Case No.59

**Methyl bromide poisoning while cleaning a grain silo**

[Description of the Accident]

During work to remove soybeans adhering to the inner surface of the silo in a cooling oil plant, the victim absorbed methyl bromide, a chemical that is used for grain fumigation, and was fatally poisoned.

On the day of accident, work to clean the silo was started around 8:40 AM by a group of workers consisting of the section chief for silo operations, staff of a maintenance company, and the victim who was a temporary worker.

Shortly after the victim started work inside the silo, the section chief became uneasy about not having measured the methyl bromide concentration in the silo, which is prescribed in the cleaning manual. He therefore fetched a gas densimeter for this purpose from the staff room of the fumigation company. When he measured the gas concentration at the location of the valve in the lower section of the silo, the meter indicated a reading of 515 ppm.

As he feared that the inside of the silo posed a danger as well, he immediately returned to the top of the silo and raised the gondola in which the victim was working, only to find that the victim was already semiconscious. While the victim recovered consciousness after being taken to the hospital, his condition worsened again and he died that night.

[Causes supposed]

1. Methyl bromide used in an adjacent silo where fumigation operations had been carried out entered the silo where the victim was working through the silo wall and via the valve in the pipe used to pump methyl bromide into the silo.

2. Steps to measure the density of methyl bromide density inside the silo had not been carried out.

3. An inspection of the silo and attached piping, etc., was not carried out.

[Type of business] Food manufacturing
[Caused by] Chemical facility
[Type of accident] Contact with harmful substance
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[Number of victims] One fatality