Testimony of Mike Suever

Representing HP Hood LLC and Supporting the Dairy Institute of California

I am responsible for milk procurement, R&D, and purchasing. Our company has substantial capital invested in facilities that process and package milk into fluid and spoon able products. These operations include an extended shelf life/aseptic plant in Sacramento California and three other ESL/aseptic plants located in the Eastern US. I have testified at several Federal and State regulatory hearings during the last 30 years.

Extended shelf life/aseptic processing operations yield dairy products that generally have 60 – 90 days of acceptable code life on them when produced. This stands in stark contrast to conventional HTST plants that would typically place a code life of between 18 – 21 days. As you can imagine a great deal of additional effort is required to achieve the longer code dates. One such effort is in the initial quality testing and release protocol that is associated with ESL/Aseptic product. Product produced in this ~~manor~~ manner will often be held in "quarantine" while microbial and other tests are conducted. The results of these tests can take 2 – 10 days before product can be released for sales and distribution while an HTST plant would move product in 24 hours. The presence of a single microbial colony in these products is usually cause for placing the product on permanent hold and then, if possible, reworking. The vast majority of HTST processed dairy products are

released for sales and distribution between 24 and 48 hours from packaging. HTST products often get released for sale with tens or even hundreds of microorganisms. The stringent quality standard associated with ESL/aseptic processing leads to much more reworked product and the related cling/loss involved. Cling is the dairy product that sticks to the inner surfaces of every stainless steel pipe, pump and vessel that we use while processing and filling. A coating of dairy product will "wet" the entire surface area of any batching, processing and filling equipment. Dairy products that have higher solids and butterfat will cause a thicker layer of cling to the inner surfaces due to the higher viscosity of those products.

Another area that is unique when comparing ESL/aseptic processing to HTST is the level of sophisticated controls required to assure product quality. These time, temperature and pressure controls are reliant on electrical impulses sent throughout the system. A simple electrical pulse which could be only enough to cause the lights to blink is sufficient to cause the ESL/aseptic process to shift out of forward flow and divert to pumping water through the processor. Even with the application of solenoids and battery backups, you cannot stop this from happening, but one can keep already processed product sterile in the surge tank. These slight power interruptions are often caused by lightning or high winds. Our view and that of the health authorities is that we have "lost control" of the process and must re-

sterilize. The associated water and steam interface leads to product loss and shrinkage that does not happen as often in a conventional HTST operation when a more pronounced electrical interruption would be needed to cause the same reaction.

The added complexity of ESL/aseptic processing equipment often leads to more control valves and longer pipe runs when compared to conventional HTST operations. The more valves and piping you have the more cling and loss/shrinkage you encounter. Even though we employ air blows and water to push product ~~though~~ through the system at the end of each product type the shear complexity of the system leads to more product loss than a conventional HTST plant.

The portfolio of dairy products or dairy containing products in an ESL/aseptic plant are much more extensive than that of a typical conventional ~~ESL/aseptic~~ HTST facility. This then requires more product to water flushes and increases the amount of shrinkage that is experienced.

The products that we produce at an ESL/aseptic plant typically have on average higher solids and greater butterfat content than would be the majority of products produced in a conventional HTST operation. So when we have

production interruptions due to any of the issues that I have previously noted, the impact is greater.

HP Hood's ESL/aseptic plants participated in the survey data collected by Carl Herbein. The physical and operational differences described by engineer Chuck Meek, explain why accountant Carl's Herbein's data shows a difference between a conventional HTST facility and that of an ESL/aseptic plant. We agree that Carl Herbein's data is representative of our operational experiences and request that USDA utilize this data when establishing the "allowable shrinkage factors" for ESL/aseptic facilities.