

Measures for rainwater around the tanks/ contaminated water at Fukushima Daiichi Nuclear Power Station

July 24, 2014

Fukushima Daiichi D&D Engineering Company

Tokyo Electric Power Company

Outline of measures for rainwater around the tanks / contaminated water

【Tank leakage early detection】

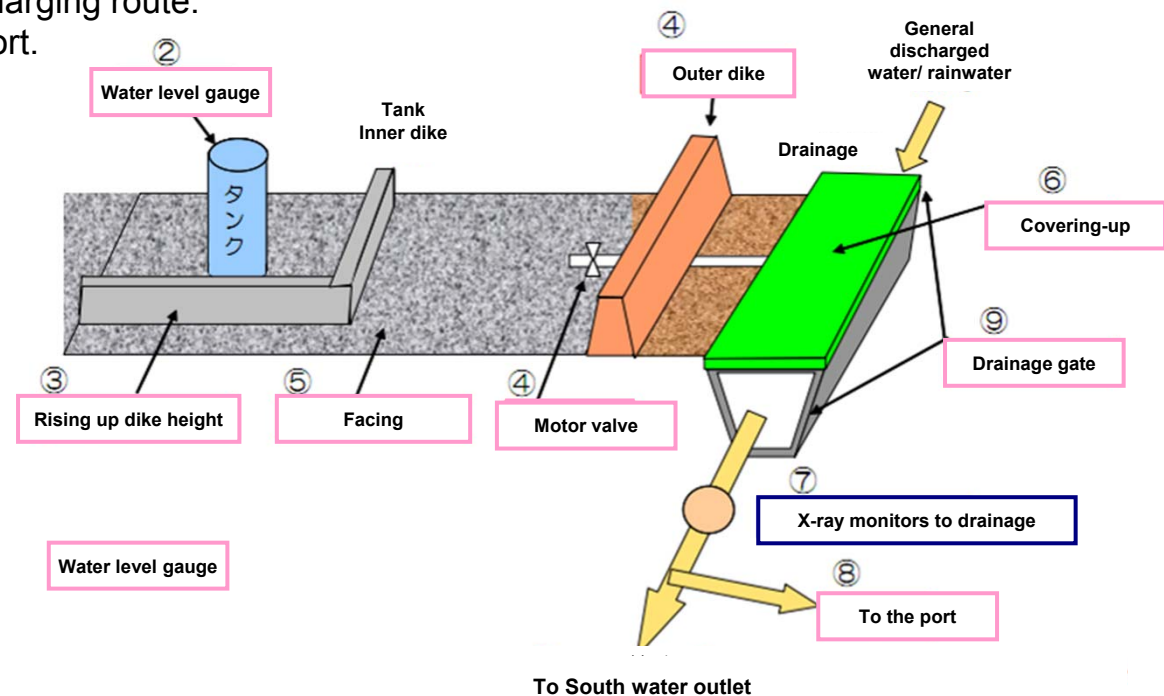
- [1] Tank patrol (Flanged tank: 4 times/ day Welded tank: twice/ day)
- [2] Monitoring with tank water level gauge (constant monitoring)

【Expansion prevention of leakage area of rainwater and contaminated water】

- [3] Rising up the height of dikes
- [4] Installation of outer dike. (discharge valves are automated controlled.)
- [5] Prevention of water penetration inside the outer dike. (facing)

【Suppression of contaminated water flowing out to the ocean】

- [6] Covering up drainage.
- [7] Installation of radiation monitor to the discharging route.
- [8] Directing discharging water to inside the port.
- [9] Installation of a gate at the drainage.

