Work of Filling Dry Storage Casks (11 Newly Introduced Casks) and Transporting Casks / Cause of and Measures against False Alarm Occurrence in Dry Cask Temporary Storage Facility

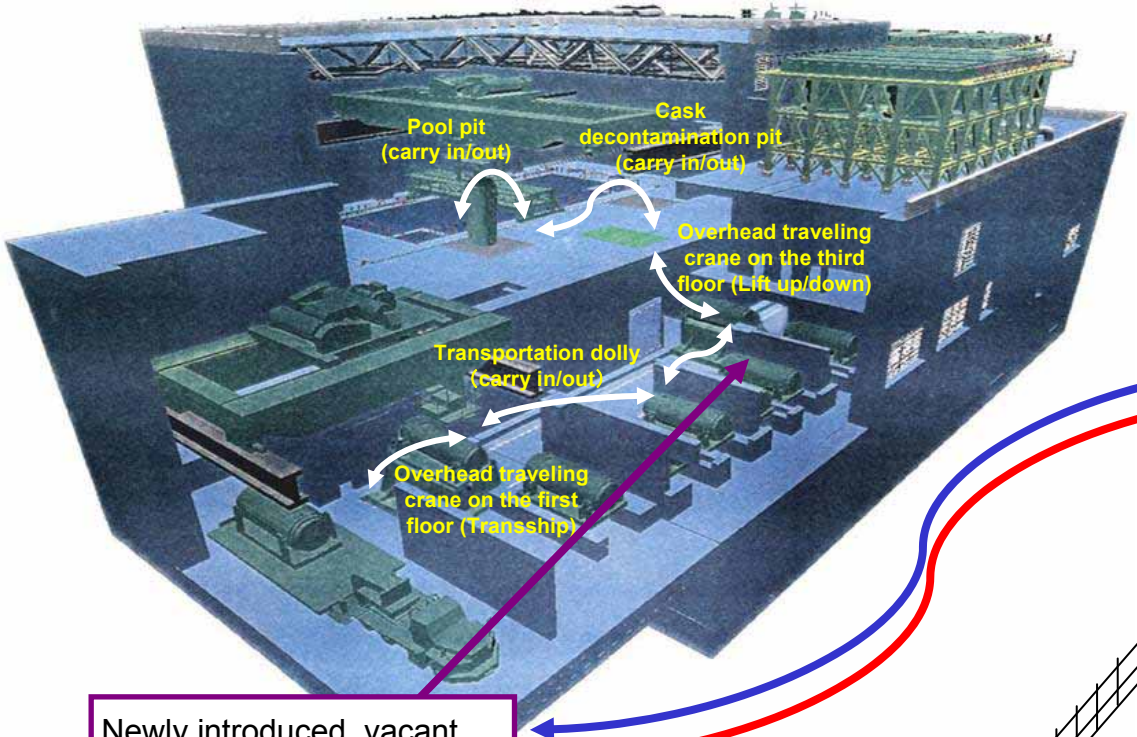
June 25, 2013

Tokyo Electric Power Company

Work of filling dry storage casks (11 newly introduced casks) with fuel and transporting casks

We will start the work of filling newly introduced dry storage casks (11 casks in total) with fuel currently stored in the common pool and sequentially transporting these casks to the cask temporary storage facility.

