

## 5 STAGE WASH SYSTEM OPERATING PROCEDURE

### SYSTEM START-UP

#### General

1. Ensure main gas valve and water valves are **open** (they should always be open).
2. Ensure conveyor, entrance and exit exhaust fans are turned on. Panel is located opposite the track control panel.
3. Turn **ON** main power control on right side of cabinet (after weekends and lock-outs).
4. **Depress** MASTER START illuminated switch.
  - a. MASTER START light comes on.
  - b. Washer circuits are enabled.
  - c. Washer exhaust fans are started.

#### Washer . . . For Heated Stages

1. **Pull** WASHER COMBO BLOWER illuminated push/pull switch.
  - a. Combustion blower starts
  - b. WASHER COMBO BLOWER light comes on.  
Note: The washer pumps may be started without the combustion blower being on. However, the combustion blower must be on for the washer burner circuits to operate.
  - c. Purge timer starts and purging light come on.
    - i) IGNITION READY light comes on when purging is complete (about 2 minutes).
    - ii) Purging lights go out.
2. **Pull** IGNITION READY illuminated push/pull switch and hold until burner lights come on for the stage being ignited.
  - a. PILOT ON light comes on when the pilot is established.
  - b. IGNITION READY light goes out.
  - c. Timers reset.
  - d. Main burners come on.
    - i) BURNER ON light comes on.
    - ii) PILOT ON light goes out when IGNITION READY switch is released.
    - iii) Burners modulate to maintain desired temperature.  
Note: If BURNER ON light goes out wait until IGNITION READY light comes on and repeat step 2.

3. When washing is desired **pull** WASHER PUMP illuminated push/pull switches for all stages desired.

**Note: Be sure wash solution is at the required temperature prior to washing parts.**

## 5 STAGE WASH PRE-INSPECTION

To be done at the start up of every shift. Day shift may need a designate to do the check as the wash operator may be busy with wash titrations.

1. Check to see that all wash burners have been lit.
2. Turn on the pumps at the main electrical panel.
3. Do a complete visual inspection of the following:
  - a. Check to see that all locks have been removed from individual lockout stations on each pump (6 of them) of the 5 Stage Wash.
  - b. Check to see if all pumps are energized and working. Document any irregular noises and report to supervisor.
  - c. Check wash pump pressures and document.
  - d. Check all inlet valves are shut off except for stages that are set up for slow draining (stage 2).
  - e. Check the solenoid ball valves, must be in the on position.
  - f. Check all water levels, fill if needed. **Never use quick fill valves to top up the tank. If the solenoid ball valves are open and the level is not right then call maintenance.**
  - g. Check the screens in each stage as you check water levels. A plugged screen will keep water level lower in pump area. Clean immediately - **only one at a time.**
  - h. Be sure all doors to wash cabinet are closed.
  - i. Check to see that all totes and chemicals are stored safely and MSDS label is in clear view.
  - j. Check to see that totes are full enough to draw chemical out and that pumps are turned on and working. Be sure that there are no air bubbles in the line between the tote and the pump, if so, turn the pump up to maximum feed and remove air bubble. Return back to normal setting.
  - k. Check 894 meter:
    - i. Check all 3 plug-in's.
    - ii. Check to see that the OX and 547 pump switches are turned on.
    - iii. Check to see if pH meter is functioning.
  - l. Check guard rails, are they secure in front of the wash and that all materials are stored in an orderly fashion.
  - m. Be sure that areas around safety shower, eye wash and entrance to dry off station are clear and accessible.

All non-conformances should be corrected by the wash operator or designate (if qualified) immediately.

## DURING OPERATION

1. Blow off parts that have water pockets. Check each part carefully.
2. Blow out all weld seams where water is trapped.
3. Unscrew all parts that are screwed on to the racks enough to allow any trapped water to escape. When no more water flows out, tighten part back on.
4. Any parts with a hole on them and have trapped water must be blown out before entering the dry off oven or must be removed from the rack and have the water dumped out. Place part back on the rack when finished.
5. Replace any plugs or caps that have fallen out.
6. Dump water out of any pipes or tubes that have trapped water. Remove these parts from the rack if necessary or tip the entire rack to empty the water out of the pieces.
7. If you have missed a part that has trapped water or you need to replace the part back on to the rack, this may be done in or outside of the cool down tunnel before the powder room.
8. Turn wash pumps on and off at required times.
9. Perform chemical titration procedures at required times.
10. Perform 5 stage wash preventative maintenance at required times.
11. **Report any unusual occurrences to your supervisor.**

## SYSTEM SHUT-DOWN

### General

1. **Depress** MASTER STOP switch.
  - a. All lights go out.
  - b. Everything stops.
2. Turn **OFF** main power control. (Weekends and Lock-outs only!)
  - Main control circuitry is de-energized.

### Washer - Pumps Only

- May be used when it is desired to maintain solution temperature but the pumps do not need to be running.
1. **Push** all appropriate WASHER PUMP illuminated push/pull switches.
    - WASHER PUMP lights will go out.

### **Washer - Pumps & Burners**

1. **Push** IGNITION READY illuminated push/pull switches.
  - a. BURNER ON lights go out.
  - b. Burners go out.
  
2. **Push** WASHER PUMP illuminated push/pull switches.
  - a. WASHER PUMP lights go out.
  - b. Pumps shut off.
  
3. **Push** COMBO BLOWER illuminated push/pull switches.
  - a. COMBO BLOWER lights go out.
  - b. Combo blower stops.