Alarms and Indicators

- Duct static pressure alarm
  - Indicates duct exhaust flow (low flow alarm)
Digital Manometer Alarm System

Low flow port to exhaust duct
Monitoring Hood Exhaust

- The Digital Manometer is tied to the hood exhaust by tygon tubing that is connected into the exhaust duct and the manometer. Monitoring is based on high or low flow. Hoods are monitored on low flow.

- Low limit alarm is a red LED that will illuminate when the display is less than or equal to the low limit setpoint.

- Set Low Limit is a momentary switch, which displays the lower setpoint value on the digital display. The value is in inches of water gage.

- On/Silence switch should always be in the on position. It should only be silenced after it has been reported. If there is low flow in the hood, it should not be used until it has been repaired or determined to be safe to use.
Sash location Alarm

* Alarm when sash raised above 11”
This is a view of the HEPA protective grill from inside of the hood. The red cone is part of the fire suppression system.

When establishing the setting for air flow there are several adjustments that can be made, this is behind the hood in the duct going up to the fan. On the lower doors of the wet benches are louvered adjustment that can be made to change air flow. The final place to change air flow is at the exhaust fan on the roof.
Six hoods are equipped with dump tanks. Nitrogen is used in the operation of the dump tanks.

Water is filled at the bottom and rises until is in range of the liquid level sensor, then it slowly cascades over the top.

Rate of fill differs at each hood, tank should always be filled before starting chemical etching.

DI water source is housed in the mechanical room on the first floor.
#1 Dump Tank
Chemical Tanks
N2 Gun
#2-Tank Controller

# 8
# 7
# 3
# 4
# 5
# 6

Not functioning
Hood Breakdown

#1 - Dump tank is operated using 80 psi nitrogen to operate the dump tank valve. If the nitrogen is off or to low, it will not work. EUTS disables the nitrogen in the hoods.

#2 - Controller for the dump tank. This controls the number of cycles, and length of time a cycle may be held. Push Start to begin rinse cycles.

#3 - Nitrogen valve should be opened all the way when dump tank is in use. Nitrogen can dry out the o-rings, so periodically they should be lubricated.

#4 - The slow fill is for when the tank is filling in the beginning, once the level is high the water will gently overflow the tank wall.

#5 - DI spray is used to set the amount of spray to cover the wafers while the tank is empting.

#6 - N2 agitation is for the dump tank bubbler.

#7 - Turns water on to venturi siphon. Chemicals excluding hydrofluoric compounds can not be siphoned here. There maybe other materials that can not be siphoned. When in doubt, check with NNF staff or EH&S. Never siphon a material that you are not sure about.

#8 - In some hoods 8 is the water for the eye wash. In the following hoods the eye wash has been disabled, 0869, 0868, 0870, 0871, 0872, 0878. In hood 0868 also know as metal etch hood, valve 8 controls the water for the condensation coil of the nitride etch.
Siphoning Chemicals

- Siphon Hose
- P-Trap
- CO2 Discharge line
- Acid to drain
- Water line to venturi acid siphon
- Siphon Block
• Our neutralizing system can not flocculate fluorine; therefore, do not put hydrofluoric acid or other fluorinated compounds down the drain. When unsure what can be siphoned, contact staff member or EH&S.

• Acid siphon works by turning the valve labeled siphon clockwise to open the water flow, which creates the vacuum. The more open the greater the flow. Viscous material, such as Nanostrip, take longer to siphon.

• The chemicals are discharged into the drain line, behind the p-trap.

• After siphoning chemicals, rinse tanks and siphon water several times to make sure the tube is free of chemicals.

• When work is complete verify that siphon is off.
Drain System

- Hoods with dump tank, are surrounded with a secondary containment unit. This unit holds about 4 dump cycles before it will over flow and leak out from the gap that you can see to the left.

- This kind of leak comes from item such as wafers and towels interfering with the drain. Need to check the secondary containment unit and the p-trap. P-traps should be checked once a year.

- Hoods without the secondary tanks can over flow, since the lip is only ¼” taller than the bottom of the hood tank.