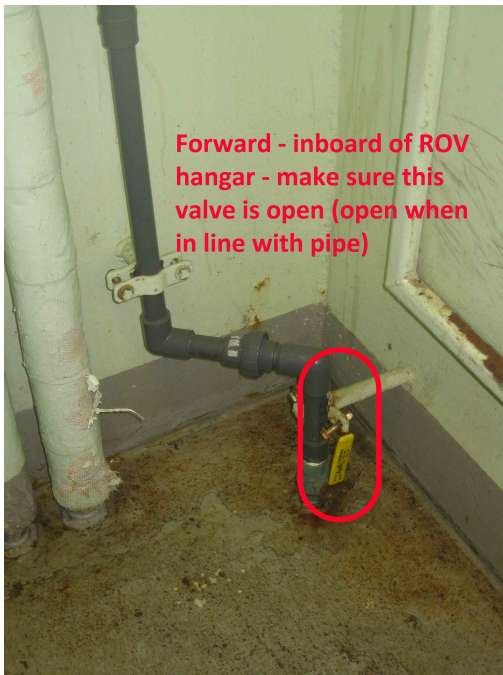


DIRECTIONS FOR STARTING FLOW THRU SYSTEM PUMP

The main thing is to make sure all the valves are open before starting the pump.

1) First thing: Let the engineer on duty know you want to start the pump (the engineers need to open some valves associated with the Alvin hangar drains and over-boarding of the flow thru discharge. Those valves are in the engine room. They will open them and let you know they are open before you can proceed.)