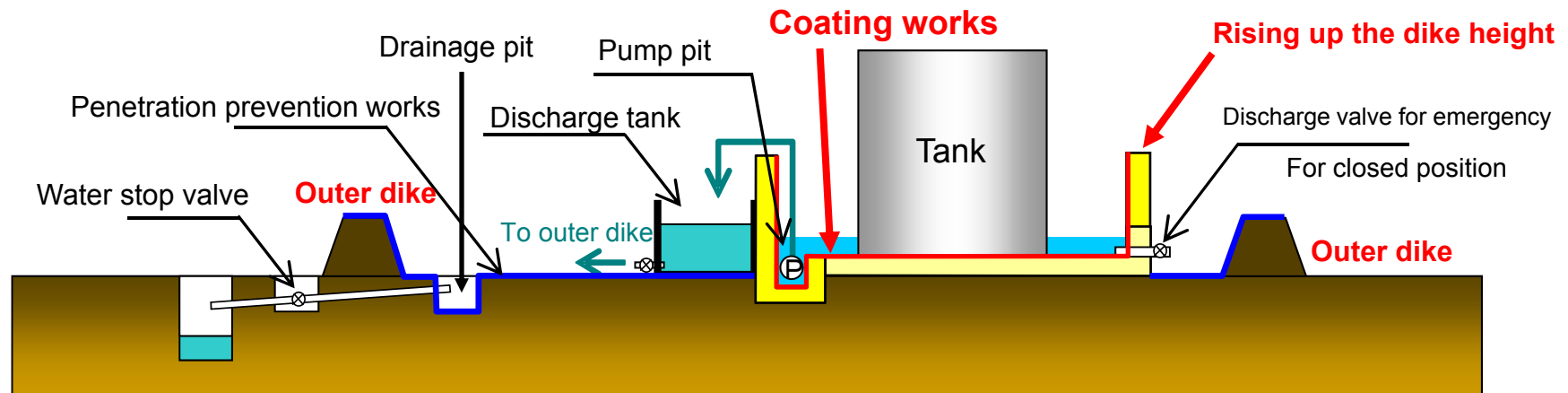


1. Rising up the height of dike and double diking

■ The rising up the dike height for existing tank areas has been done in order to reduce leakage risk of contaminated water flowing outside the dike.

■ Dikes for the areas of D, G7, J1, J2, J3, J4, and J5, which are currently under construction, are to be built in order in accordance with the installation of tanks.

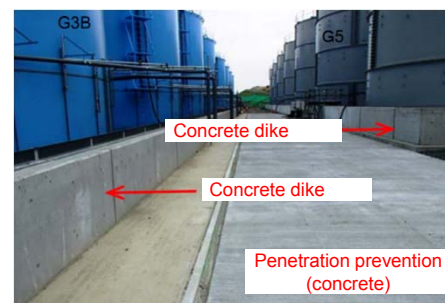
■ As further measures, coating inside the dike and building outer dike are to be addressed. Also, a pit is added to the dike to make it easier the rainwater remained inside the dike to be discharged, thus, for the outer dike, a drainage pit with motor valve is installed just within.



