(Attachment)

We affirm that the Reactor Building and Spent Fuel Pool of Unit 4 will not collapse in the event of an earthquake

1) We measured the distance between the water surface of the spent fuel pool and the floor surface of the building, and confirmed that the building has not tilted.

We have measured the distance at 4 corners of the 5th floor of the reactor building between the water surfaces of the spent fuel pool, the reactor well and the floor surface of 5th floor. We conducted the measurements twice on February 7 and April 12, 2012 and the measured data at the 4 corners were mostly the same. Thus, we confirmed that the floor surface of the 5th floor, water surfaces of the spent fuel pool and the reactor well were parallel.

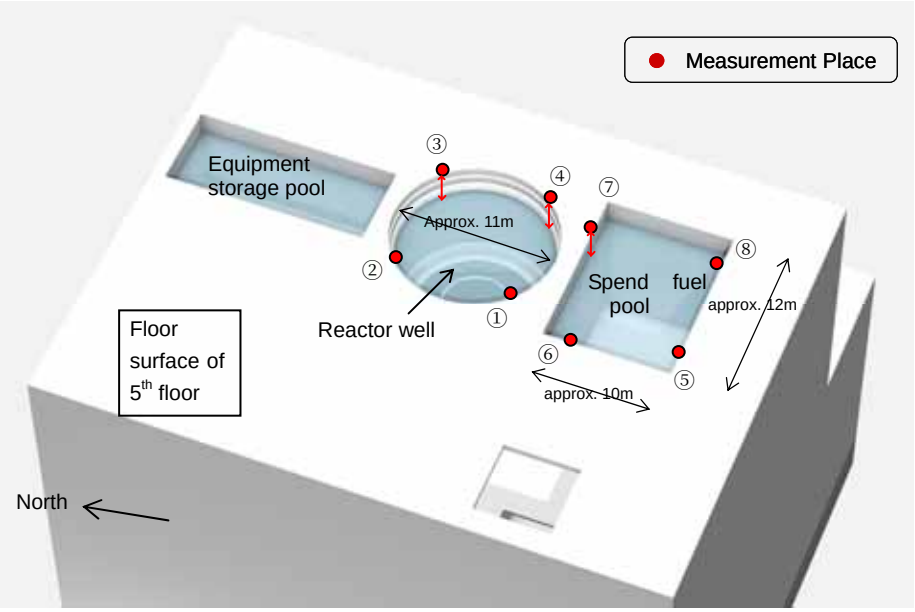


Figure 1 Measurement points

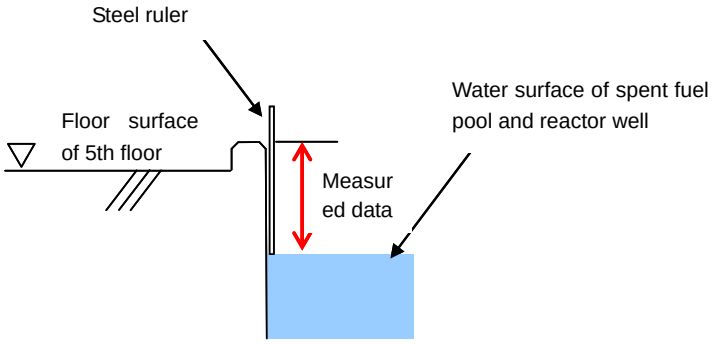


Figure 2 Measurement Method

Table 1 Measurement results

Unit [mm]

Reactor well	Measurement date	
	Feb.7, 2012	Apr. 12, 2012
①	462	476
②	463	475
③	462	475
④	464	475

Spent fuel pool	Measurement date
	Apr. 12, 2012
⑤	468
⑥	468
⑦	468
⑧	468

※Water level changes depending on the operation of cooling system.

2) Our analyses show that the building, including the spent fuel pool, will not collapse even if an earthquake equivalent (seismic intensity 6) to the Tohoku-Pacific Ocean Earthquake occurs in the area.

Using an analysis model reflecting the damage of the reactor building per the hydrogen explosion as shown in figure 3, we conducted an evaluation of the reactor building against the seismic movement (600 gal) used for the seismic back-check equivalent to the Tohoku-Pacific Ocean Earthquake and confirmed that the reactor building has a sufficient margin of seismic safety.