Common pool building



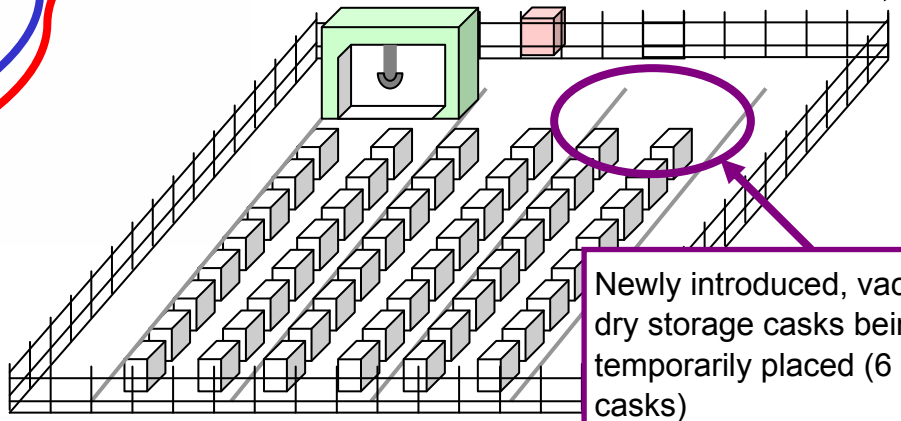
Transportation of vacant cask

Transportation of cask containing fuel

Transportation using a dedicated vehicle

Cask temporary-storage facility

North



Newly introduced, vacant dry storage casks being temporarily placed (5 casks)

Newly introduced, vacant dry storage casks being temporarily placed (6 casks)

※ Numbers of casks being temporarily placed are as of June 25.

◆Workflow

- Transportation of the newly introduced dry storage casks (currently stored in the dry cask temporary storage facility) into the common pool will be started on June 26 for the purpose of filling these casks with spent fuel contained in the common pool.
- Thereafter, filling of the dry storage casks with fuel will be started in the common pool from June 27 or later. The dry storage casks will be sequentially transported to the dry cask temporary storage facility as soon as the preparation is completed.
- Regarding when dry storage casks are transported to the dry cask temporary storage facility after being filled with fuel inside the common pool, we are <u>not allowed to make a previous announcement from the perspective of physical protection. We will make an announcement after the transportation of all of the casks is completed.</u>

Our plan is to carry out the above work on one cask at a time, and to sequentially fill vacant casks (currently stored in the dry cask temporary storage facility and the common pool building) with fuel and transport the casks.

Before cask transportation starts tomorrow (June 26), we developed and took measures against false alarm occurrence, which was on May 1.

■ Situations of the occurrence

At 9:10 AM on May 1, 2013, the alarm indication box raised a collective alarm indicating an "inter-lid pressure abnormality" and a "surface temperature abnormality" at one time.

