**Procedure for cathode high voltage processing after a re-cesiation**

**Preconditions:**

* Machine status in Beam Permit
* Conditioning resistor inserted
* Gun valve (VBV0F01) closed
* Gun High Voltage power supply is off

**Procedure:**

1. Bring the Gun HVPS screen
2. Click on the HVPS reset yellow button to clear all the faults
3. With the striptool, load the following graph: NUG with UHV and gamma
4. In the HVPS screen, click on ON, this will turn the HVPS ON
5. While watching the signals in the striptool, set the HV to 150kV and click the “HV GO” button. This will ramp the voltage up.
6. Letting the voltage soak for 5 minutes at each set-point, go to 200kV, 250kV, 300 kV, 325kV and finally 350kV.
7. Let the gun soak at 350kV for 20 minutes.
8. The procedure is complete, set the voltage to 0 kV and click on “HV GO”
9. Click on HVPS OFF
10. Run the FEL shutdown procedure to go to Controlled Access
11. Call MCC to go to Controlled Access to switch to the running resistor.

**IMPORTANT OBSERVATION DURING THE PROCEDURE**

* If the High Voltage power supply trips off on current, please contact Don Bullard (7221) or Carlos Hernandez-Garcia (6862).
* It is expected to see some current spikes associated with vacuum. This is normal in the present state of the gun. The average HVPS current at 350kV should be between 180 and 190 uA. If the current is higher than 200 uA, contact Don Bullard or Carlos Hernandez-Garcia

**Procedure to switch back to running resistor:**

1. Proceed to the vault
2. Turn off HVPS and lock out contactor per procedure
3. Insert the gun tank ground rod, this is the right most of the 3 rods. In all cases the Swage fitting should be loosened by hand before inserting/retracting then re-tightened. Be sure that there is a shorted BNC connector on the end of this rod as well as a ground strap. This rod has a blunt end and need only touch inner electrodes
4. Insert the resistor drive rod on top of the aluminum spool piece connecting the HVPS to the gun tank. This is also a rod with a jack plug on the other end, which drives the dc motor that drives the running resistor in and out.
5. Connect the running/conditioning resistor drive box to the squared connector.
6. Turn it on, and flip the toggle switch to the “running resistor” position. You will see current being drawn in the display. The current will go back to zero when the running resistor is fully inserted.
7. Remove the squared connector.
8. Remove the shorted BNC connector on the ground rod and connect a coaxial cable.
9. With an Ohm-meter, check the resistance at 0.470 k-Ohms by connecting one end of the meter to the black pin on the squared connect and the other to the central connector on the coaxial cable. If the meter shows OPEN, try to retract and insert again the running resistor.
10. When the running resistor is inserted, replace the coaxial cable on the ground rod with the shorted BNC connector.
11. Retract the resistor drive rod on the spool piece, and then the ground rod on the gun tank.
12. Unlock HVPS contactor and return to ON position.

**Do NOT forget: Unlock and turn ON HVPS contactor**