

# Reference information for each project

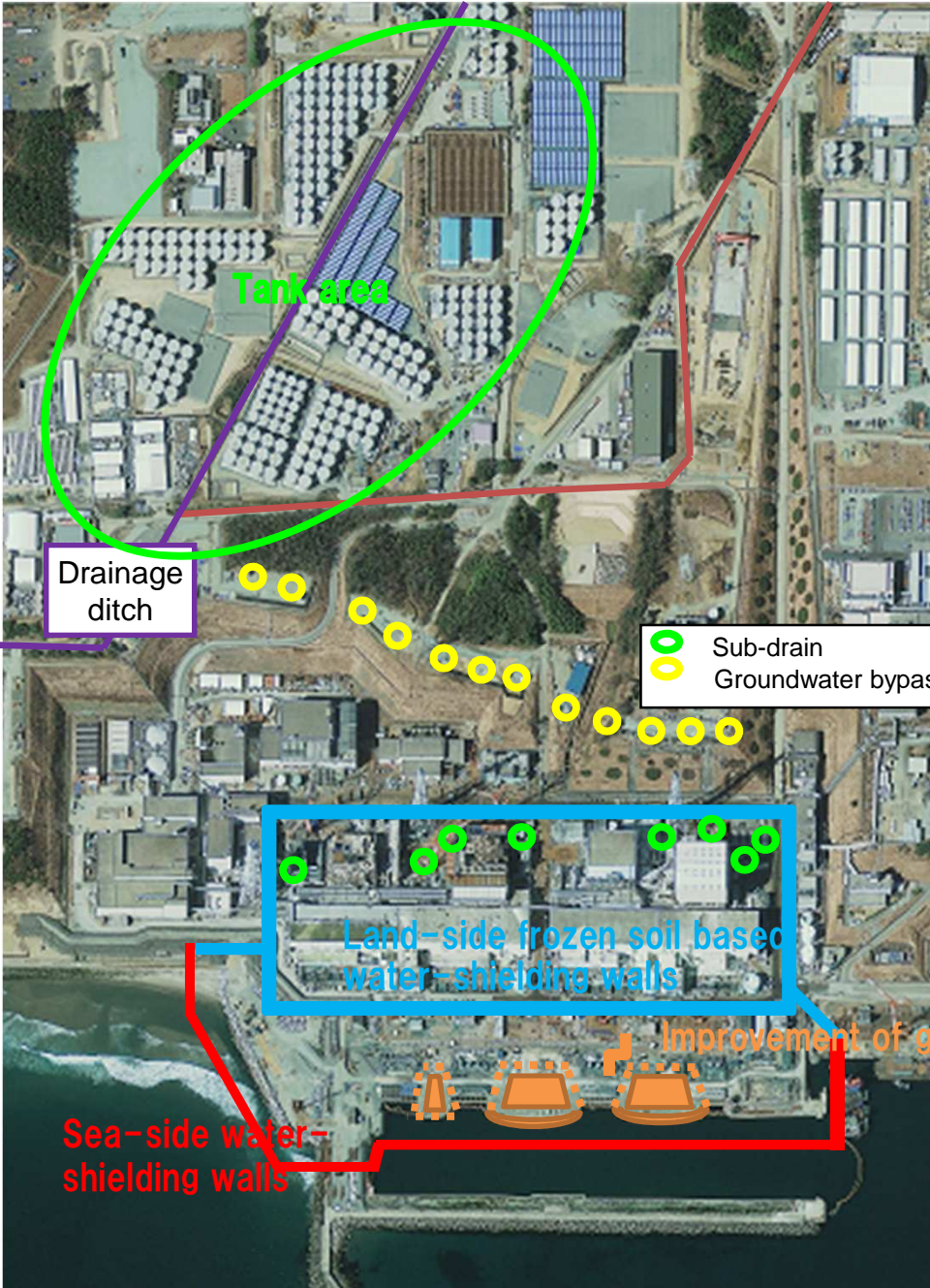
April 8. 2014

Ministry of Economy, Trade and Industry

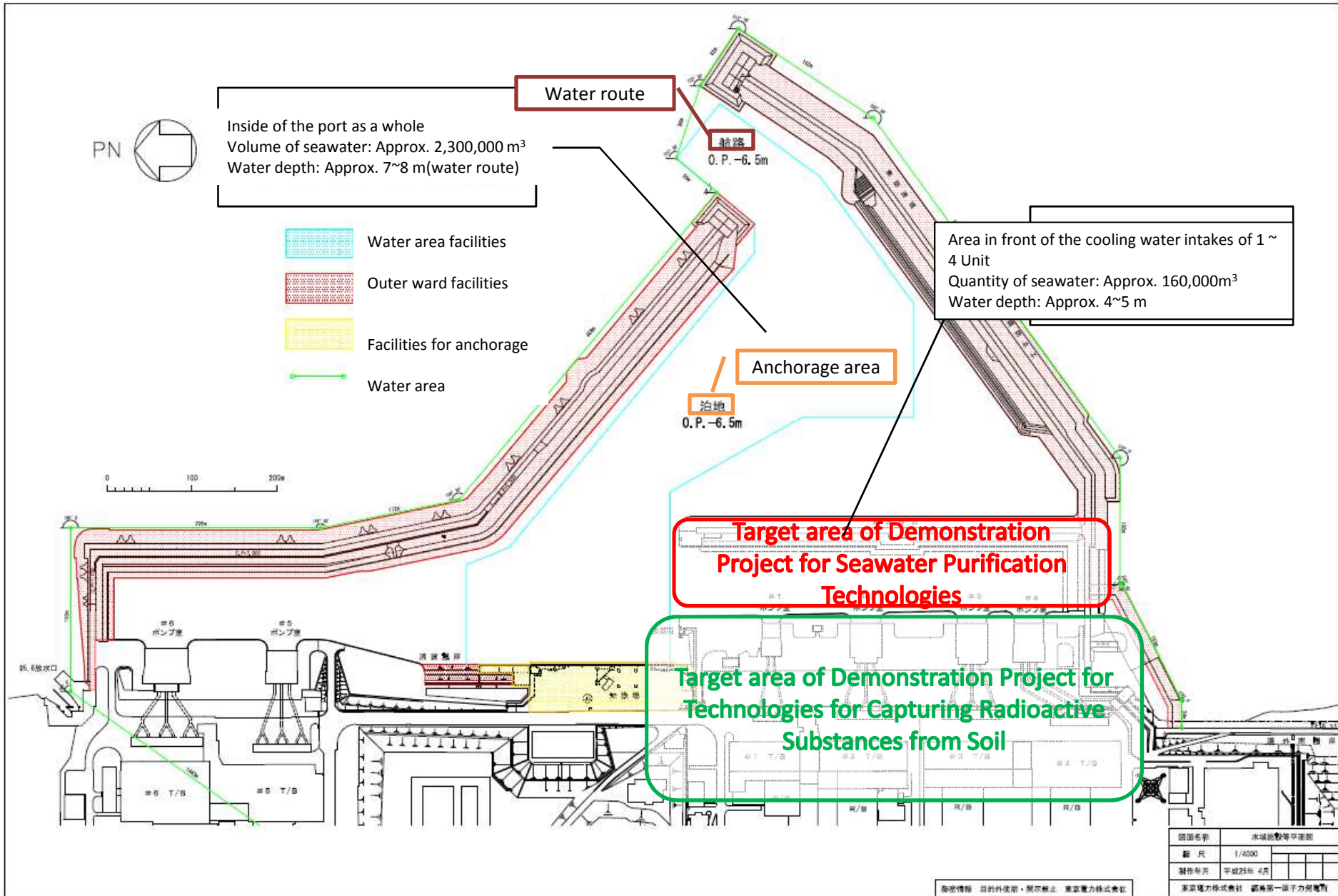
Agency for Natural Resources and Energy

(Cabinet Office, Management Office of the Team for  
Decommissioning and Contaminated Water Countermeasures)

