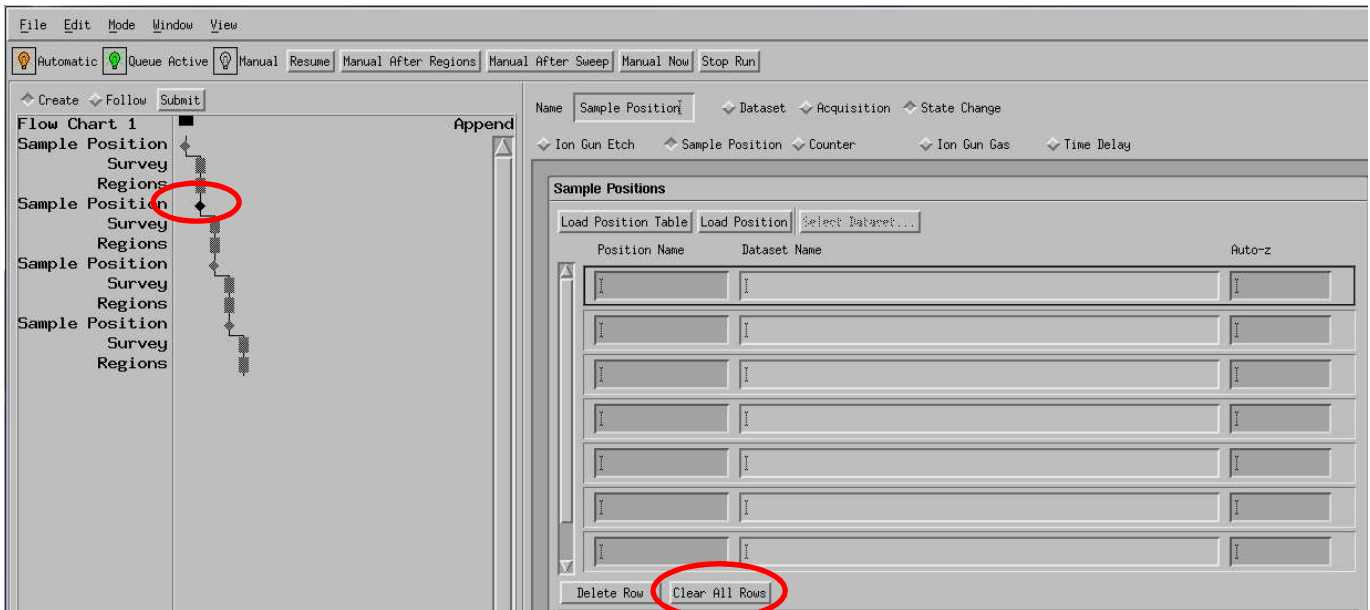
23. Repeats steps 9-14 to select the position of the second sample and enter the filename for the second sample. Then highlight the next Sample Position step in the flow chart and continue this process until all the sample positions and filenames have been entered.
24. Highlight the very last step in the flow chart (typically a Regions step) to edit it.
25. Under Standby Control, change the Action on Completion to "Go to Standby". This will automatically turn off the X-Rays after the last sample has been completed.
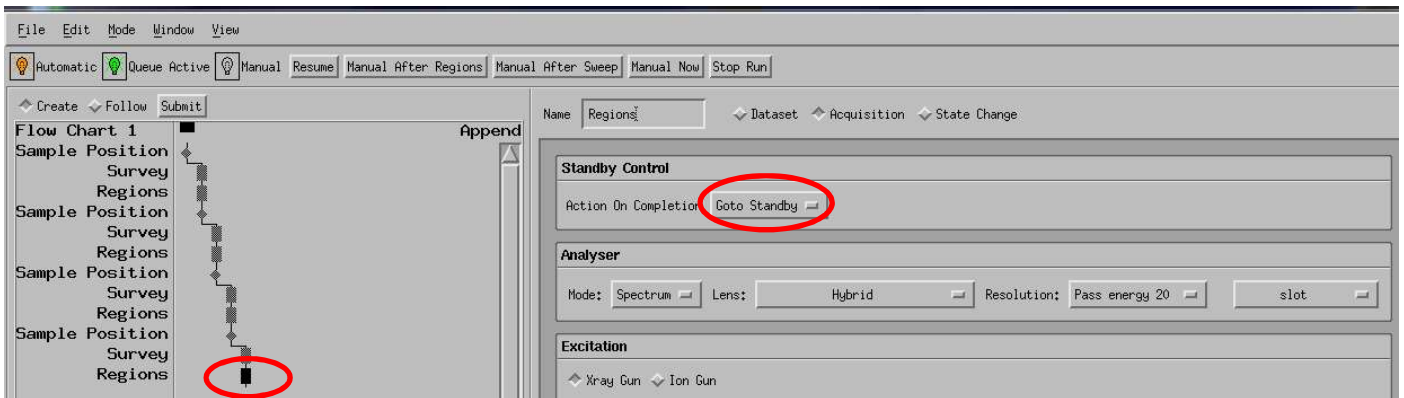
26. After manually turning on and ramping up the X-Rays, click Submit to start the multi-sample run.