1. **Purpose:** To describe how the Filter Press filters function and are maintained.

2. **Scope:** This policy applies to all filters used in the Filter Press in the Manufacturing facility. All product is subject to filtration regardless if the final product is liquid or crystal.

3. **Policy: Filter Press Filtration**

A filter press is used to remove solid impurities from the "Mud" produced in the Digesters at Giles Chemical. Since the MgO is a mined raw material the impurities are mostly rock-related materials (sand, unreacted MgO, and Calcium Sulfate crystals generated by naturally occurring CaO in the mined material). The media for the filtration have a nominal mesh size of 5 micron. However, the nature of filtration is such that a coating of filtered material on the filter press cloth actually increases the effectiveness of filtration to sub-micron levels.

Upon startup of a press run, approximately 300 gallons of material are returned to a holding tank instead of the brine tank. This is to coat the cloths with filtered material and increase the filtration efficiency. After approximately 300 gallons the brine discharge is swapped to the Brine Tank. The stored material is then pushed through the press at the end on the Press run cycle.
The cloths used are woven from a polyester monofilament that does not break down into fibers per 21 CFR 211.72.

The cloths are changed on a monthly basis on each of the two presses. Prior use has indicated that the cloths are functional for as much as three months, but the productivity drops as the cloths age.
The Quality Department inspects the brine daily, and if the brine color is high or tinted, this is reported to Production so they can inspect the filter presses for holes in the cloths, leaks, or cloths with folded corners.

4. **Change Information:** New Document