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Bleach Plant Case
BY HONEY NAMPAK

Dealing With Low Oxygen Delignification Efficiency

Consistency, Retention ?

Chemical dosage ?

Temperature and Pressure changes?

Species?

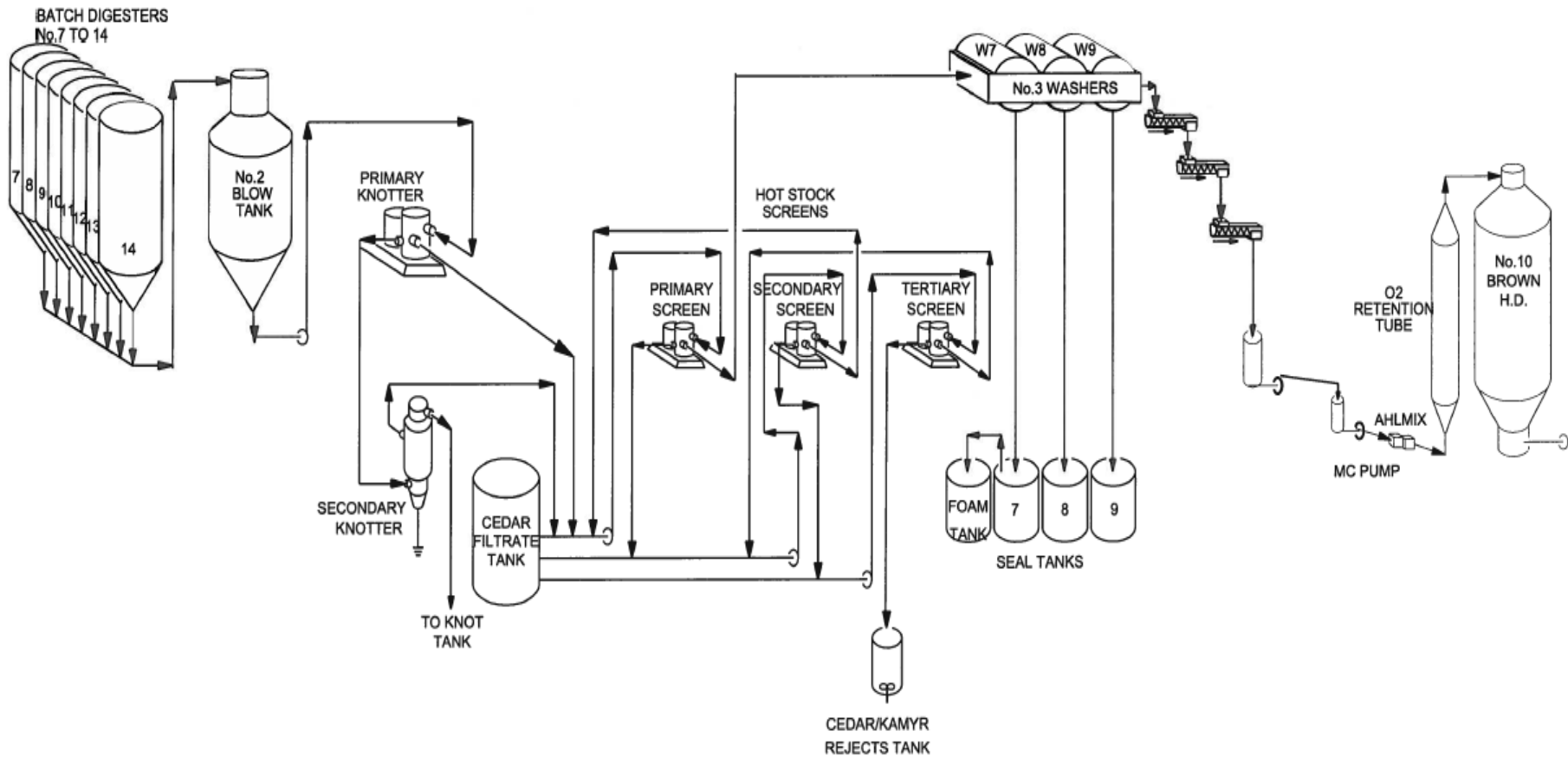
Channeling?