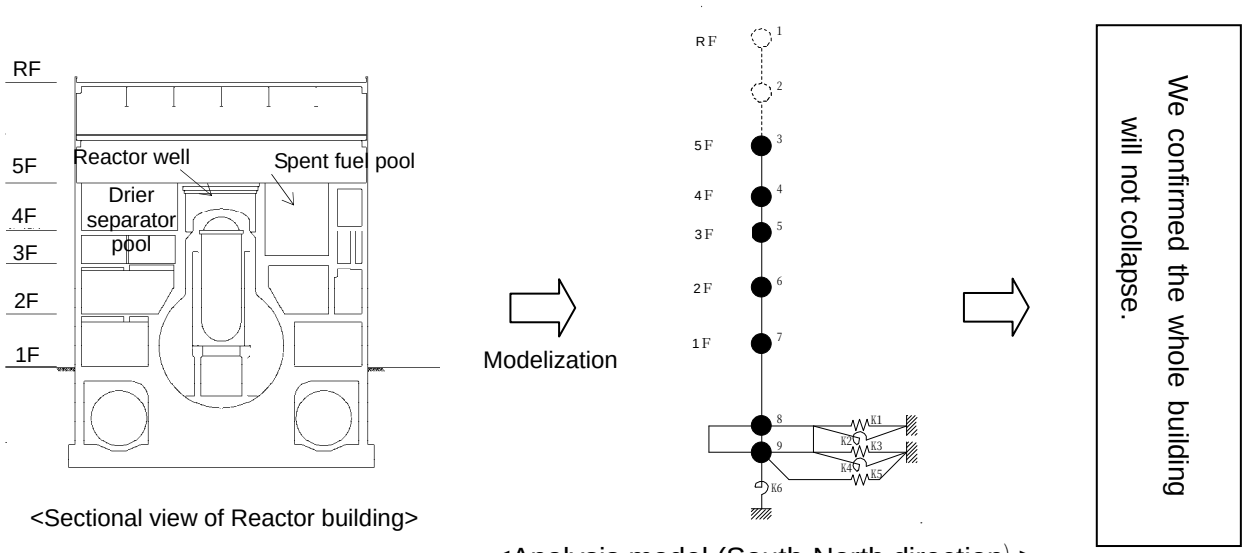
Additionally, we conducted a partial evaluation with an analysis model considering the building damage or conditions of the pool water at high temperatures in figure 4 and confirmed that the spent fuel pool has a sufficient margin of seismic safety.

※1: We submitted “Reports of the study regarding current seismic safety and reinforcement of reactor buildings at Fukushima Daiichi Nuclear Power Station (1) (May 2011 TEPCO)” to Nuclear and Industrial Safety Agency, METI on May 28, 2011, and received feedback that the review result was reasonable.

※2: Seismic safety evaluation since 2006 in accordance with the revision of the “seismic design guideline on nuclear reactor facilities”

※3: We applied the standard seismic movement Ss used for the seismic safety evaluation of the nuclear power plant.
Furthermore, the seismic intensities of the observed record of the Tohoku-Pacific Ocean Earthquake in the power plant as well as the standard seismic movement Ss are both approx. upper 6.

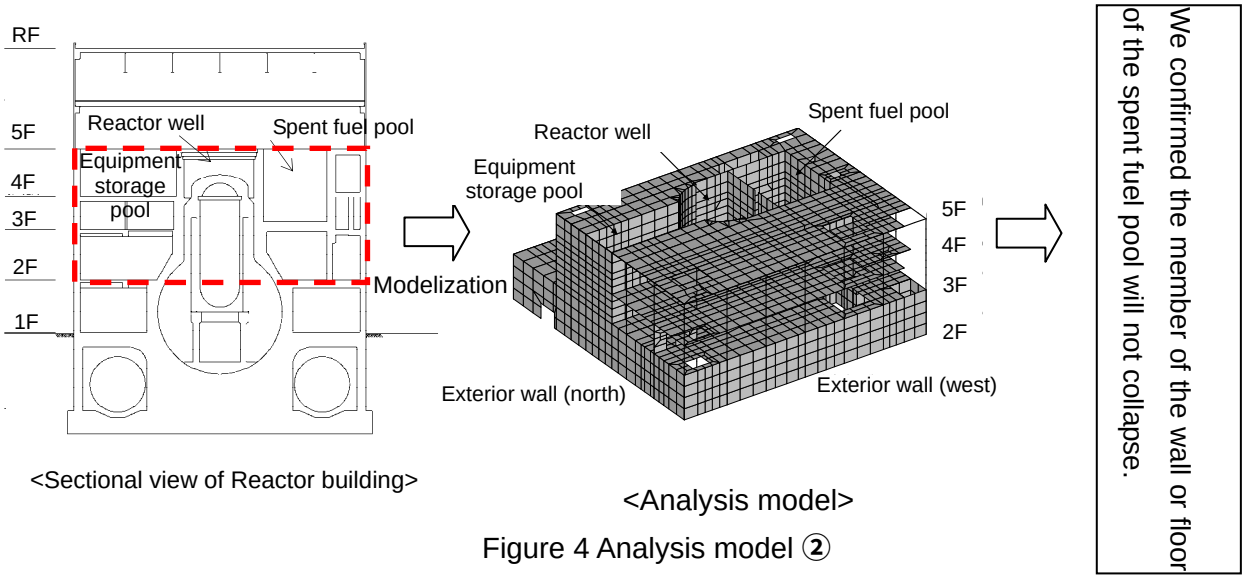
※4: We conducted an evaluation of the severe conditions of the pool water at 100 ℃.



