X-Pinch Task List (Draft)

1. Complete Mechanical Design of the X-Pinch Housing and End Plate
    a. Make sure the drawings are in the IAC standard drawing format
    b. Make sure the drawings meet the IAC standards (default tolerances, surface finish, radii ....)
    c. Make sure there is a final approval of the drawings
2. Order Housing and End Plate
    a. Get multiple quotes - 30 day or less delivery
    b. Order the parts
    c. Receive parts and inspect upon receipt
    d. Order required fasteners (McMaster Carr) and gaskets
3. Complete Mechanical Design of the Output Section (Insulator and electrodes)
    a. Get final drawing approvals
4. Order final parts
    a. Get multiple quotes - 30 day or less delivery
    b. Order the parts
    c. Receive parts and inspect upon receipt
    d. Order required fasteners (McMaster Carr) and gaskets
5. Buy the charging line (resistive o-ring material and HDPE tubing)
6. Buy HVR load resistors
    a. These are from the available HVR resistor stock (e-mail HVR)
    b. Typical HVR resistor values needed are ~ 1 - 10 Ohms each
    c. Calculate the critically damped value for our system
7. Locate RG-214 cable (10 feet)
8. Locate test area near the ISIS Screen Room
9. Establish a safety perimeter
10. Have an Operating Procedure in place
11. Locate a +100 kV power supply
12. Locate a PT-55 trigger unit
13. Layout the testing area with all components
14. Assemble hardware
15. Test hardware
    a. Initial tests will be in air with HVR resistor load
    b. Test should be made in oil - consider building or acquiring a small length of tubing that fits on our test flange that can be filled with oil for these tests.
16. This is all we need to accomplish before May 22, 2014.