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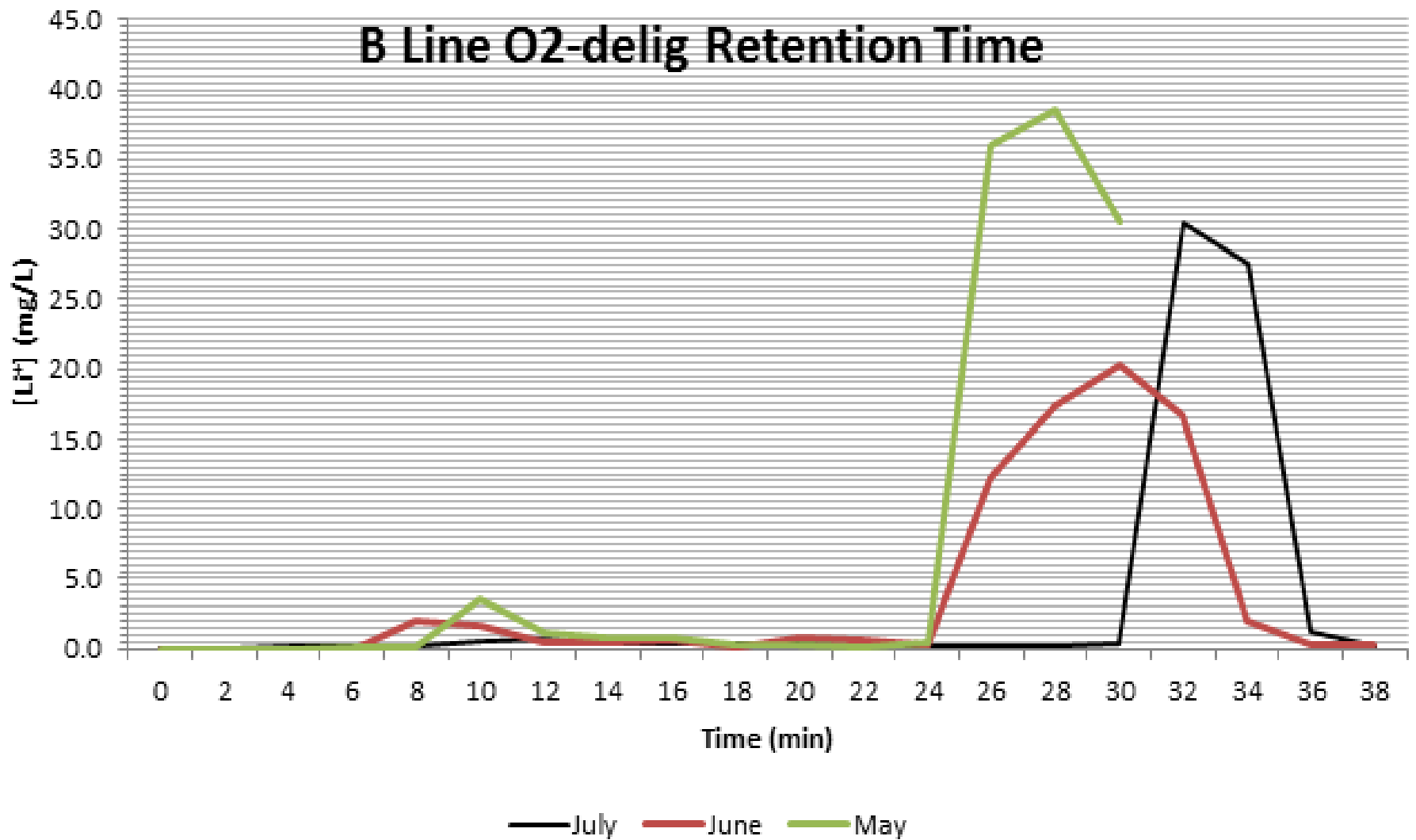
No.3 Line BSW Detail



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B Line O2-delig Retention Time