<Sectional view of Reactor building>

<Analysis model (South-North direction) >

Figure 3 Analysis model ①



<Sectional view of Reactor building>

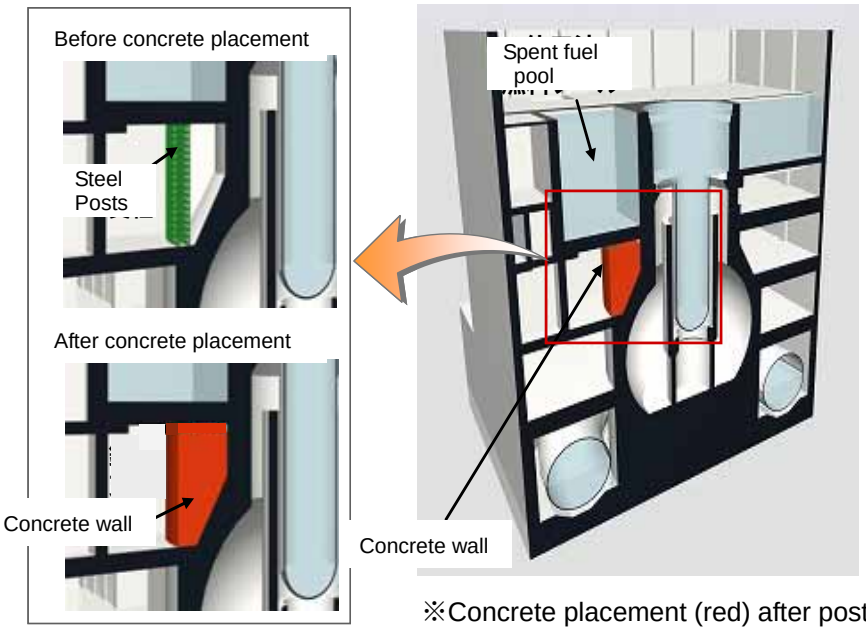
<Analysis model>

Figure 4 Analysis model ②

3) In addition, we have improved the seismic safety margin by 20% by reinforcing the bottom of the spent fuel pool.

We enhanced the support function against the load of the spent fuel pool by installing steel posts at the bottom of the spent fuel pool. In addition, we encased the posts in concrete to increase its strength. (Completed on July 30, 2011)

Table 2 shows the enhanced seismic safety effect resulting from these reinforcements. It shows that the seismic safety margin against the load of the spent fuel pool improved by 20%.



※Concrete placement (red) after posts installation (green)

Figure 5 Reinforcement image at the bottom of the spent fuel pool

Figure 6 Steel posts installed condition

Table 2 Enhancing effect of seismic safety

Evaluation item	Margin before reinforcement	Margin after reinforcement	Margin Reinforcement rate
Out-of-plane shear	1.43	1.79	25%

※3: Out-of-plane shear force: force generating shear to the direction of pushing through the floor

※4: Margin = tolerance/shear force

4) We will regularly check the reactor building and the spent fuel pool four times per year to confirm their soundness.

We have already conducted visual inspections on every floor to ensure there is no damage that could lead to the collapse of the reactor building, but we will conduct the following investigations four times per year to confirm their soundness.

Table 7 shows the removal situation of the damaged building frame above the 5th floor. The removal above the 5th floor will be completed by the middle of this fiscal year.

<Checking the building's inclination>

At the 5th floor of the reactor building, we have measured the distance between the water surface of the spent fuel pool and the reactor well and the 5th floor surface twice, and found no building inclination. We will measure the inclination continuously.

<Visual Inspection>

We will regularly conduct a visual inspection of the building frame of the spent fuel pool.

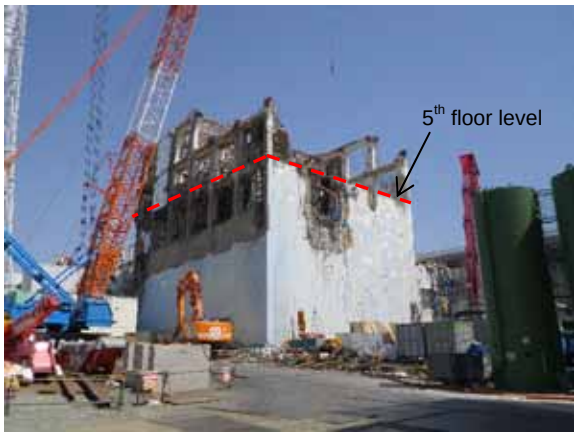
Regarding the visual inspection, we will check cracks on the concrete floor and wall. If we find cracks, we will measure their progression regularly to confirm the damage level and conduct repairs as necessary.

<Concrete strength check>

We will regularly conduct a non-destructive inspection (Schmidt Hammer※5, etc.) to confirm concrete strength. We will confirm the securing of seismic safety based on the measured concrete strength.

※5 Schmidt Hammer method: strength estimation method by impact against hitting concrete. This is a non-destructive inspection method without damaging the structure.

<July 2011>



<April 2012>

Figure 7 Situation of the Reactor Building of Unit 4

End