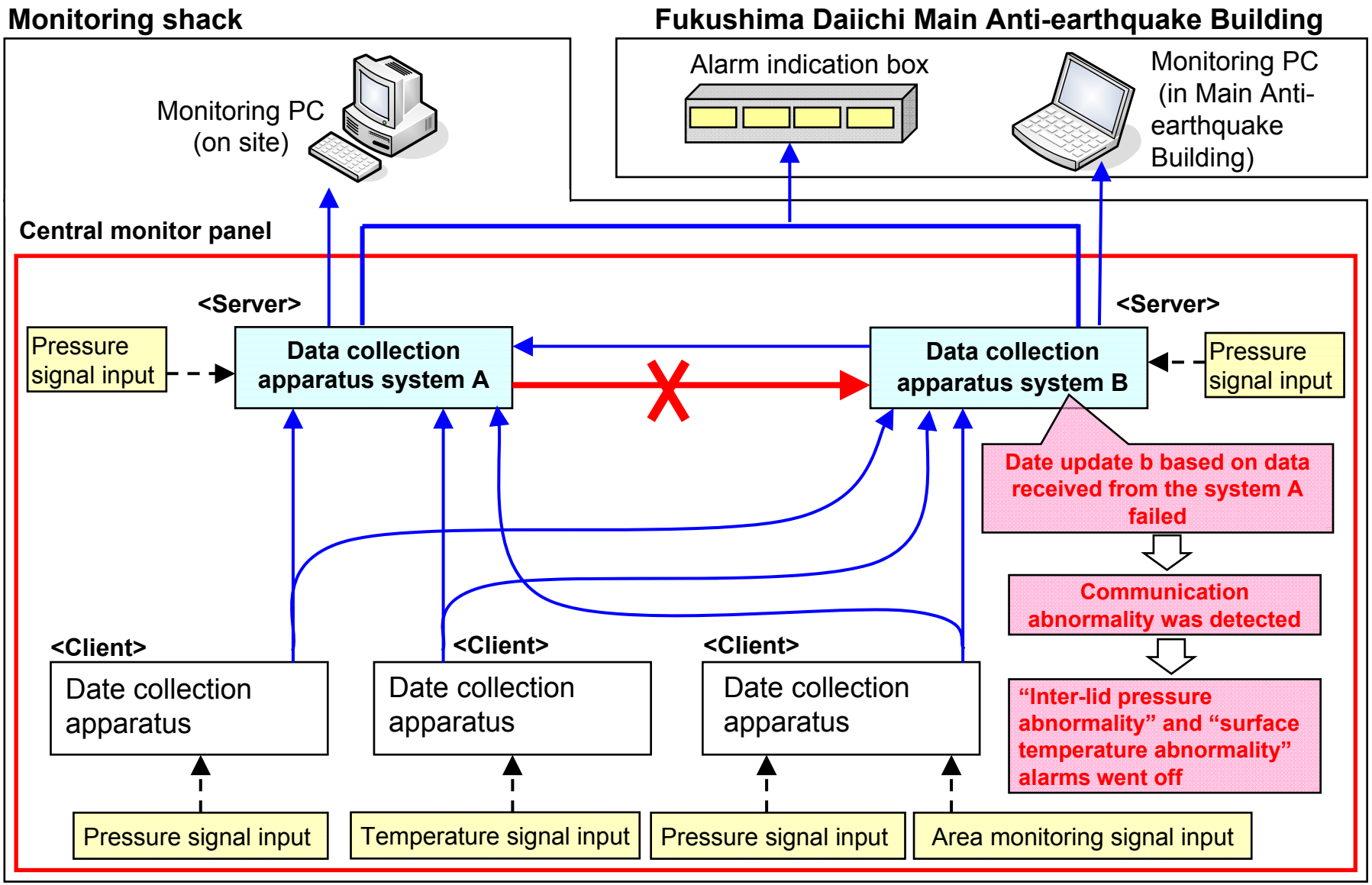
Thereafter, each of the cask-related parameters was found normal, and the alarm was restored to normal when a resetting operation was performed.

■Investigation results

- ○ Based on information such as error logs on the monitoring PC in Main Anti-earthquake Building, it was found that, on the data collection apparatus system B, data update based on data received from the data collection apparatus system A temporarily failed due to a communication abnormality.
- ○ The data processing cycles were suspected as a cause of the temporary update failure, and were evaluated on the desk. As a result, we found out that processing cycles for reliably executing the processing should be designed to be longer than the cycles previously set.

We consider that the latest alarm incident was caused by detection of a communication abnormality due to a data update failure, which occurred because the time periods set as the data processing cycles were not sufficient to complete the processing.

Cause of false alarm (inter-lid pressure and surface temperature abnormalities) occurrence



■Measures

Processing cycles were changed to those necessary for reliable data processing.

Arithmetic processing: changed from 1 sec. (when the alarm went off) to 5 sec. *1
Transmission processing: changed from 2 sec. (when the alarm went off) to 20 sec. *1

*1 Obtained by adding a sufficient margin to a total of typically required processing time

Analysis was conducted on data transmitted on the three days after the change of the processing cycles, and we confirmed that there was no missing data associated with transmission congestion.

In this facility, we noticed changes in indication, which occurred due to noise caused by movement of gate-type crane. Therefore, on this occasion, we performed the following as measures against such incidents:

- Changed locations where the crane, signal cables, and so on make contact with ground.
- Reduced the influences of noise by increasing signal voltages of the signal cables.

After these measures were taken, an operation test of the crane was conducted, whereby we confirmed that the influences of noise were eliminated.

End