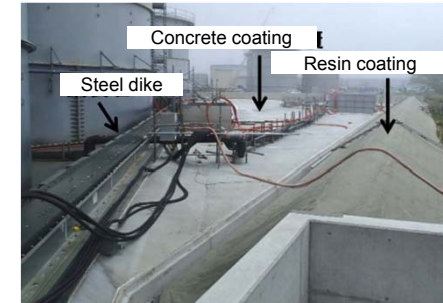
Pump pit



Coating works inside the dike



Dike with height rising done



Double diking

1. Rising up dike height and double diking

Works done

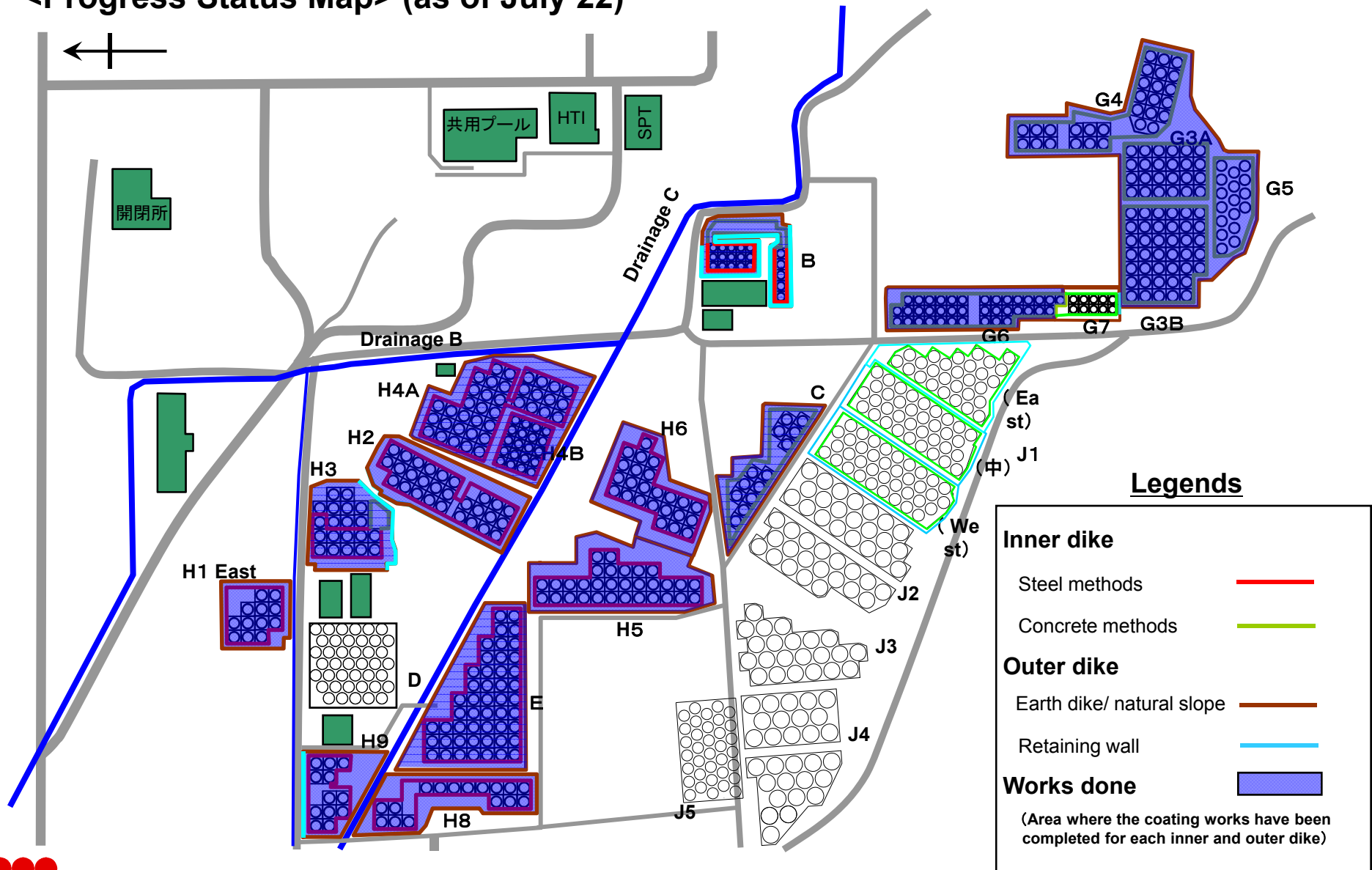
Double diking works progress control table [existing areas] (as of July 22)

Measures for rainwater(dike ht. 60 cm)				Justification of height			Outer dike/ penetration prevention		
Area	Dike (inst.)	Coating (inst.)	Rain gutter (inst.)	Inner dike name	Installation	Coating	Outer dike name	Installation	Coating
B North	Done	Done	Done	B(Concrete dike)	Done	Done	B	Done	Done
B South	Done	Done	Done						
C East	Done	Done	Done	C(Concrete dike)	Done	Done	C	Done	Done
C West	Done	Done	Done						
E	Done	Done	Done	E(Steel dike)	Done	Done	E	Done	Done
H1 East	Done	Done	Done	H1(Steel dike)	Done	Done	H1	Done	Done
H2 North	Done	Done	Done	H2(Steel dike)	Done	Done	H2	Done	Done
H2 South	Done	Done	Done						
H3	Done	Done	Done	H3(Steel dike)	Done	Done	H3	Done	Done
H4 North	Done	Done	Done	H4A(Steel dike)	Done	Done	H4	Done	Done
H4 East	Done	Done	Done						
H4	Done	Done	Done	H4B(Steel dike)	Done	Done			
H5	Done	Done	Done	H5(Steel dike)	Done	Done	H5	Done	Done
H6	Done	Done	Done	H6(Steel dike)	Done	Done	H6	Done	Done
H8 North	Done	Done	Done	H8(Steel dike)	Done	Done	H8	Done	Done
H8 South	Done	Done	Done						
H9	Done	Done	Done	H9(Steel dike)	Done	Done	H9	Done	Done
H9 West	Done	Done	Done						
G3 East	Done	Done	Done	G3A(Concrete dike)	Done	Done	G3-G5	Done	Done
G3 West	Done	Done	Done	G3B(Concrete dike)	Done	Done			
G3 North	Done	Done	Done						
G4 North	-	Done	Done	G4(Concrete dike)	Done	Done			
G4 South	-	Done	Done						
G5	-	Done	Done	G5(Concrete dike)	Done	Done			
G6 North	Done	Done	Done	G6(Concrete dike)	Done	Done	G6	Done	Done
G6 South	Done	Done	Done						
Total	23/23	26/26	26/26	Total	17/17	17/17	Total	13/13	13/13