# Overall View

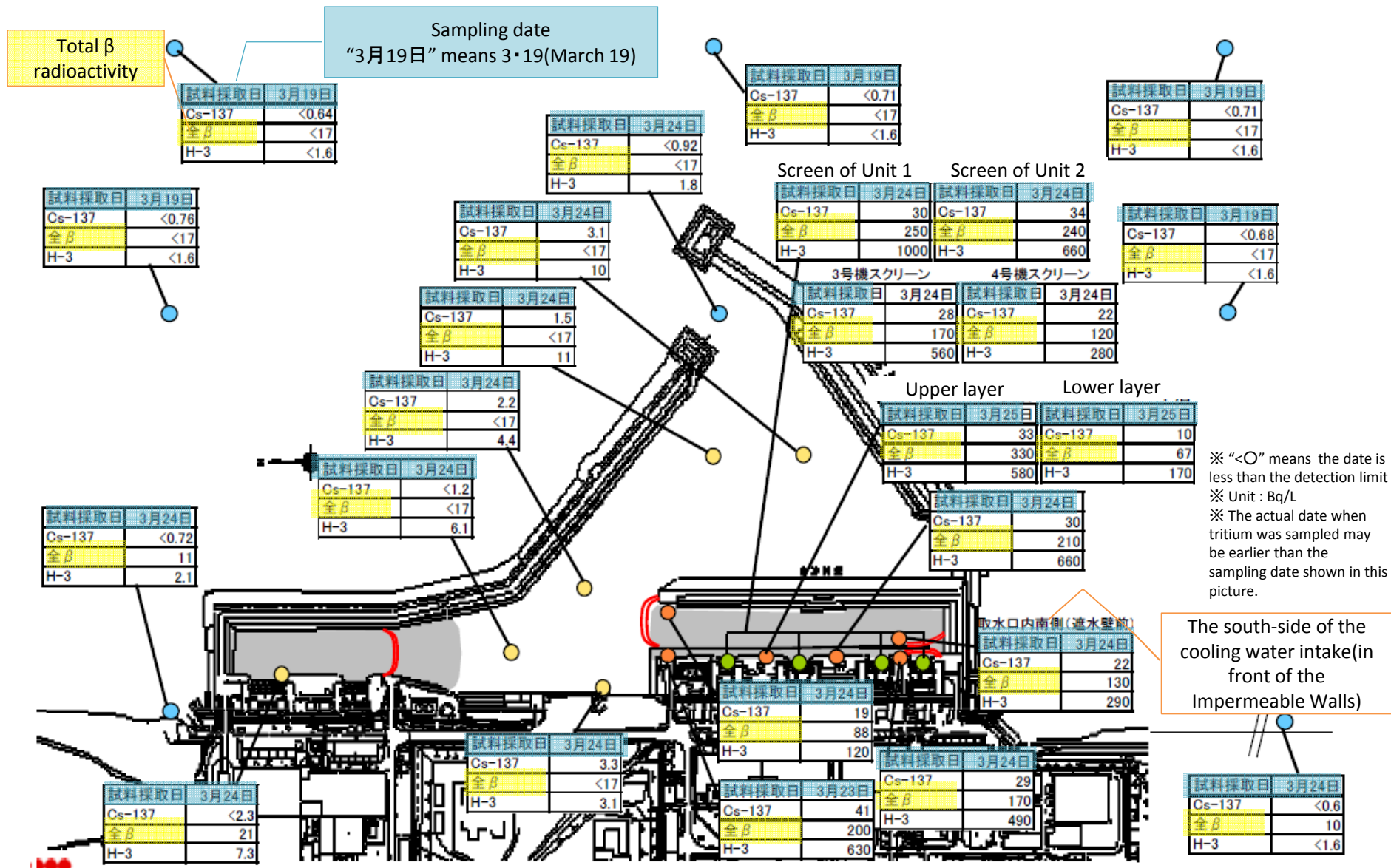


# Overall View



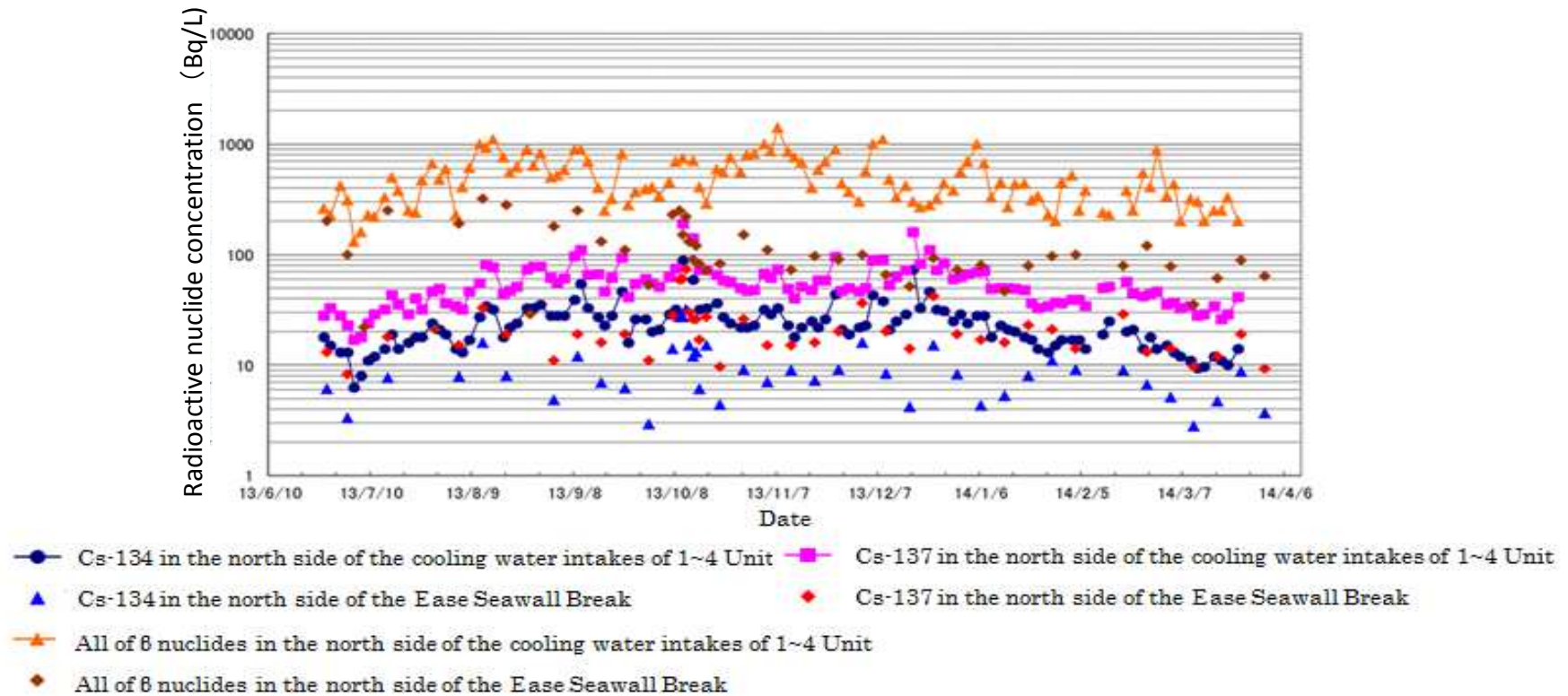


# Concentration of radioactive nuclides around the port (for Demonstration Project for Seawater Purification Technologies)

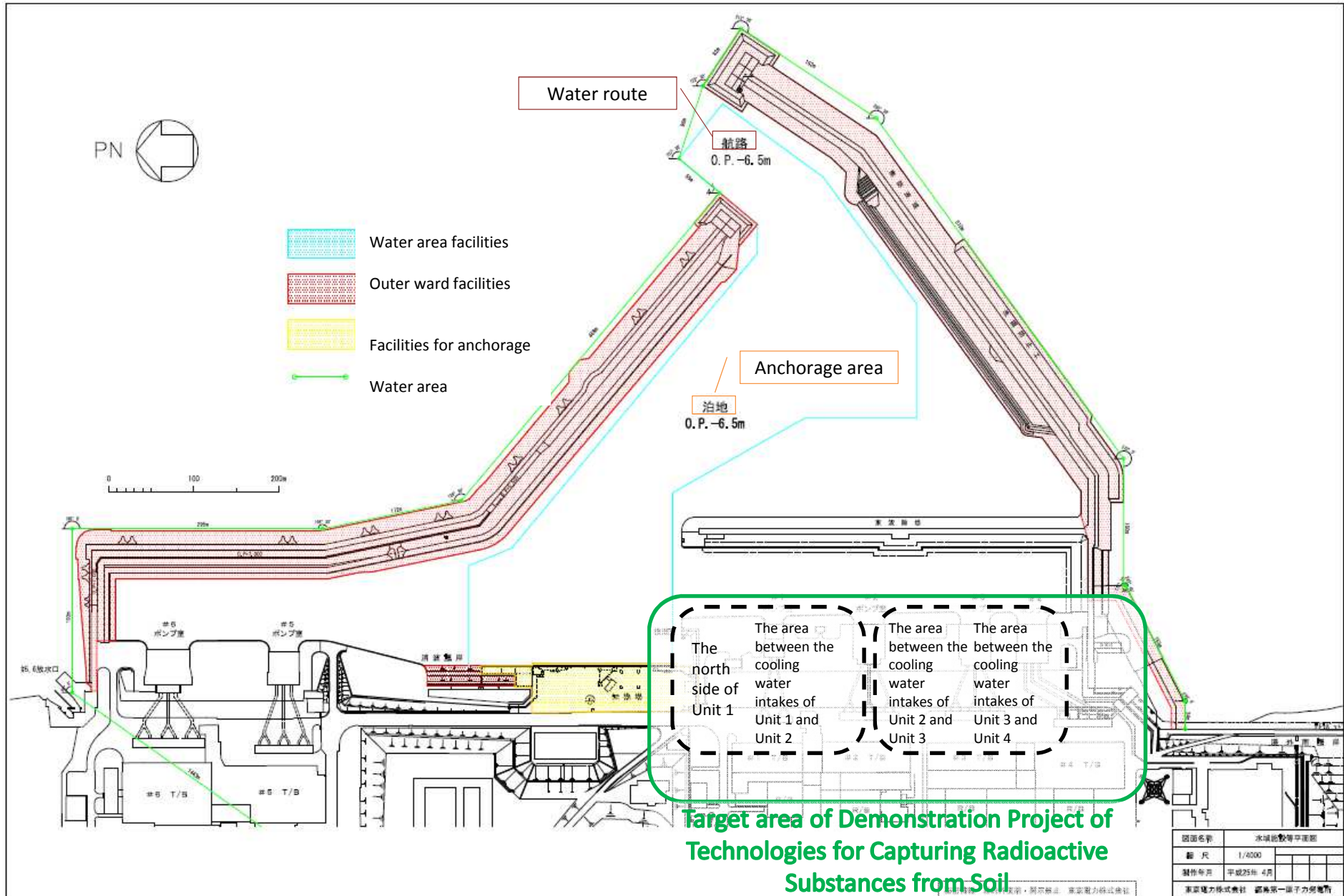


## Change of radioactive nuclide concentration in the seawater (for Demonstration Project for Seawater Purification Technologies)

Change of radioactive nuclide concentration in the north-side area of Unit 1 through 4 cooling water intakes and north-side area of the Ease Seawall Break



