

<Reference material>

Unit 2 Reactor Building and Large Carry-in Entrance Rooftop Accumulated water Quality Results

February 24, 2015

Tokyo Electric Power Company



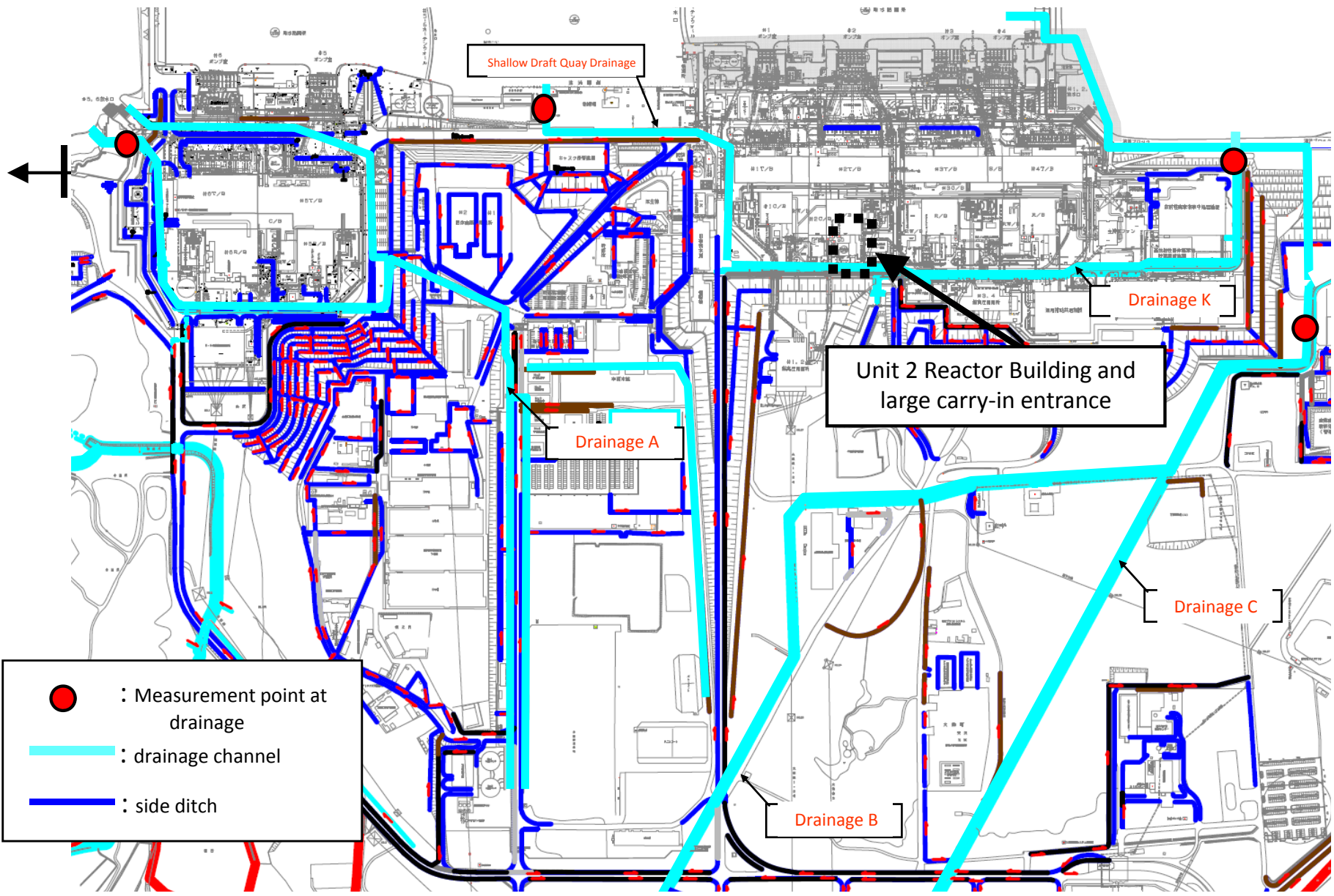
東京電力

1. Report overview

- Radioactive material concentration in rainwater and groundwater passing through the drainage channels have been continuously monitored since 2014 and decontamination (including facing) of the areas where the water flows and the cleaning of the roads and drainage channels have been continuously conducted.
- While progress in the decontamination and clean-up work has resulted in showing a decreasing trend in the dosage in the water around the mouth of the drainage channels since around December 2014, the levels in the water at the mouth of "Drainage K" are higher than the others (Drainage A, C, and shallow draft quay)
- Given this result, the company inspected the upstream branch pipes of "Drainage K" and found that a puddle on the rooftop of the large carry-in entrance of the Unit 2 reactor building showed a relatively high concentration (e.g. 23,000 becquerels per liter of Cesium 137).
- Regarding the dosage at the mouth of "Drainage K", the levels monitored were lower (around ten to several hundred becquerels per liter of Cesium 137) than that of the rooftop of the large carry-in entrance of the Unit 2 reactor building, and there was also no substantial concentration rise identified in the seawater around the south drainage release point, called Point T-2-1.

