PM1 ICP Etch Operational Procedure

1. Reference **Figure 1** on **page 2** for arrows within this procedure.
2. Vent the Load Lock via the "**Vent Lock**" icon if necessary.
3. Load your sample(s) and a pre-clean substrate into **Cassette 1** (the cassette on the left). Ensure the major flat is parallel to and facing the back of the cassette. The system will automatically map the cassettes when you close the door.
4. Pump the Load Lock via the "**Pump Lock**" icon. The ICON will change to "**Pump Lock**" when the "**Vent Lock**" process is complete.
5. Edit the process variables for your etch step. Edit etch step.
6. From the "**Lot Operations**" screen:
   a. Select **Cassette 1**.
   b. Enter a "**Lot Name**".
   c. From the "**Material ID/ Port Location**" list select the substrate that you wish to process.
   d. From the "**Flow Name**" list select the flow that you wish to run (i.e. "**InP 200C Standard**").
   e. Select "**Execute Lot**".
   f. The selected wafer will now be removed from the "**Material ID/ Port Location**" menu list.
   g. Once the chuck temperature has reached process set-point the system will begin running. If the actual temperature is different than your required process temperature it may take a while to attain your desired temperature so please be patient.
7. When the system has completed processing it will prompt you with an audible indicator and the Signal Tower will flash yellow.
8. Repeat steps 5-7 until all of your substrates have finished processing.
9. Vent the Load Lock, via the "**Vent Lock**" icon.
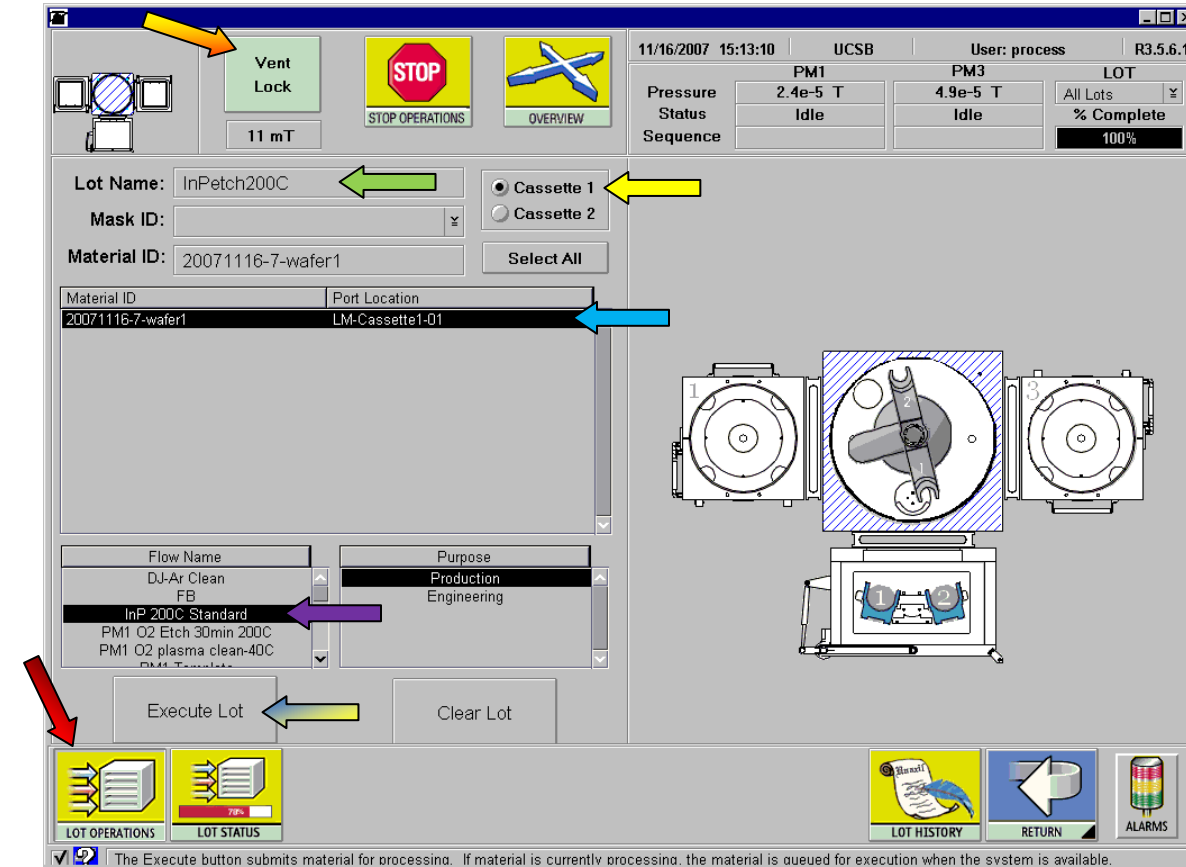10. Remove your substrates and select "Pump Lock".

Figure 1

Load Sample(s):

- Remove cassette #1 (the left cassette).
- Place your sample(s) onto a carrier wafer at the center.
- Hold the carrier wafer at the edge opposite the major flat using wafer tweezers, and insert the carrier wafer **to the back of the slot** (**otherwise, the carrier wafer will be broken**). The major flat should be parallel to the back of the cassette (the side without the pins).
- Ensure the wafer isn't "cross slotted".
- Place the cassette back on the elevator (the pin side of the cassette should be facing the TM chamber).
- Close the door gently and click on the "**Pump Lock**" icon.