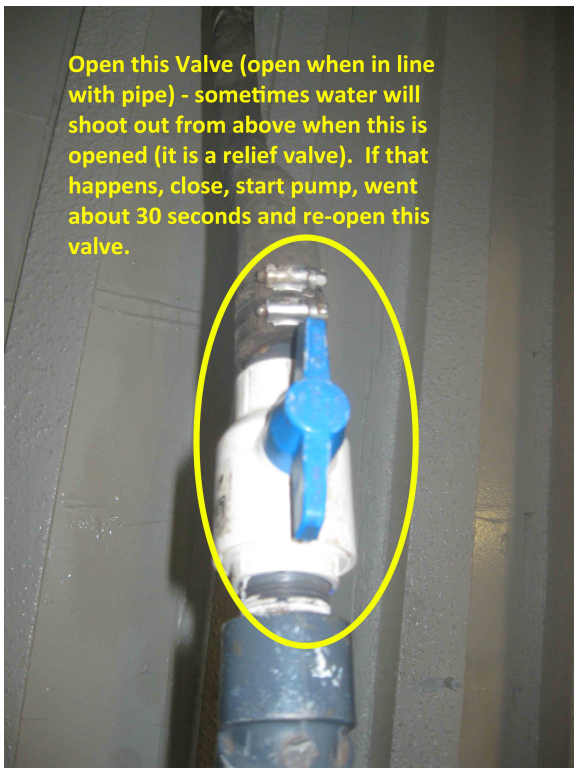
2) Proceed to the ROV Hangar

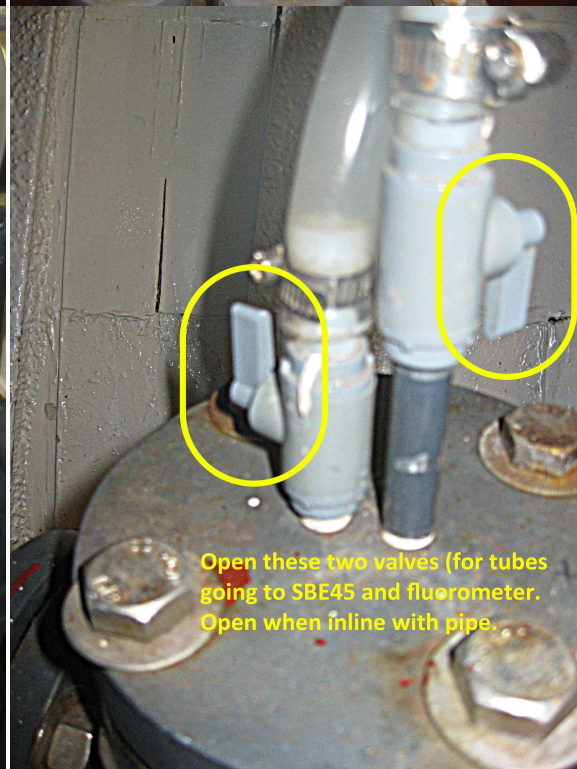
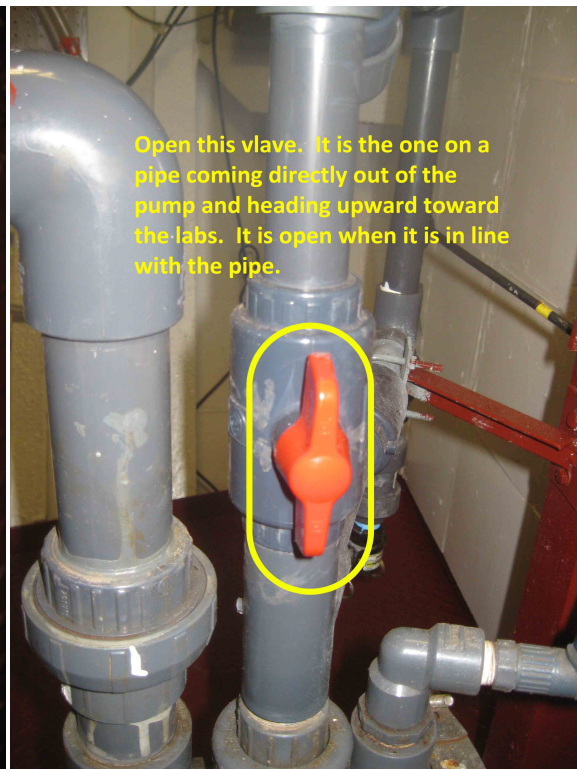


3) Now head down the Main deck passageway forward



4) Head down the forward stairwell to the bow thruster area and climb down the ladder





5) Now head to the Motor / Generator Room – it is up the ladder



NOW ALL THE VALVES ARE OPEN!

6) Turn on the pump

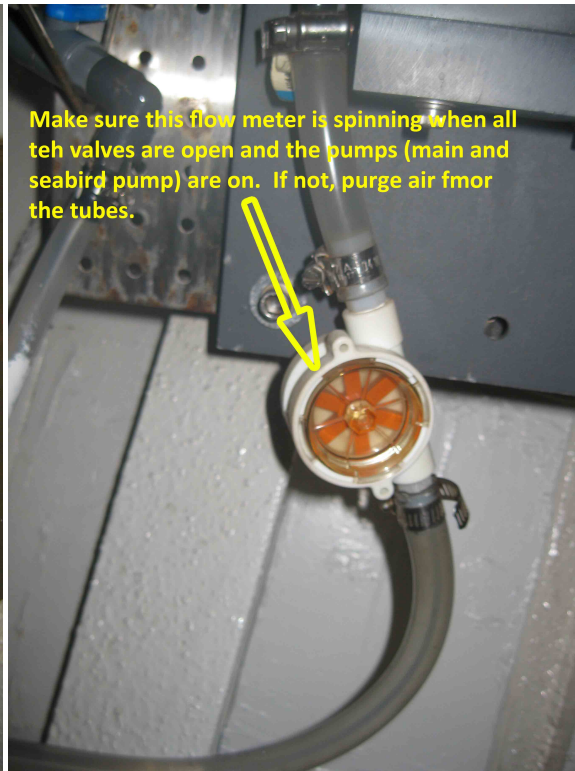


7) Go back down the ladder and check some things and turn on the SBE pump





This turns on the SSSG Seabird pump that pumps the water through the Fluorometer and the SBE45.



Make sure this flow meter is spinning when all the valves are open and the pumps (main and seabird pump) are on. If not, purge air from the tubes.

- 8) Now hop up to the main deck and check all the flow thru taps (1 – main lab outboard sink, 1- BioAnalytic Lab aft sink, 1- wetlab, 1- Hydrolab outboard sink. Make sure they were not left open (and are now running)
- 9) Finally – you should be able to see a discharge when you look forward along the hull from just behind the ROV hangar.

TURNING OFF THE FLOW THRU SYSTEM

You don't need to go through and close everyone of these valves. Simply turn off the main pump, turn off the SBE45 pump and close the skin valve (the first valve from the intake – pictured in the first picture in step 4). You should also close the valves that go to the SBE 45 if you are cleaning the tubes (and/or prior to putting chlorine in the strainer).