Bonneville VBS cleaning and STS removal/reinstallation criteria

The preferred method for cleaning screens is to use the TIE crane. The crane first places the backer VBS behind the VBS to be cleaned. The crane unhooks from the backer VBS, hooks to the dirty VBS and lifts the VBS in the gatewell slot. Debris is hosed off into the gatewell slot and given a few minutes to either get pulled through orifices or to get impinged on the backer VBS. The backer VBS is then moved to the next slot and the process continues down the powerhouse. If all goes perfect, the entire powerhouse can be cleaned in one day using the TIE crane. If there are any problems whatsoever, this is no longer the case.

The TIE crane has a 15 mph wind restriction to pick anything considered to act as a sail and at 25 mph is restricted from operating at all. When winds hit the 15 mph threshold, the gantry crane must be used to clean VBSs. Because the gantry is not tall enough to pick a VBS clear of the gatewell slot, the backer VBS must be broken in half to move it from one slot to another. This is extremely time consuming and results in the project being able to only clean 3 units per day.

Currently, the FPP states:

> **5.** VBSs will be cleaned when drawdowns read 1.1' on any day (including weekends) and when drawdowns reach .9' on Thursdays.
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> **6.** If a screen has reached the cleaning threshold, all three screens in that unit will be cleaned.
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> **7.** A unit will be shutdown if the VBS drawdown meets or exceeds 1.5' in a 12 hour period.

1. TIE Crane in Service

> **A.** VBSs will be cleaned by installing the spare VBS in the back slot, pulling the main VBS up and spray it off with a fire hose, then replace back in slot and pull spare (reverse order).
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> **B.** If the VBS drawdown criteria of <1.1' CANNOT be maintained during the day due to debris, the spare VBS will not be installed in the back slot and the gatewells will not be dipped. The Project will pull the main screen, spray it off with a fire hose, and then re-install.
>
> **C.** If the VBS drawdown criteria of <1.5' over a 12 hour period CANNOT be maintained due to debris, even after performing the above operations, then the STSs will be pulled out until the screen re-installation criteria (see 2.4.2.2.j.3) have been met.
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> **D.** Once the screens have been removed, these units should operate only as necessary to maintain TDG levels below dissolved gas cap limits.

2. **TIE Crane OOS- use gantry crane**

A. If the Gantry Crane is used to pull the main VBS, the spare VBS will not be installed in the back slot.

B. If the VBS drawdown criteria of <1.5' over a 12 hour period CANNOT be maintained due to debris, even after performing the above operations, then the STSs will be pulled out until the screen re-installation criteria (see **2.4.2.2.j.3**) have been met.

C. Once the screens have been removed, these units should be operated only as necessary to maintain TDG levels below dissolved gas cap limits.

3. SCREEN RE-INSTALLATION CRITERIA: Once flows drop below 300 kcfs and water clarity is 4' or greater, the Project will install STSs in the highest priority unit available. When VBS drawdown for that unit remains below 1.1' for 24 hours, the Project will re-install the remaining STSs. The reinstallation process may occur before or after the above criteria are reached at the discretion of the Project Biologist followed by a discussion with FPOM.