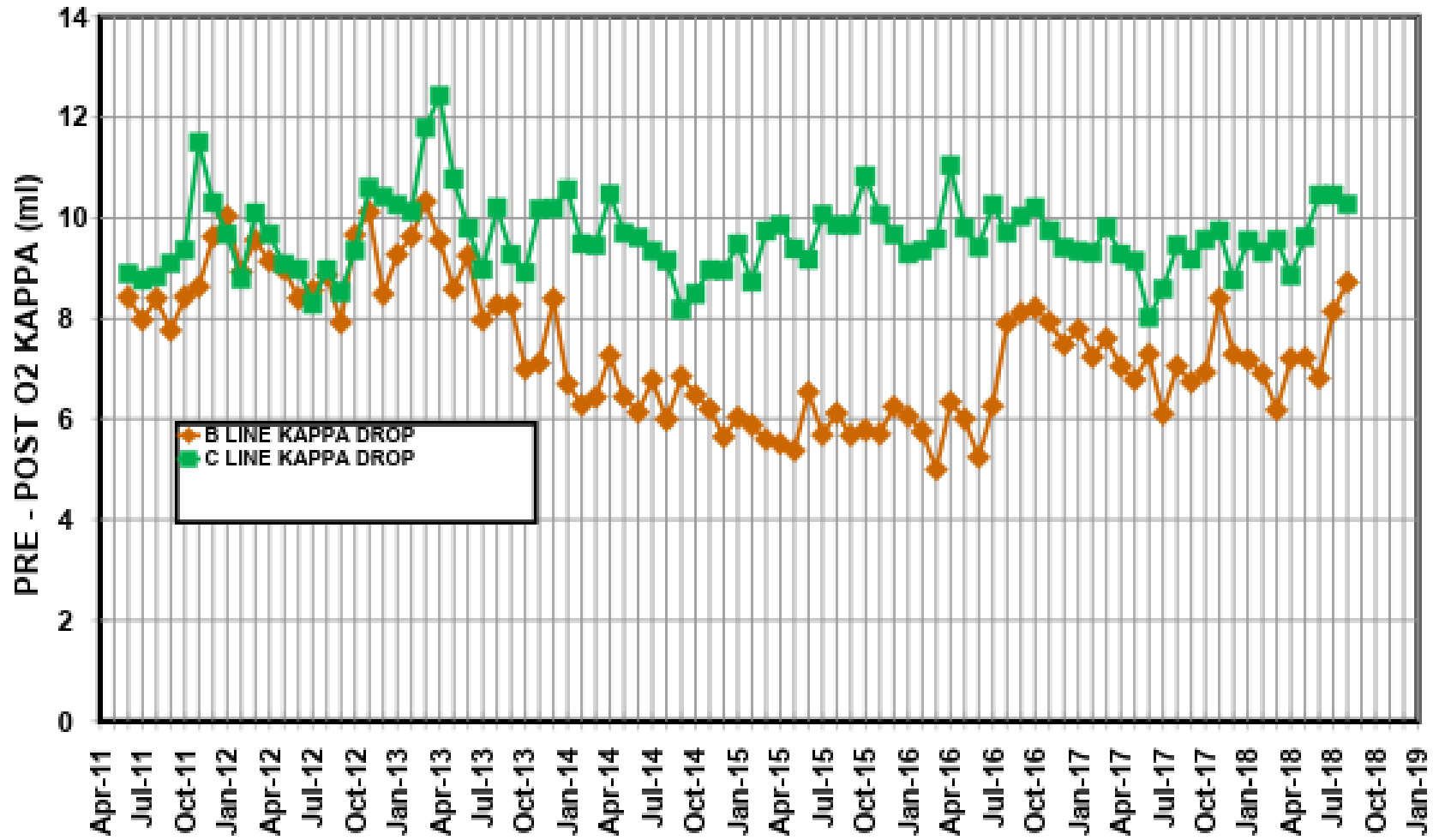


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O2 STAGE PERFORMANCE

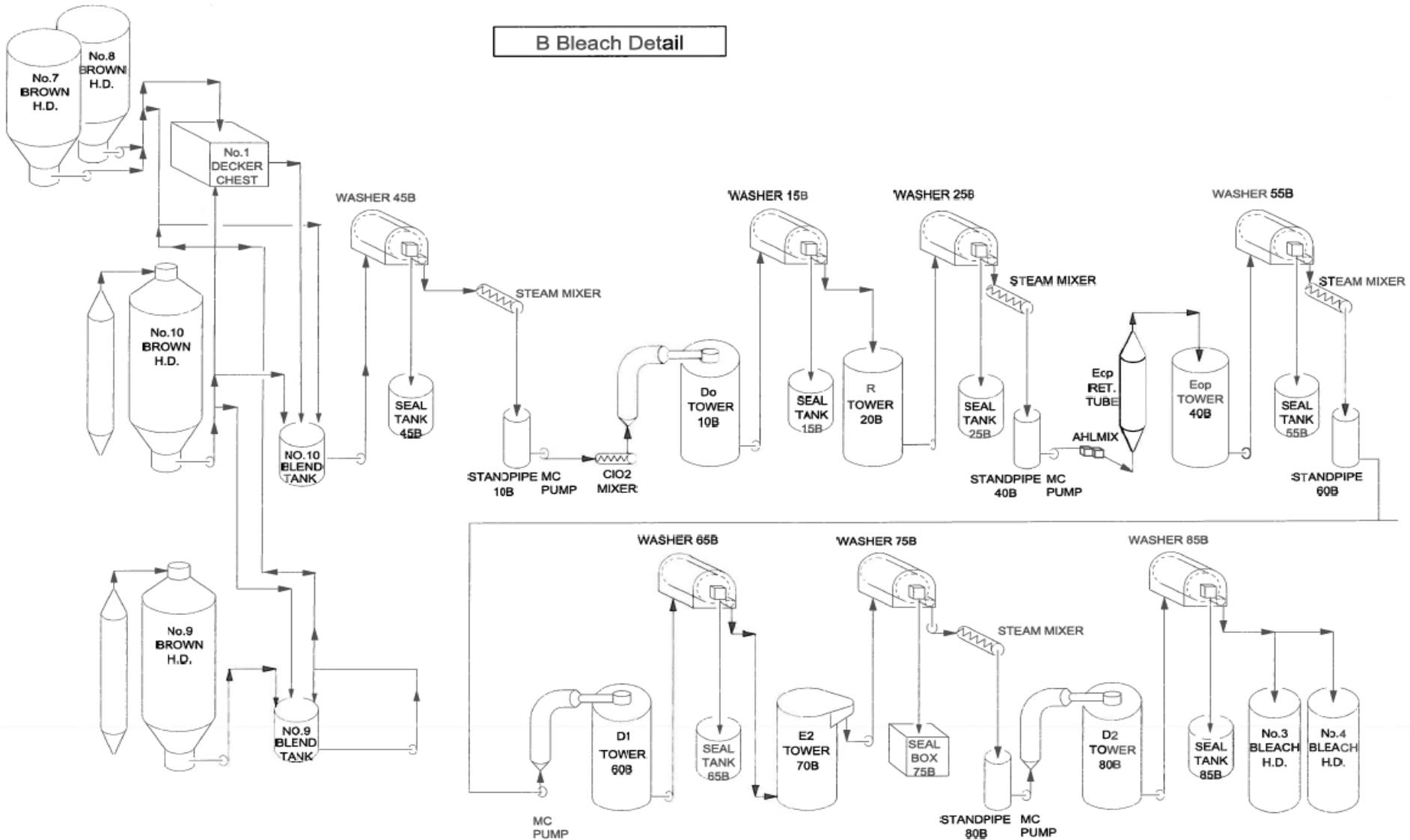
B AND C LINE



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B Bleach Detail



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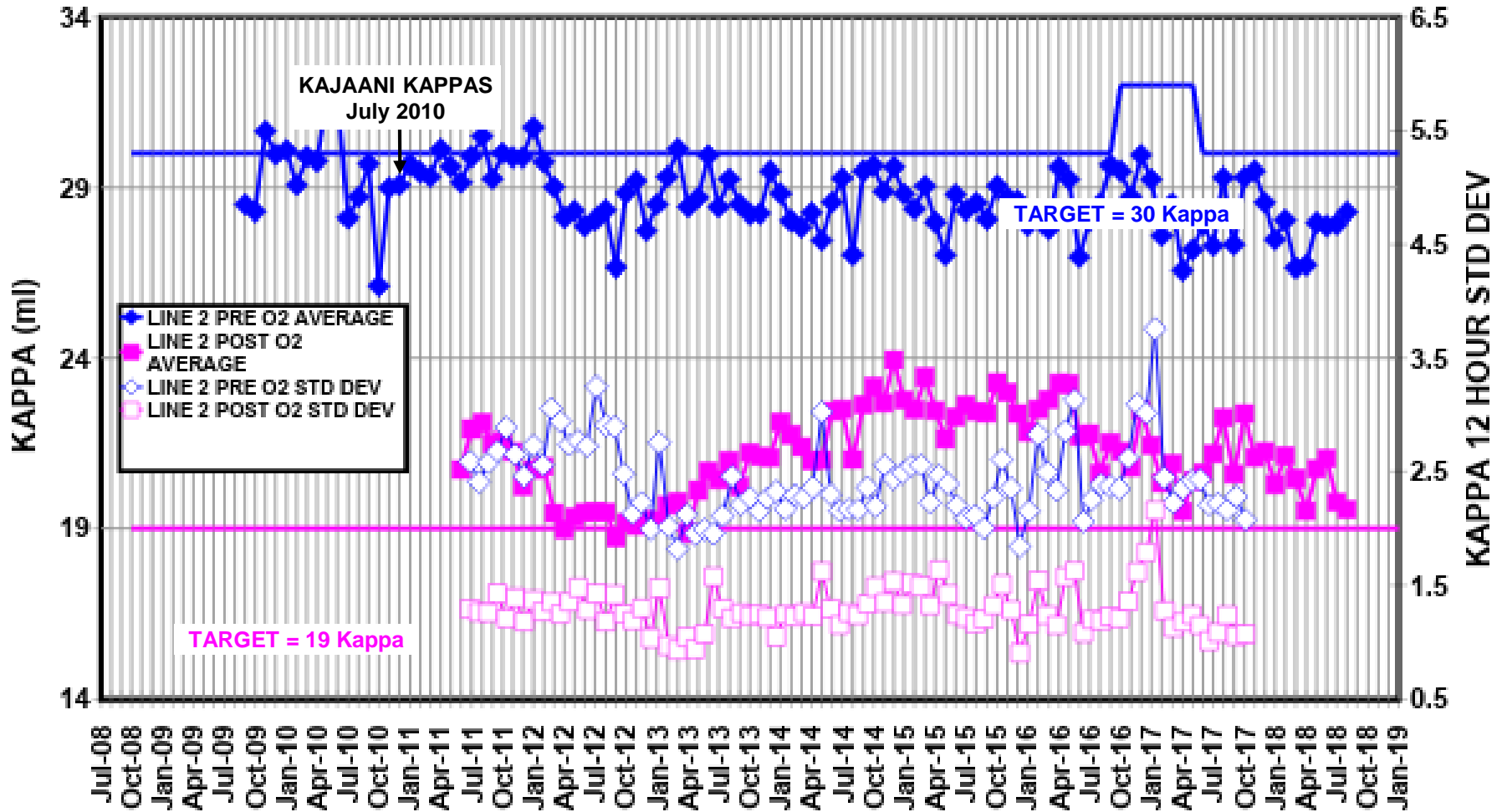
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- Added Pre-bleach shower flow measurement
- Increased total shower flow
- Introduced filtrate tank dilution to reduce conductivity
- B Bleach additional stage and better bleaching results wouldn't justify high capital budget for O2-delig modification
- Add pH measurement/control loop on O2-delig stage?