# Demonstration Project of Technologies for Capturing Radioactive Substances from Soil

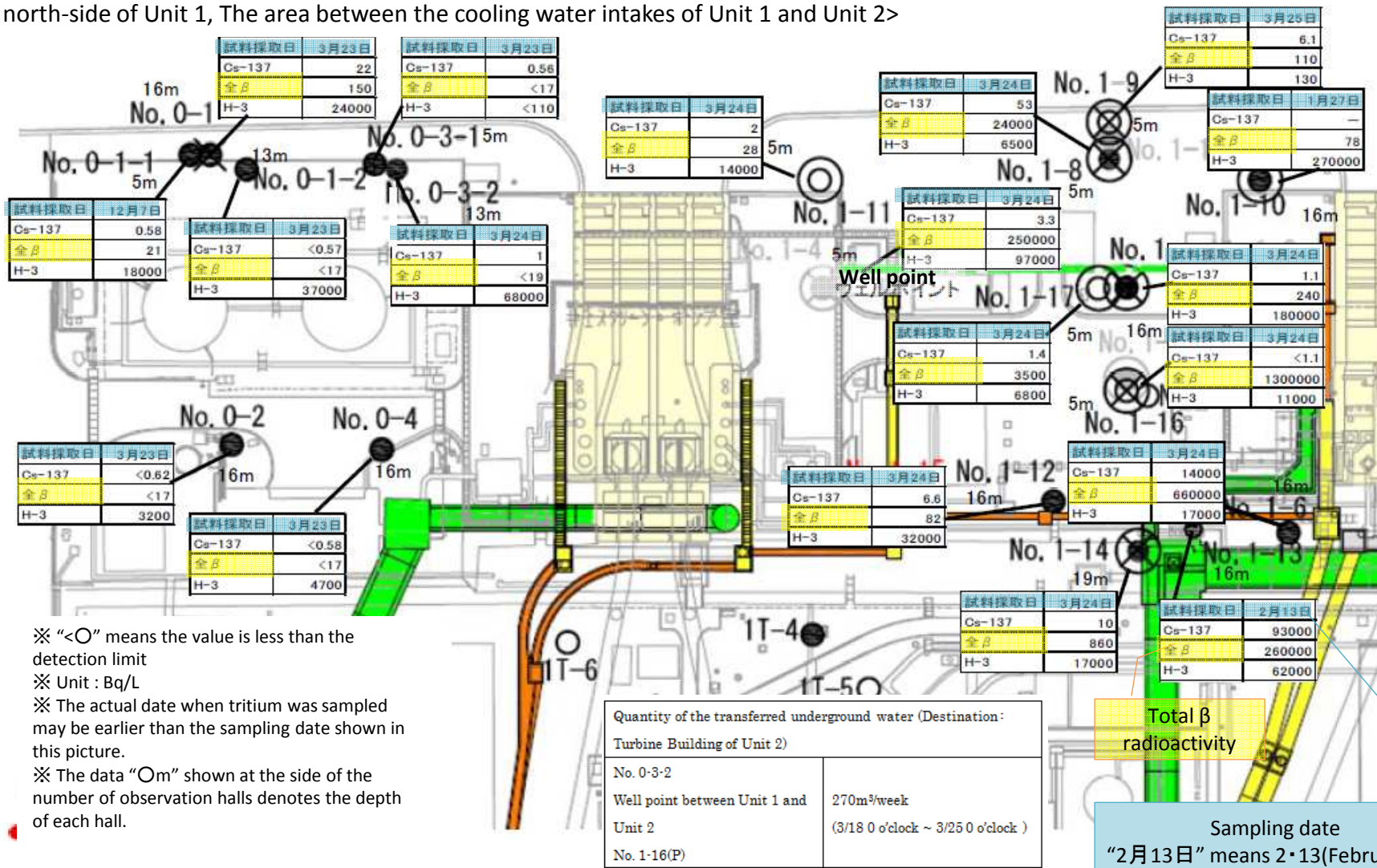




# Radioactive nuclide concentration of groundwater (1/2) (for Demonstration Project of Technologies for Capturing Radioactive Substances from Soil)

## Radioactive Nuclide Concentration of the groundwater in the east side of the Turbine Building(1/2)

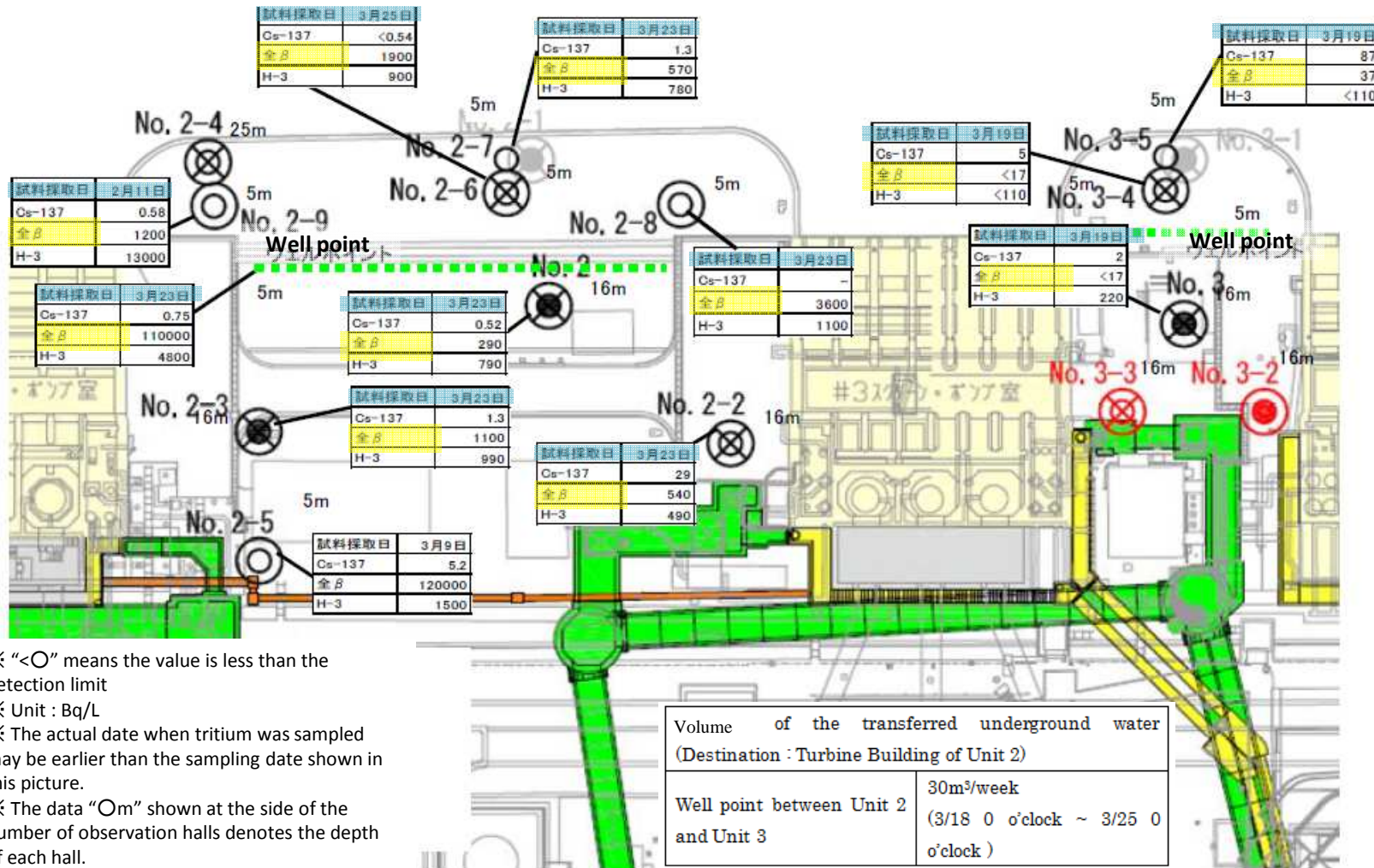
<The north-side of Unit 1, The area between the cooling water intakes of Unit 1 and Unit 2>



# Radioactive nuclide concentration of groundwater (2/2) (for Demonstration Project of Technologies for Capturing Radioactive Substances from Soil)

## Radioactive Nuclide Concentration of the groundwater in the east side of the Turbine Building(2/2)

<The area between the cooling water intakes of Unit 2 and Unit 3, the area between the cooling water intakes of Unit 3 and Unit 4>



- ※ “<” means the value is less than the detection limit
- ※ Unit : Bq/L
- ※ The actual date when tritium was sampled may be earlier than the sampling date shown in this picture.
- ※ The data “○m” shown at the side of the number of observation halls denotes the depth of each hall.



