

## List 1. The Course of this case

March 31	There a was power outage from 11 am for three hours at the Taiki plant of Snow Brand in Hokkaido. Due to this power outage, the skim milk was kept heated at 68 to 86°F for four hours during the cream separation process, which usually took only a few minutes. Also the return tank used to store excess skim milk during the condensation process was left without cooling for nine hours. Consequently toxic enterotoxin type A propagated
April 1	It was considered to be safe enough to produce skim milk powder by sterilizing the material that was retained inside the pipe at the plant (the material needed to be discarded), and a total of 830 bags of skin milk powder were manufactured. And 450 bags out of 830 tested negative for bacteria including staphylococcus and escherichia coli and shipped (112 bags out of 450 were used for dairy products while the rest were moved to storage). As the rest of the 380 bags exceeded the amount of general bacteria by more than 1% of it's own standard value (9,900 bacteria per gram), they were reused as material of skim milk powder (due to the lack of safety control management). At the Taiki plant, 750 bags of skim milk powder were manufactured out of the toxic material and shipped on April 10
June 20	The Osaka plant received the skim milk powder manufactured in the Taiki plant.
June 23	The Osaka plant manufactured the dairy products that had caused food poisoning (~ 6/28).
June 27	The Osaka City and Snow Brand received the first report that the Snow Brand low-fat milk caused food poisoning. The number of the illnesses continued to grow through the following day, June
June 28	The Osaka City government investigated affected people and inspected the Osaka plant. They directed Snow Brand to refrain from producing, and to recall the products, and make an announcement of the facts of the incident. The incident was publicized on June 29 and the order of product recall was made on June 30. The cause was expanded to nearby cities and
June 30	The Health Ministry sent office members to the Osaka City government and held a joint session with related cities and prefectures
July 1	The Health Ministry and the Osaka City jointly investigated the Osaka plant under the administration of Hazard Analysis and Critical Control Point (HACCP).
July 2	The Osaka Public Health Dept. detected Staphylococcal enterotoxin type A in a "low-fat milk" product. The Osaka City government identified it as food poisoning caused by a toxic agent and prohibited operation of the Osaka plant. Also Osaka Prefectural Police began an investigation under Suspicion of Negligence Causing Injury.

July 5	The number of affected people reached to more than 10,000 and on July 5th, Takuro Ishikawa, the President of Snow Brand resigned effective the following day.
July 10	The Osaka City government issued an interim finding and announced it's discoveries of the investigation of the incident. The reported number of affected people reached to 14,780.
July 11	Snow Brand suspended production of dairy products at 21 plants across the county.
July 25	The Health Ministry authorized the reopening of 10 plants including those in Kyoto and Kobe.
August 2	Those plants went back in operation from July 27 and a declaration of safety was issued to 20 plants.
August 18	Regarding the mass food poisoning caused by the product of Osaka plant, the Osaka City announced that toxin (enterotoxin type A) of Staphylococcus bacteria was detected from the skim milk powder produced (on April 10) at Taiki plant (Taiki, Hokkaido Prefecture). Sales of Snow Brand dairy products began to be
August 19 - August 23	Received the request of investigation from the Osaka City and the Health Ministry, Hokkaido Prefecture began to investigate the site from August 19 and announced their findings of the power outage occurred on August 23 that affected the production of the toxic skim milk powder, violated use of skim milk powder contained viable cell count that did not meet its standard, and detection of enterotoxin type A in the stored sample of skim milk powder produced on April 1 and April 10. The toxic skim milk powder was used as material of dairy products manufactured at the Osaka plant. Hokkaido Prefecture also charged violation of Article 4 of Food Hygiene Law and ordered a ban on producing dairy products according to Article 23 as well as to recall the skim milk powder
September 20	In a joint session, the Health Ministry and the Osaka City issued the interim and announced that the outbreak of food poisoning attributed to the skim milk powder produced at Taiki plant.
September 23	The Health Ministry accepted the improvement plan including power outage control measures, which were submitted for the Taiki plant, and lifted the ban order. Operation restarted from
September 26	Snow Brand announced the financial outlook for the next fiscal year. The ordinary loss fell into the deficit of 53.8 billion yen and Snow Brand announced to close the Osaka plant.
December 20	"The joint session of the Health Ministry and Osaka City" held a meeting and issued the final report of the food poisoning caused by Snow Brand dairy products, and concluded that the cause was attributed to the skim milk produced at Taiki plant (Taiki, Hokkaido Prefecture). Toxin of staphylococcus was generated either from cream separation process or condensed process during power outage.

December 22 - January 31, 2001	Snow Brand publicized the final report that the cause of the food poisoning was attributed to the skin milk produced at the Taiki plant (Taiki, Hokkaido Prefecture). Due to a power outage in March, the temperature in the Taiki plant was not kept properly which caused the creation of the toxin. Although the public health institute of the Osaka City government requested a product recall and an intra-company announcement, Snow Brand disagreed with the request and the executive director directed them to reconfirm the request on early 29th, which caused a delay in making an announcement, the report continued. In the meanwhile, on the 22nd, Snow Brand reported the Osaka plant closure due to revelation of lack of sanitation, and the plant was actually closed down on January 31, 2001.
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HACCP: Hazard Analysis and Critical Control Point (HACCP) administered by the Health Ministry to the institutions that possess high a sanitary system is a means to analyze possible risks to secure products.