Campaign 17

Operations Summary

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Cellulosic Research and Demonstration Plant

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Operations - Campaign 17
06/22/2015 – 06/26/2015

Operation problems & resolutions:

1. Preparing Propagator 2 Seed
    a. Problem:
        i. In all prior campaigns, we had prepared the propagator 2s using the radar level sensors for level control. This method became too difficult due to the unreliable level readings at low liquid levels.
    b. Resolution:
        i. This was the first campaign that we used the prep tank to prepare the proper dilutions for the propagator 2 seeds. This method used weight and was much more reliable. The level of sterility was less than usual, but it did not seem to affect anything since contamination was not an issue.
    c. Status:
        i. Resolved.
2. Propagator 2B Base Pump
    a. Problem:
        i. The quick-connect O-ring swelled and cracked causing the pump to malfunction.
    b. Resolution:
        i. A spare aflas O-ring was used for replacement.
    c. Status:
        i. Resolved.
3. Pre-steam bin live bottom amperage
    a. Problem:
        i. The pre-steam live bottoms amperage was spiking erratically, which has never happened before. Typically, the amperage trend is flat and smooth.
    b. Resolution:
        i. We have not yet found out why this happened. We were running the live bottoms at 60% the entire time, which might have been the reason because we tried a test-run after the campaign running at 100% and the amperage looked fine.
        ii. Another possible reason could be from when Yates personnel worked inside the bin prior to the campaign. Maybe they dropped something within the screws that caused a high load.
    c. Status:
        i. Not yet resolved.
4. Screw press steam leak
    a. Problem:
        i. A steam leak developed at the driven end of the screw press.
    b. Resolution:

        i. We are not yet sure what the cause of the leaking was, but we believe there is a soft gasket that has worn away.
    c. Status:
        i. Not yet resolved.
5. Loadsure element
    a. Problem:
        i. A loadsure element for the pH Adjustment tank ruptured while in operation. This was completely unexpected since it had been such a long time since one had broken.
    b. Resolution:
        i. We replaced it with a spare.
    c. Status:
        i. Resolved for now.