## Type and the number of tanks to be disposed

(1) Type of tanks to be disposed

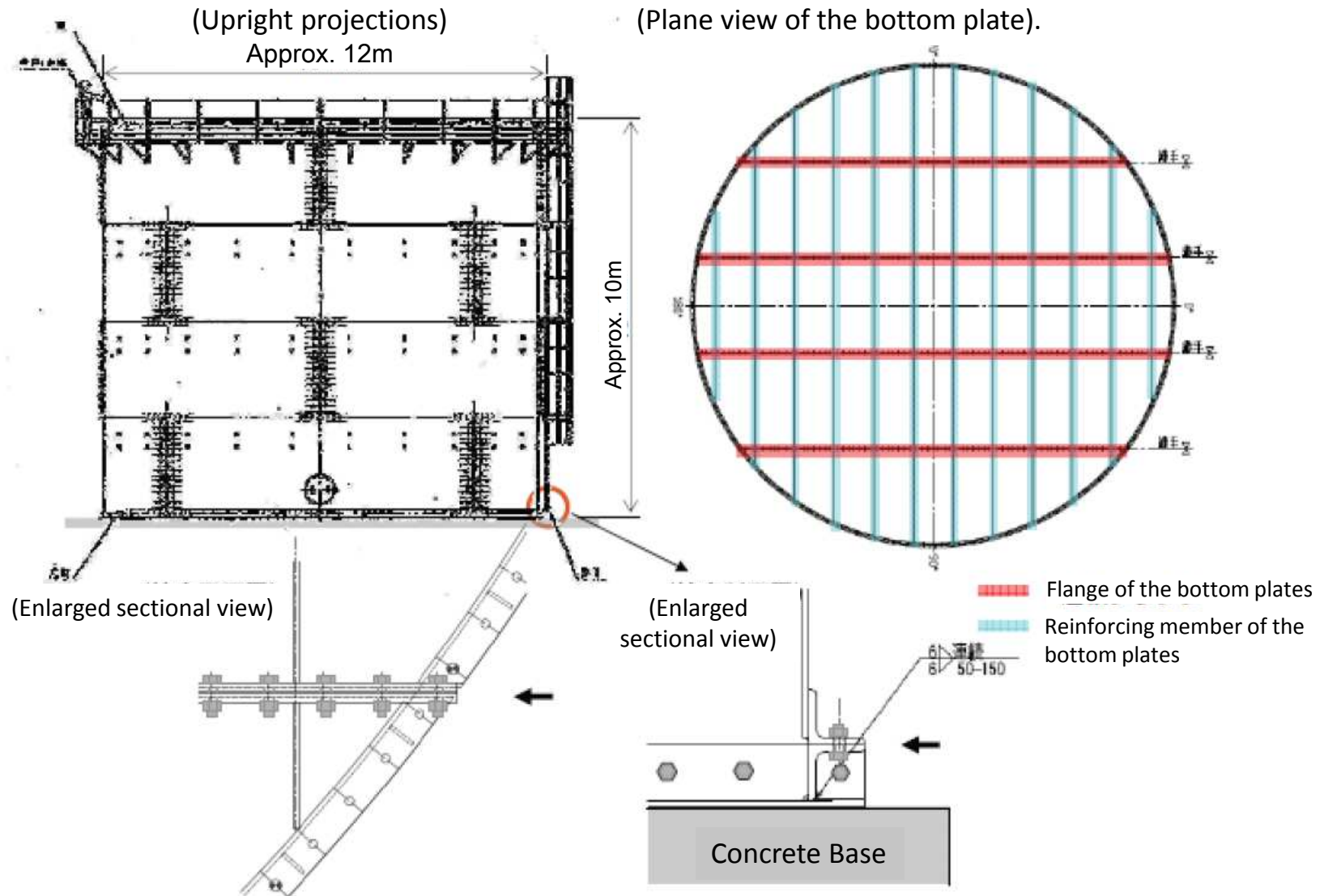
Cylindrical flange-joint type tank



(2) The number of tanks to be disposed

▪ 340 tanks

# Structure of the tank to be disposed



# Structure of the bottom panels of the tank to be disposed

(Plane view of the bottom plates)

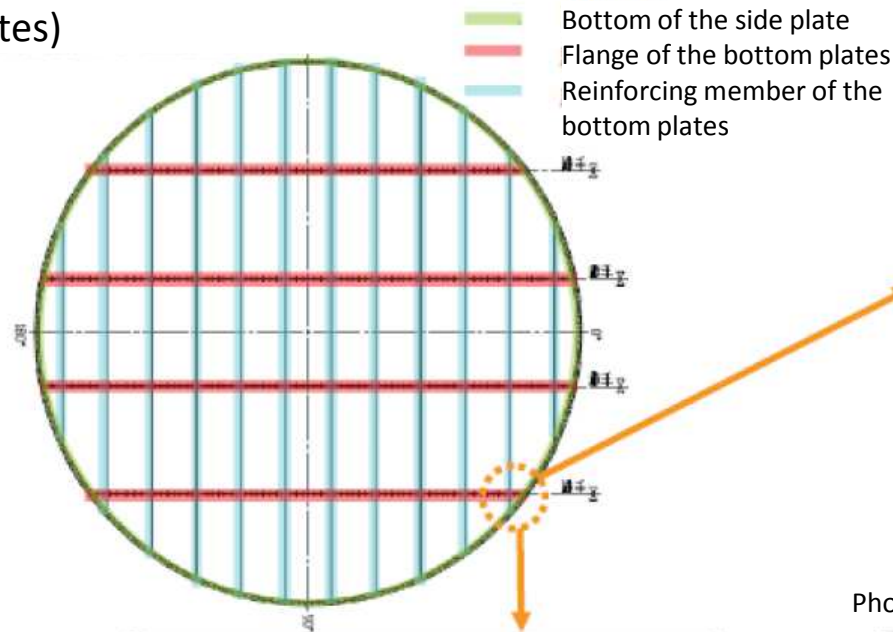
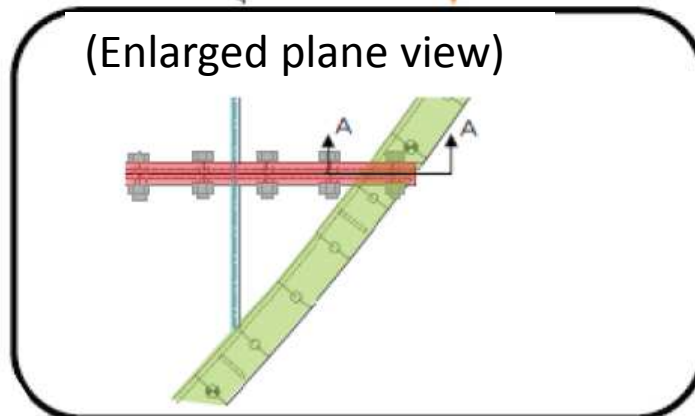
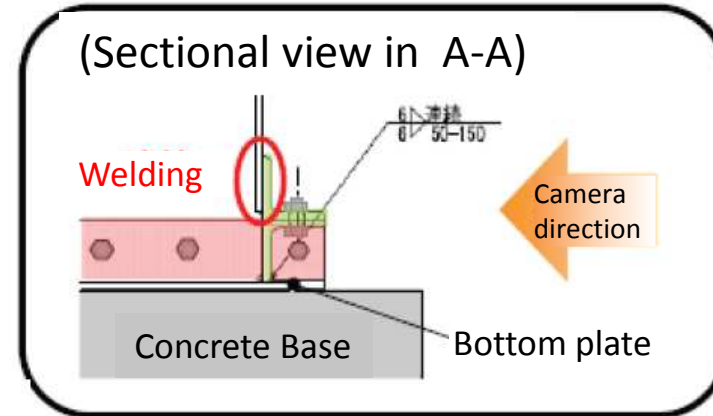