Countermeasures works have been completed for all tank areas

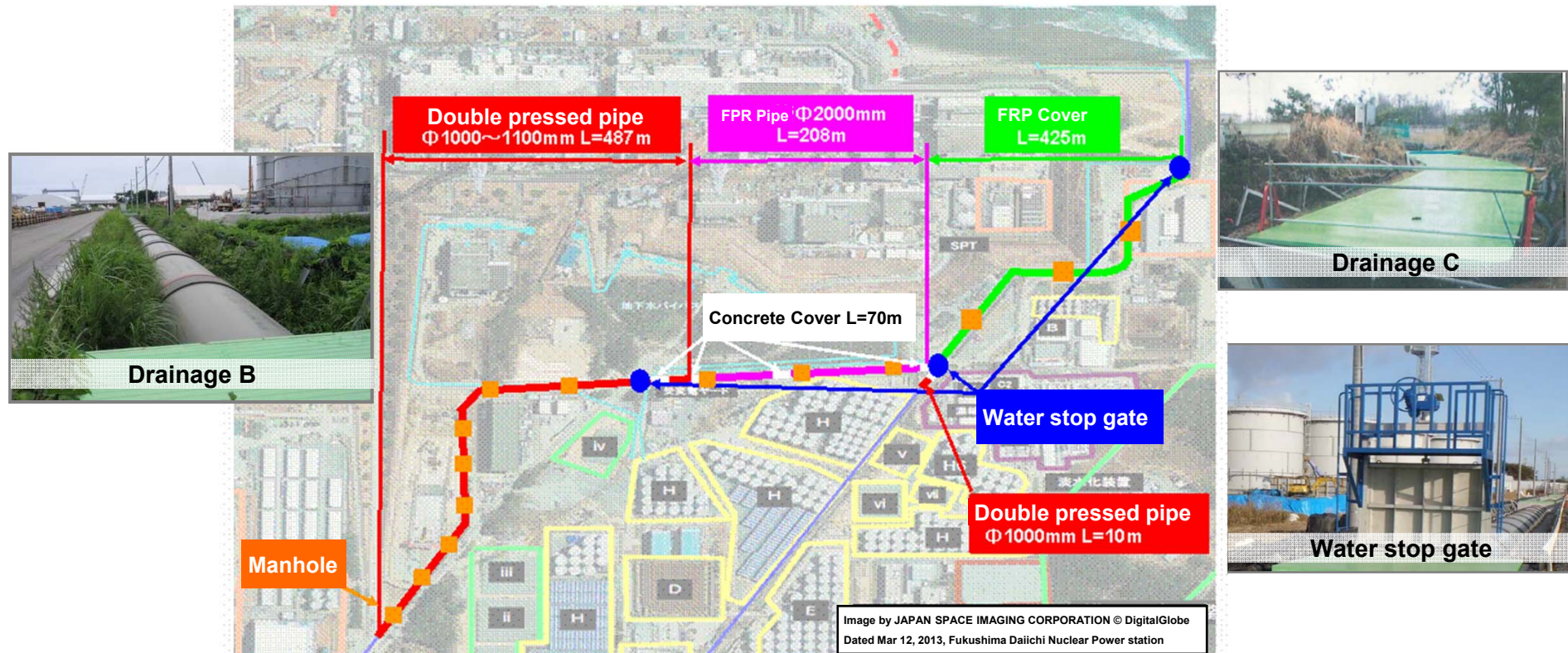
1. Rising up dike height and double diking

<Progress Status Map> (as of July 22)



2. Covering up drainage

Covering up works of the drainage has been done to prevent contaminated water from flowing into the drainage and letting it out to the ocean directly. (Feb 2, 2014, completed)



3. Installation of diversion drains and radiation monitors to drainage

- A diversion drain has been installed to prevent contaminated water, just in case, leaked out of tank flowing into the ocean directly from the drainage.
(Of two drains, one was opened on July 14 letting water pass through, and the other is planned to be done in the end of July.)
- Radiation monitors are installed in order to detect any inflow of radioactive materials into the drainage when abnormal activities are identified with tanks inside the outer dike. (Operation has started from July 14)