- Added new shower bars on brown stock washers
- Amp control was developed to reduce the dilution water on the back of the final brown stock vacuum washer prior to steam mixer and O2-delig
- Installed functioning vacuum gauge on the washer's drop leg
- Increased pressure on the top of the O2-delig
- Increased O2 feed temperature from 190F to 195F
- Steam mixer plug issues continues
- Spare vacuum valve installation

B LINE KAPPA PERFORMANCE

NO. 2 BATCH - NO. 9 BSW - B BLEACH



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Vacuum Valve Installation:

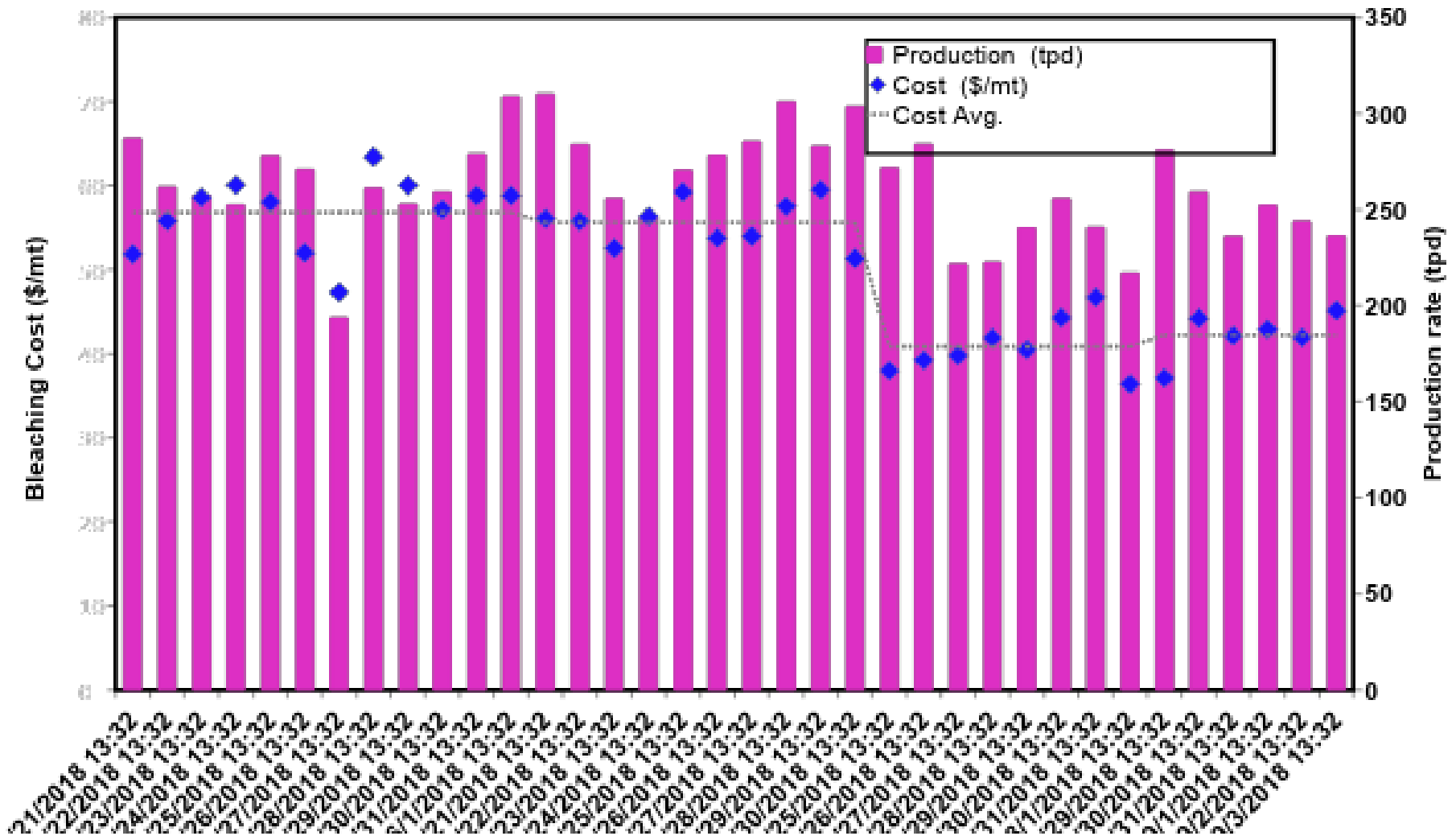
- Optimum position to adjust...
- Adjusted the valve based on bleach plants' end valves optimum results
- No more rewetting with black liquor
- Steady higher final consistency by 1-1.5%
- Improved conductivity to bleach plant