Photo of the joint part of flange at the bottom of the tank

(Enlarged plane view)

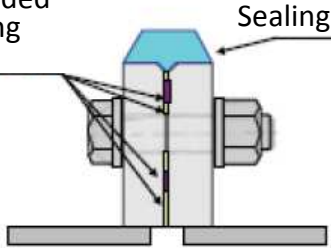

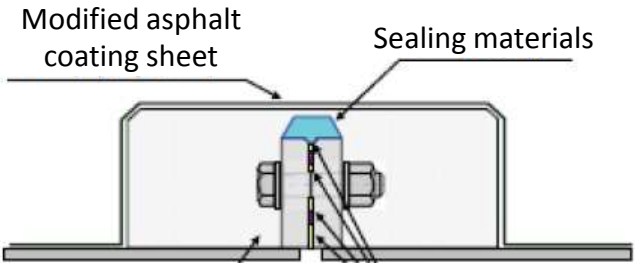



(Sectional view in A-A)





# Structure of joint of bottom plates(1/2)

	Cross-section view of bottom plates waterproofing structure	Construction example
Type-1	<p>Water expanded waterproofing materials</p>  <p>Sealing materials</p>	
Type-2	<p>Modified asphalt coating sheet</p>  <p>Sealing materials</p> <p>1:2 mortar</p> <p>Water expanded waterproofing materials</p>	

# Structure of joint of bottom plates(2/2)

	Cross-section view of bottom plates waterproofing structure	Construction example
Type-3,4	<p>Modified asphalt coating sheet</p> <p>Sealing materials</p> <p>1:2 mortar</p> <p>Water expanded waterproofing materials</p> <p>Joint caulking</p>	
Type-5	<p>Sealing materials</p> <p>Water expanded waterproofing materials</p>	

# Joint sealing of shell plates inside tanks

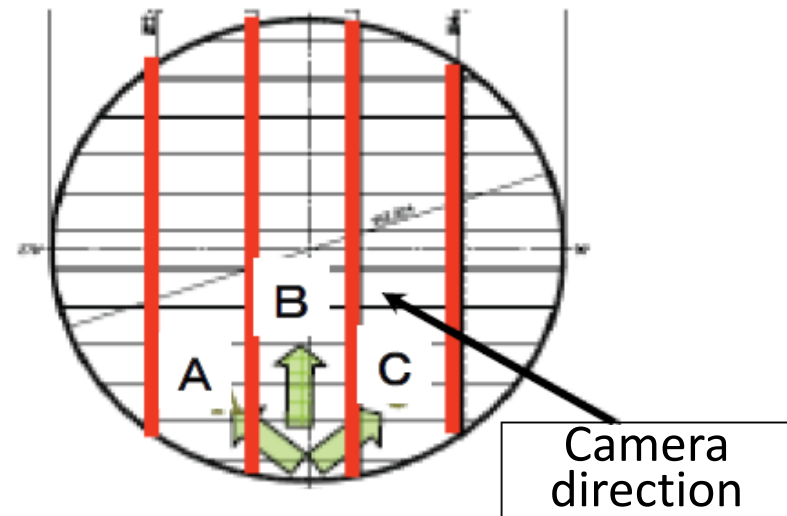
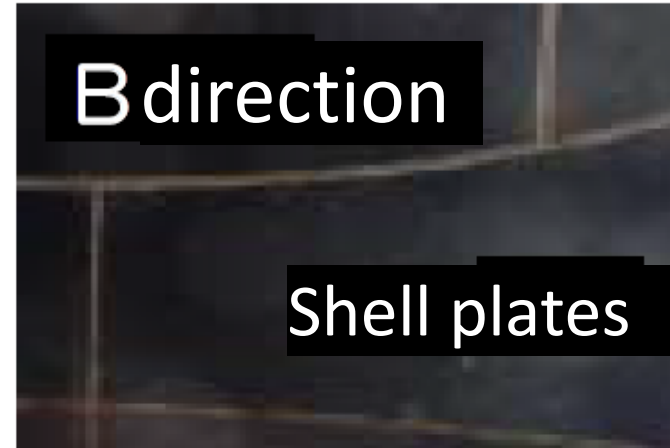




Photo of side structure of the tank (joint section)