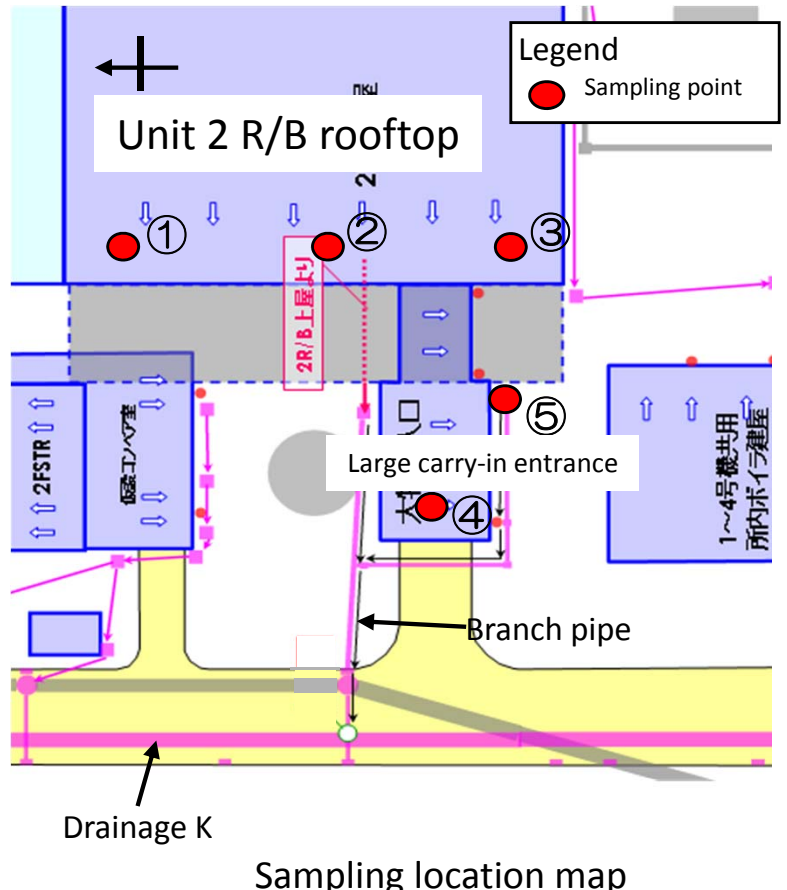
2.1 Drainage locations

Below are the locations of drainage channels.



2. 2 Result of water quality analysis of the rooftop area of reactor building (Unit 2 reactor building rooftop, large carry-in entrance rooftop)

- Rainwater on the rooftop of the reactor building, located upstream of the branch pipes which flow into "Drainage K", were analyzed.
- Because of the high dosage in the reactor building roof and concern over the radiation exposure to workers in a comprehensive investigation, the analysis was limited to the 2 R/B rooftop and large delivery rooftop, which were chosen based on accessibility and atmospheric radiation.
- As a result of the investigation, the rainwater found on the large carry-in rooftop contained a relatively high density of radioactive materials.