Edit Etch Step:

- From main screen, click on "**EDITORS**" icon.
- Focus on **PM1** ⟵ and select "**Edit Step**". ⟵
- Select the appropriate "**Category Filter**" i.e. "InP Process". ⟵
- Select the appropriate step from the "**Directory of Process Steps**". ⟵ i.e. "**InP Etch**".
- Edit the "**Setpoint**" field for the corresponding step variable(s) you want to change. ⟵
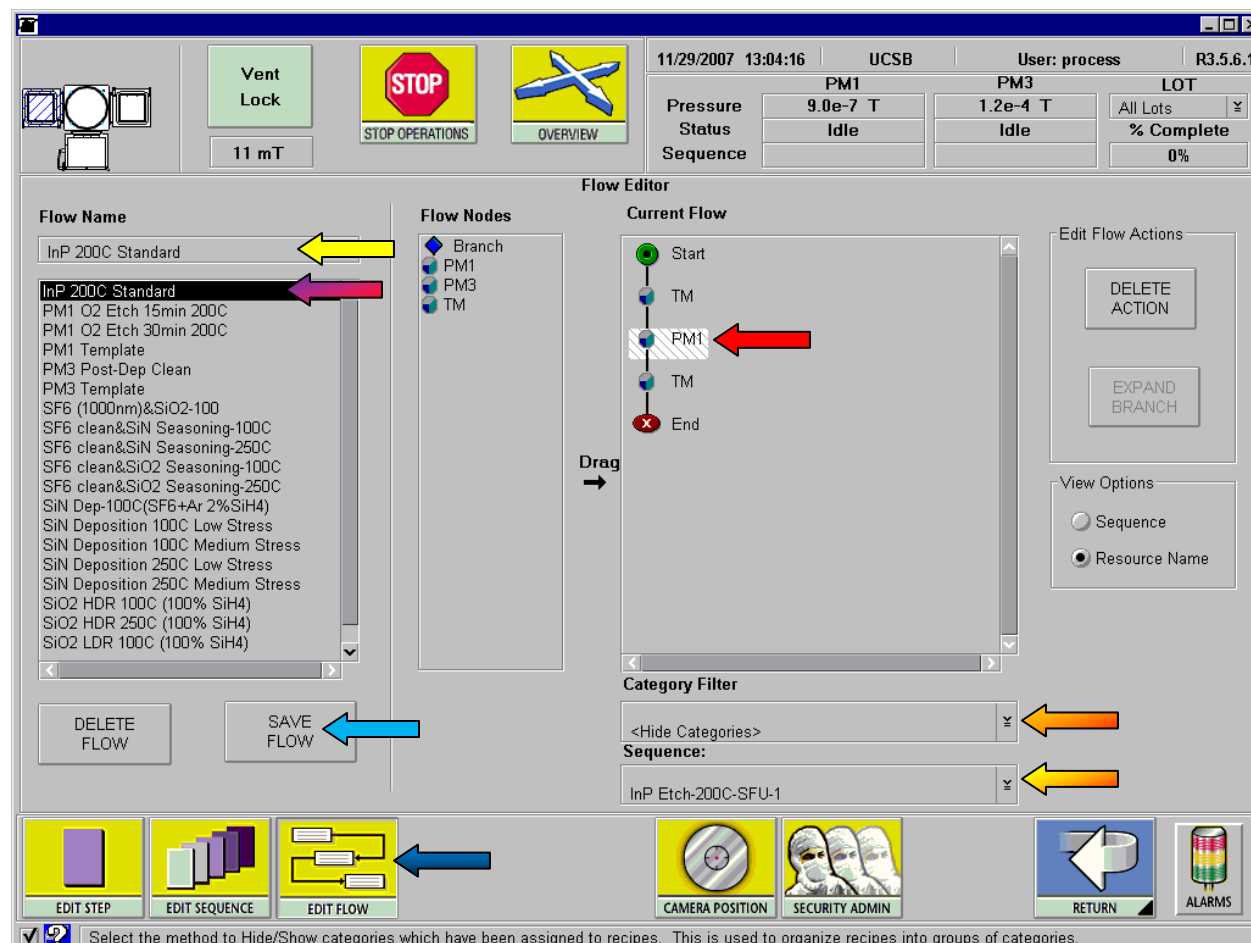- Select "**SAVE STEP**". ⟵

Edit A Sequence:

- From main screen, click on "**EDITORS**" icon.
- Set the Focus to PM1. ⟵
- Select the "**EDIT SEQUENCE**" icon. ⟵
- Select the appropriate "**Sequence Category Filter (SCF)**". ⟵
- Select Sequence from the "**Sequence Directory for PM1**". ⟵
- Select the appropriate "**Process Step Category Filter**". ⟵
- From the "**Process Steps Available**" select the process step to be added. ⟵
- Select a step from the "**Sequence Contents**" list that is either directly above or below the space you want to insert your new process step. ⟵
- To insert the step above the selected click the "**INSERT**" button. ⟵
- To insert the step below the selected click the "**ADD**" button. ⟵
- To delete a step from the sequence click the "**Remove**" button. ⟵
- Change the name in the "**SCF**" field if needed. ⟵ "**Save**" the sequence. ⟵

Edit A Flow:

- Navigate to the "**Editors**" screen.
- Select the "**Edit Flow**" icon. ⬅
- Select a flow from the "Flow Name" list. ⬅
- Click on "**PM1**" in the "**Current Flow**" field. ⬅
- Select your Sequence "**Category Filter**". ⬅
- Select your Sequence from the "**Sequence**" list. ⬅
- If needed you can save the flow to a unique name by changing the name in the "Flow Name" field before saving. ⬅
- "**Save**" the flow. ⬅