Inside photo of dismantling  
the steel flange-type tank



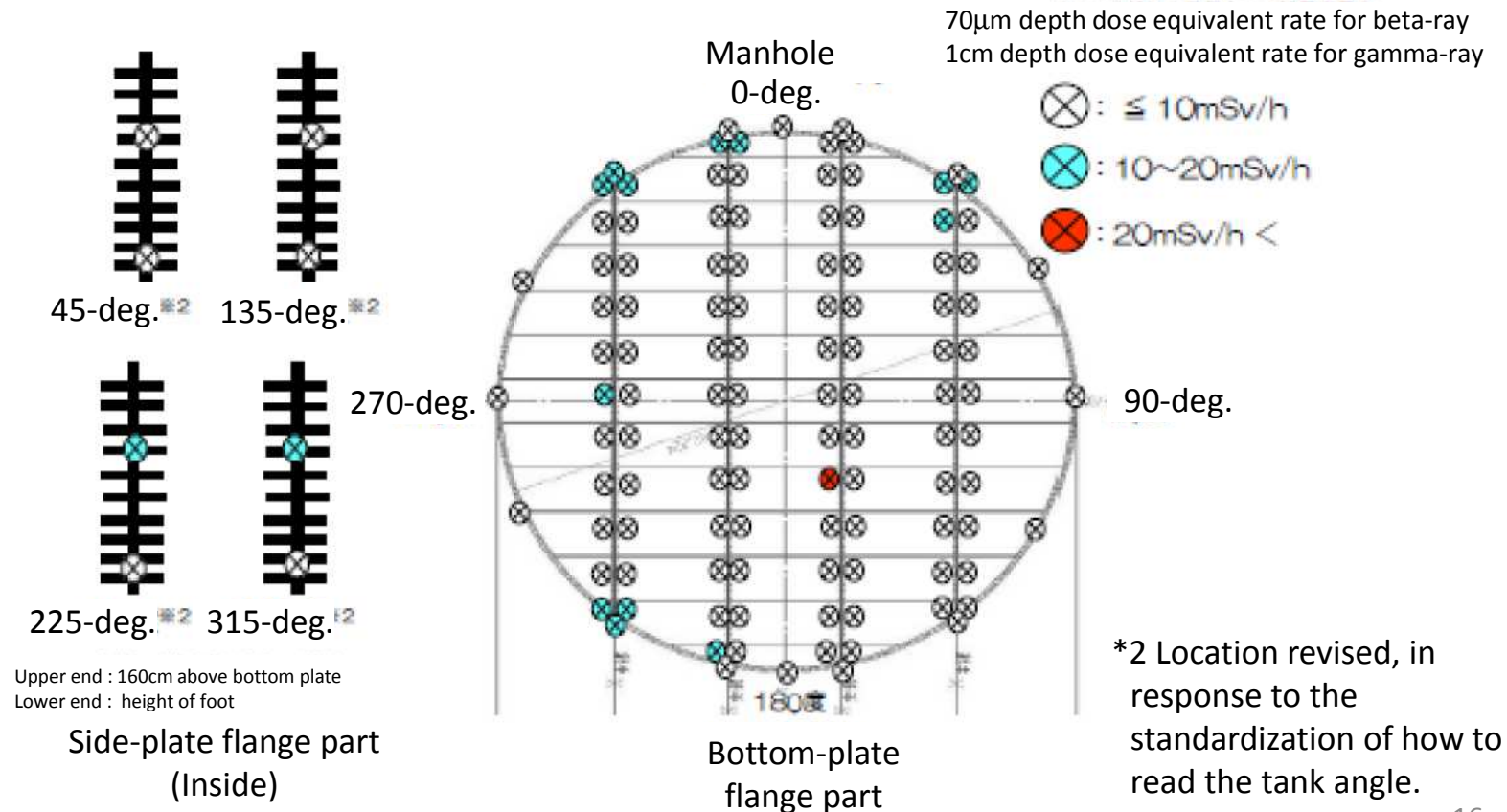
Joint for side  
of a tank



# Concentration of radioactive nuclide in the tank

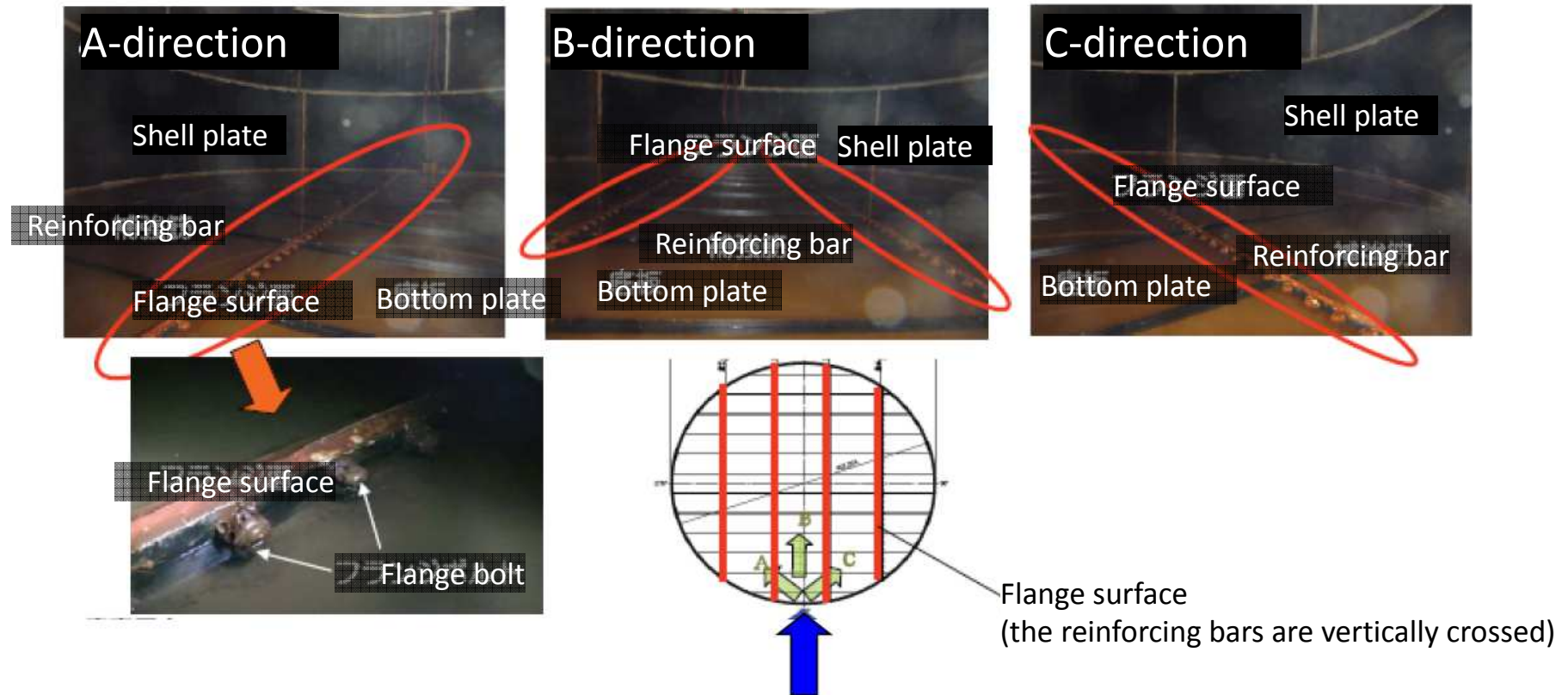
## Measured dose rates in the tank (H4 area No.5)

The dose rates measured around flanges were below 10mSv/h for beta-rays at almost points, and the maximum was approx. 22mSv/h. Dose rates from gamma-ray were 0.02 – 0.125 mSv/h



