**Insights from Cement Manufacturing Data Analysis**

**1. Throughput Changes:**  
Before the business moment, the mean mill throughput (Mill TPH) was approximately 165.82 tons per hour, which slightly increased to 166.46 tons per hour after the business moment. This indicates a slight improvement in efficiency or production capacity post-business moment.

**2. Raw Material Consumption:**  
There is a significant increase in Gypsum TPH post-business moment. This could indicating to increases the amount of gypsum into mill as per the data after preprocessing .

**Mean Change**: Before preprocessing, the mean Gypsum TPH was approximately 4.94, whereas after preprocessing, it increased significantly to around 96.93. This indicates a substantial increase in the average throughput rate of gypsum.

**3. Energy Consumption:**  
While there are minor fluctuations, the overall trends in energy consumption (Mill KW, Mill Vent Fan KW, CA Fan KW) seem relatively stable before and after the business moment. However, detailed analysis of specific energy consumption patterns could provide insights into potential efficiency improvements or areas for optimization.

**4. Temperature and Draft Control:**  
Parameters like Mill I/L Temp, Mill O/L Temp, Mill Vent BF I/L Draft, and Mill Vent BF O/L Draft show some variations post-business moment. These changes may reflect adjustments in the manufacturing process to optimize temperature control and draft conditions, potentially leading to improved product quality or energy efficiency.

**5. Reject Rates:**  
The reject parameter shows a decrease post-business moment, indicating potential improvements in product quality or process efficiency.

**6. Equipment Performance:**  
Parameters like Mill Vent Fan RPM and Sep RPM show noticeable changes post-business moment, suggesting adjustments or maintenance activities on related equipment. These changes may impact overall system performance and efficiency.

**7. Data Quality:**  
There are anomalies in some data points after the business moment, such as extremely high values for DFA TPH and Sep Amp. These discrepancies may indicate data recording errors or significant process changes that need to be investigated further for accurate analysis and decision-making.

**Conclusion:**  
These insights highlight the dynamic nature of cement manufacturing operations and the importance of continuously monitoring and analyzing process data to drive improvements in efficiency, quality, and overall business performance.