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B Bleach Cedar Grade Bleaching

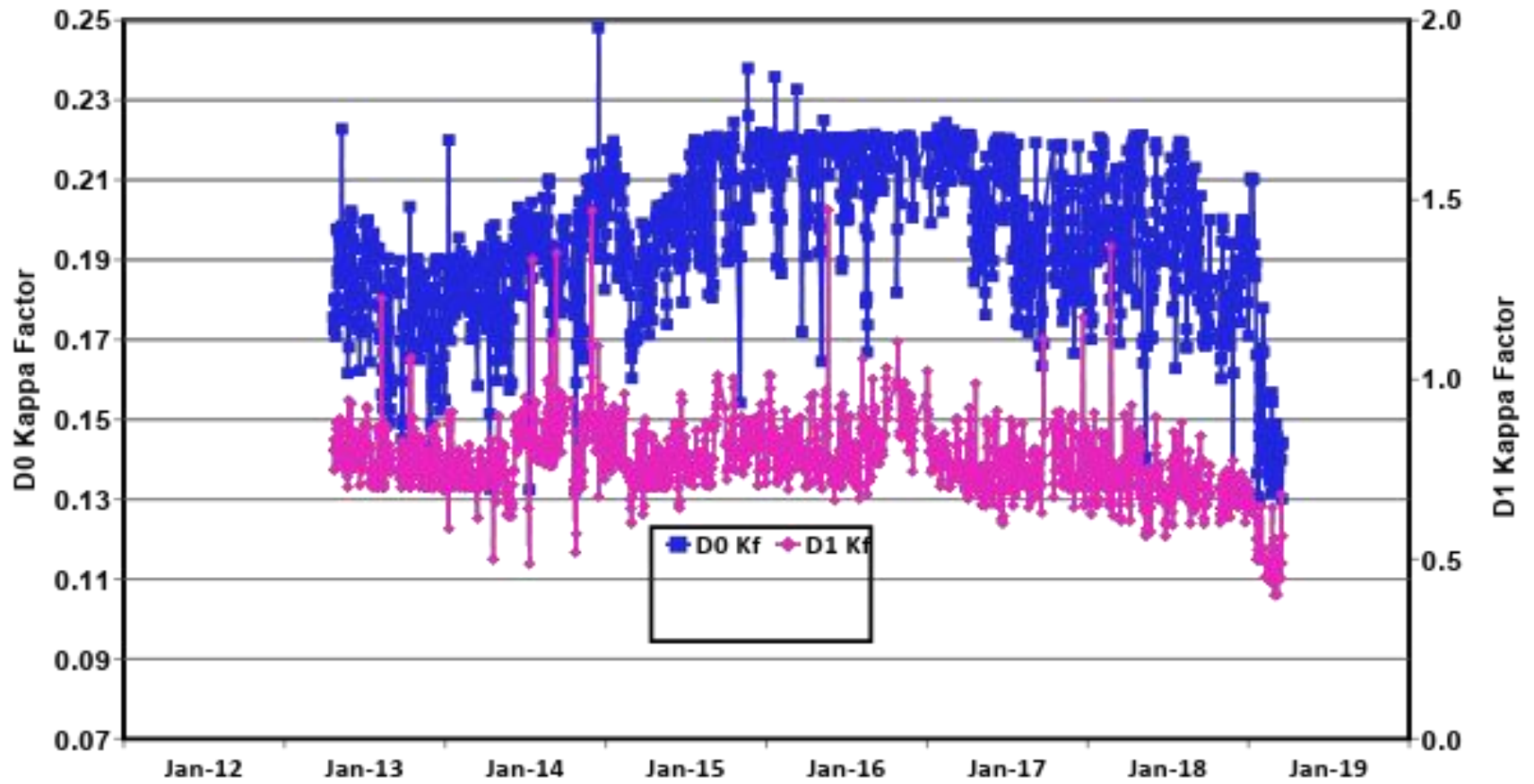


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B Bleach Kappa Factor

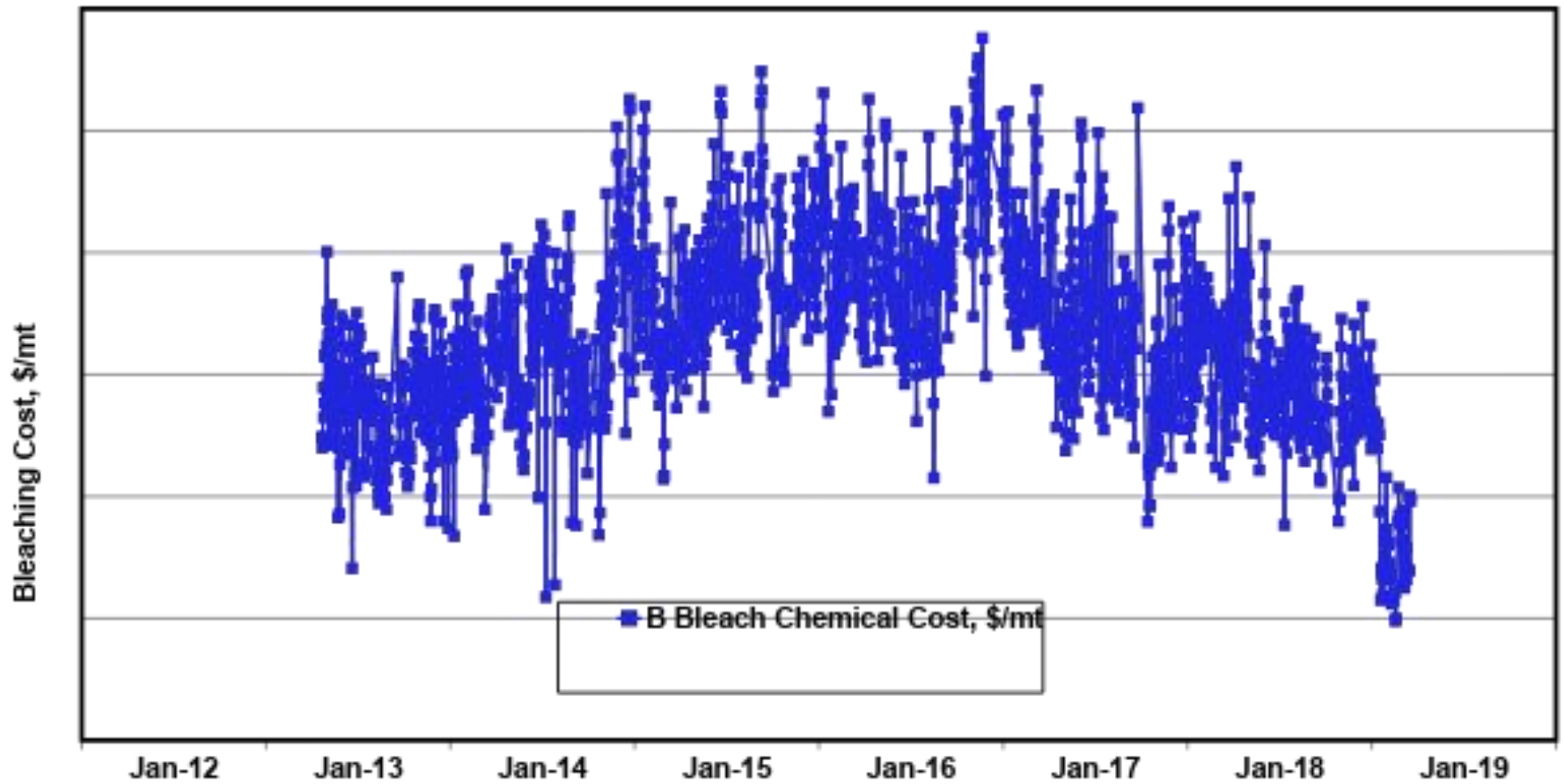
D0 & D1



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Bleaching Cost, \$/mt