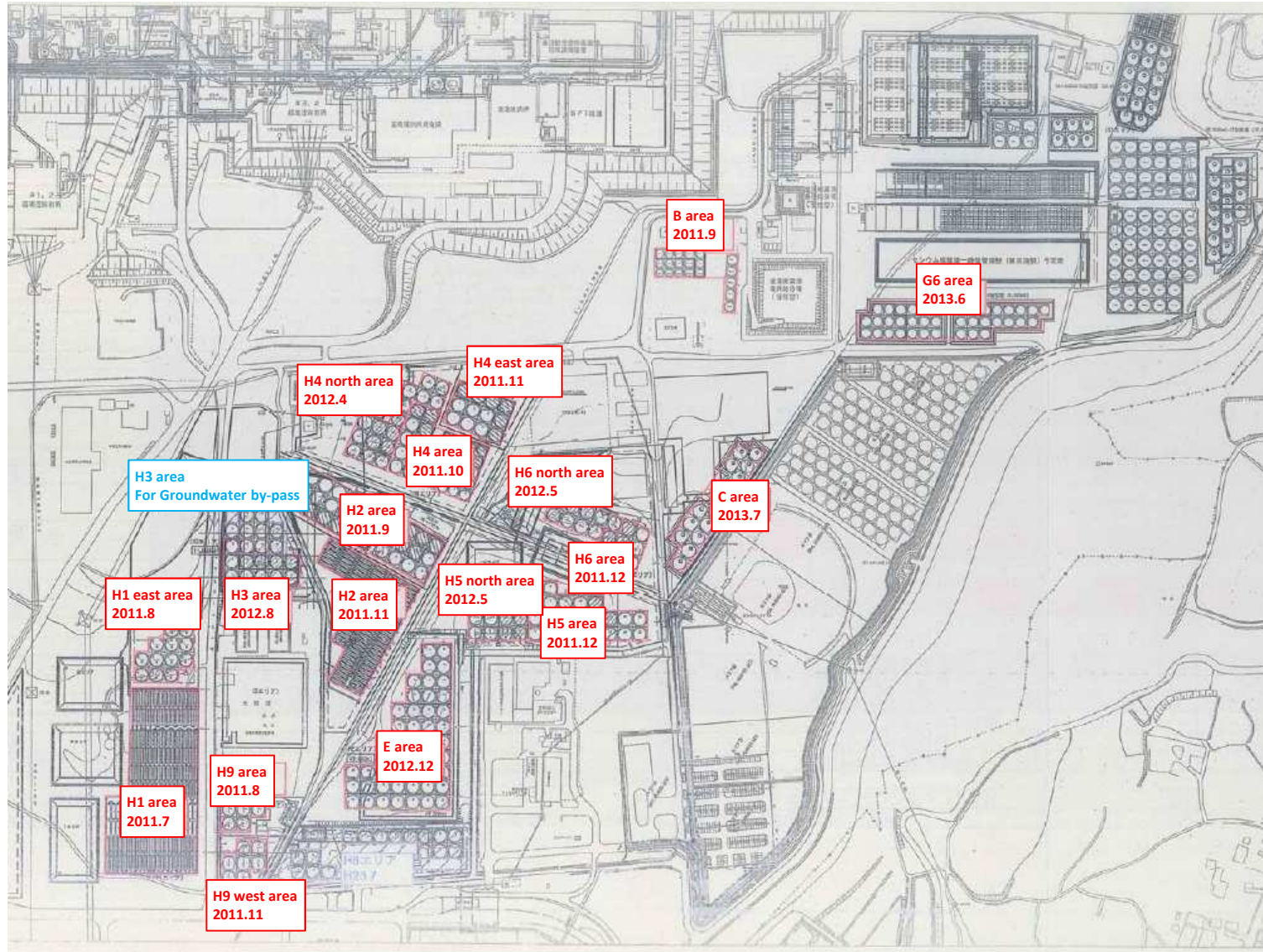
# Main target of decontamination inside the tank

- No defects were observed on general parts of the side plate from its appearance. At the joint section, sealing materials still remain.
- General parts of the bottom plate cannot be observed because of the remaining water. At the flange part, although there still accumulate some clads, sealing materials at the joint section still remain. At the bolted flange part, the shape cannot be clearly observed because of sealing materials and clads, remarkable corrosion, however, has not been observed at this time.

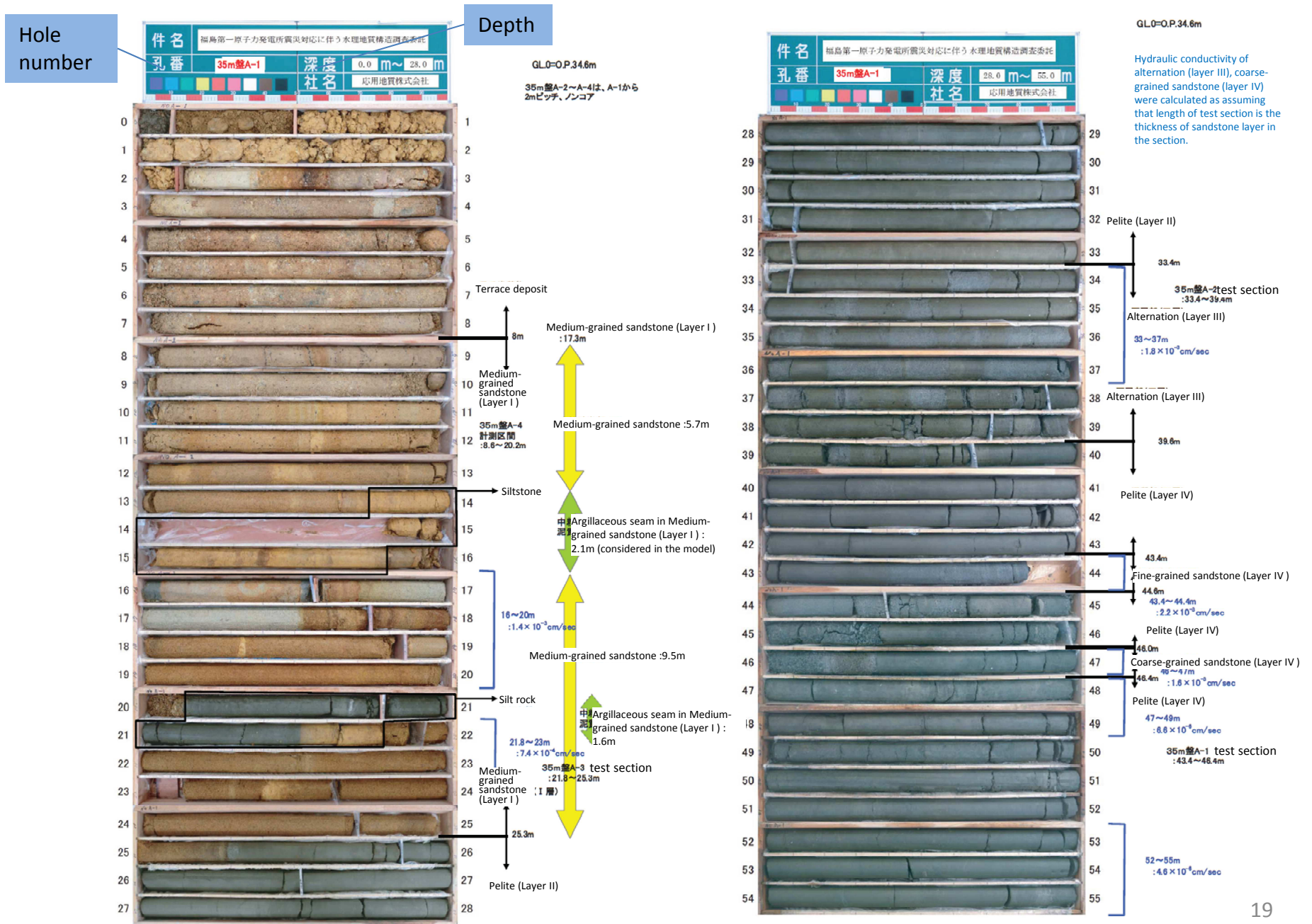




# Arrangement of tanks



# Example of Boring Core (for Demonstration Project for Unmanned Boring Technologies)





# Example of Boring Procedure (for Demonstration Project for Unmanned Boring Technologies)

## Boring for groundwater survey

(example of construction for contamination measure L:25-30m    Period : approx. 10 – 20 days)

The countermeasures shall be required not to expand the contamination to other layers if boring halls are drilled in the area with the risk of soil or groundwater contamination.