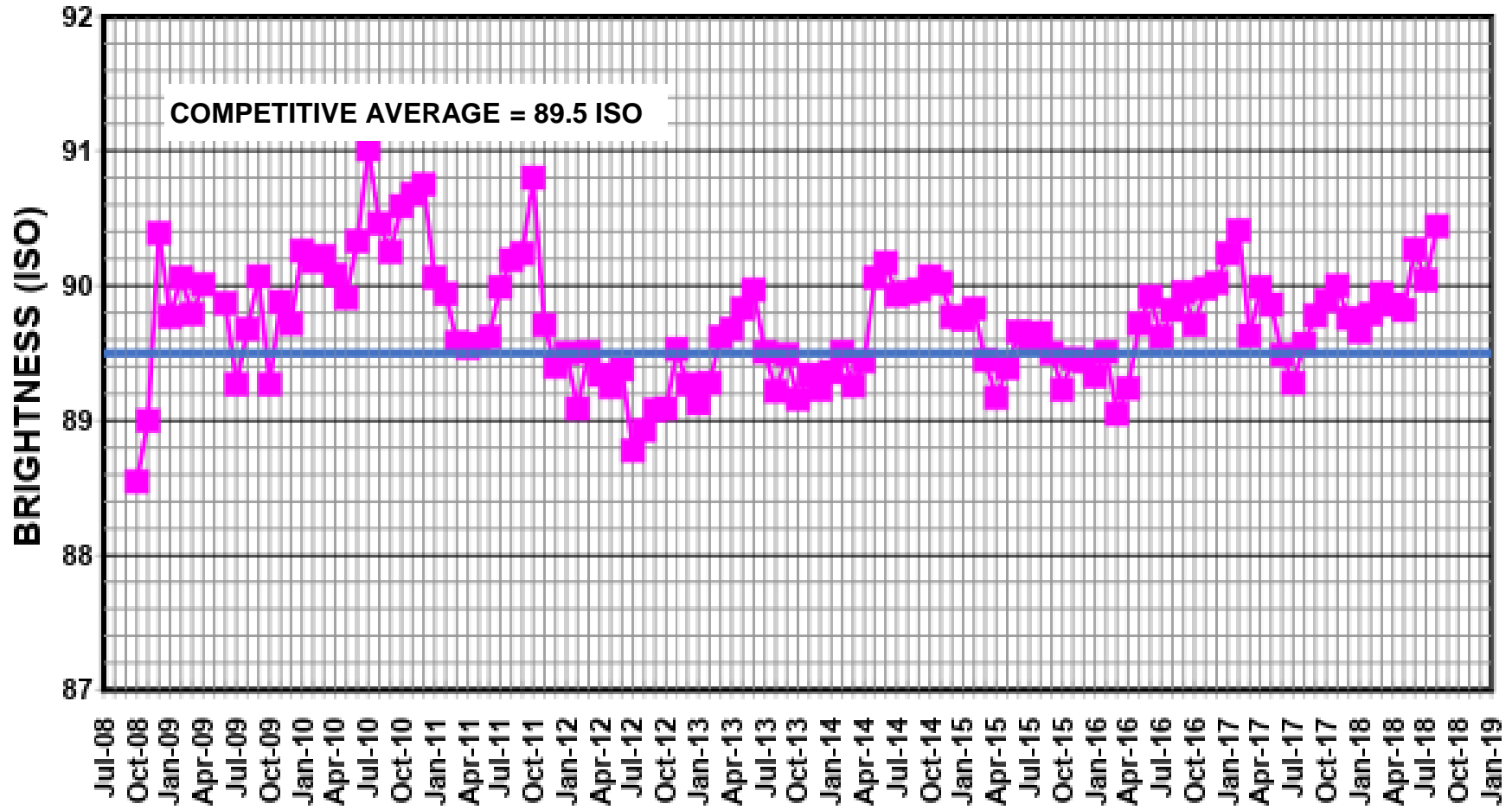


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NO. 1 MACHINE BRIGHTNESS

ALL FB GRADES (B LINE SINCE SEP 2009)



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Next Steps....

- Trial to cut re-pulper dilution while bypassing the troublesome steam mixer
- Will we achieve the temperature set point?
- Will we see improved delignification due to higher consistency?
- Can we increase the digester final kappa target?
- Optimize bleaching chemicals and final bleaching brightness
- Increase B bleach throughput

Thank you



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