Photo② : Unit 2 Reactor Building rooftop



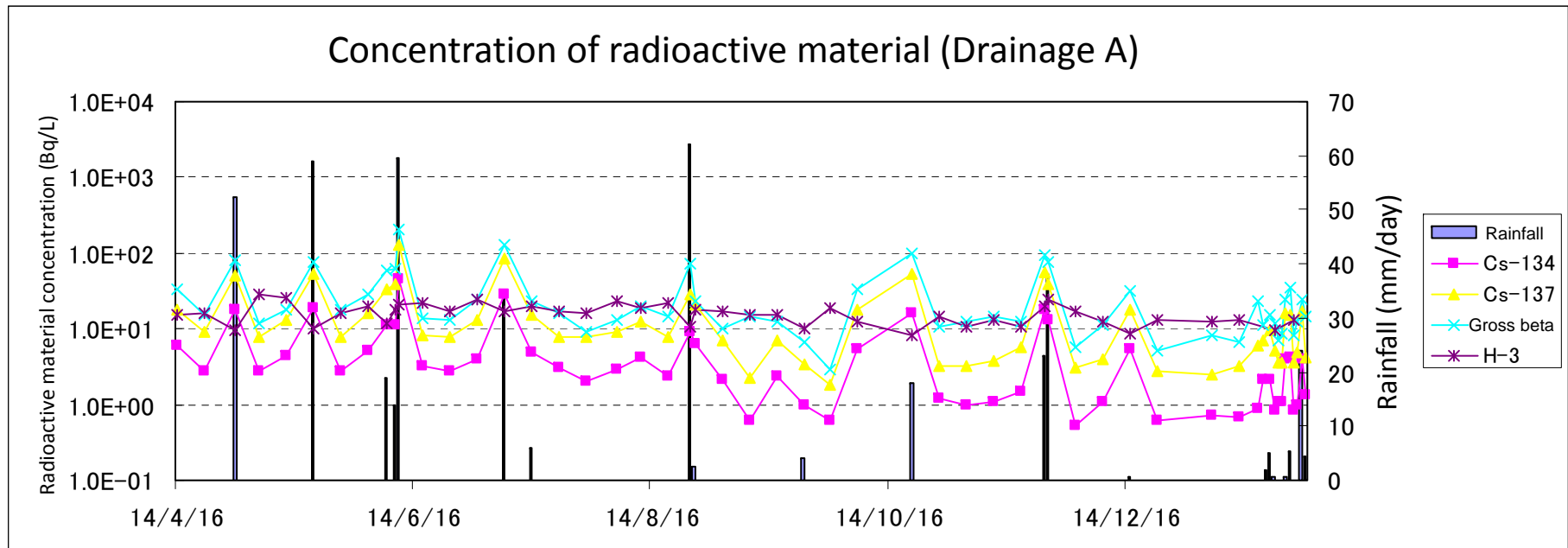
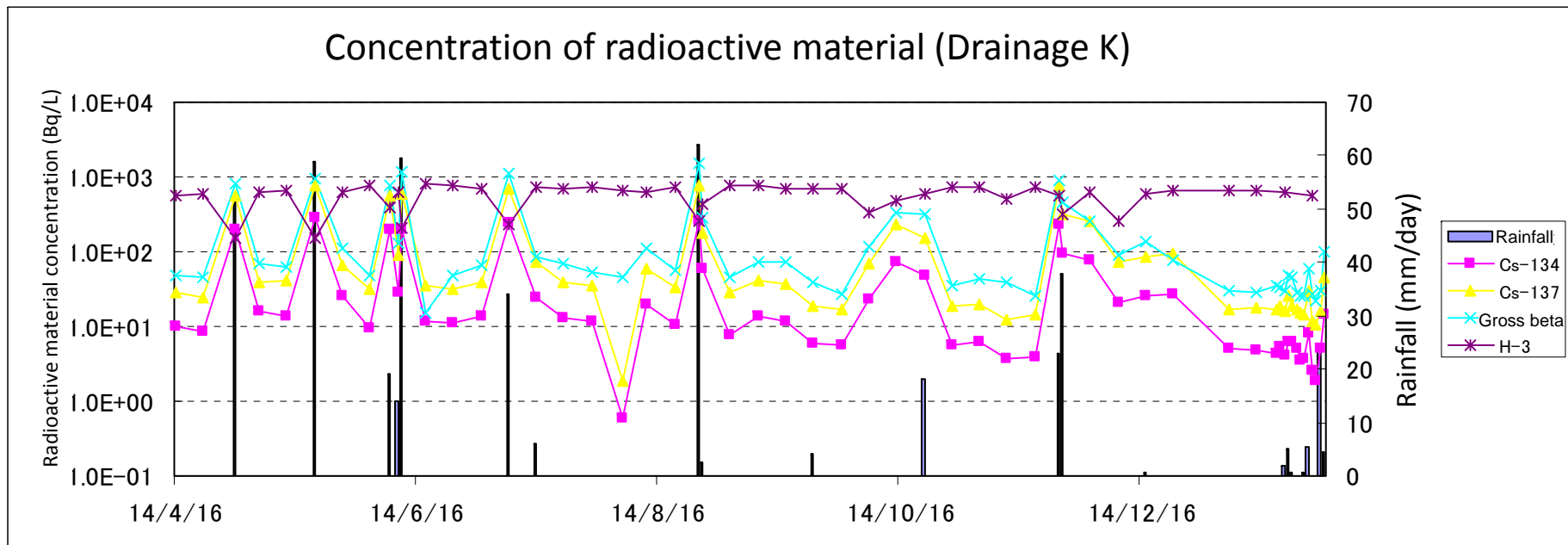
Photo④ : large carry-in entrance rooftop

List of analysis results

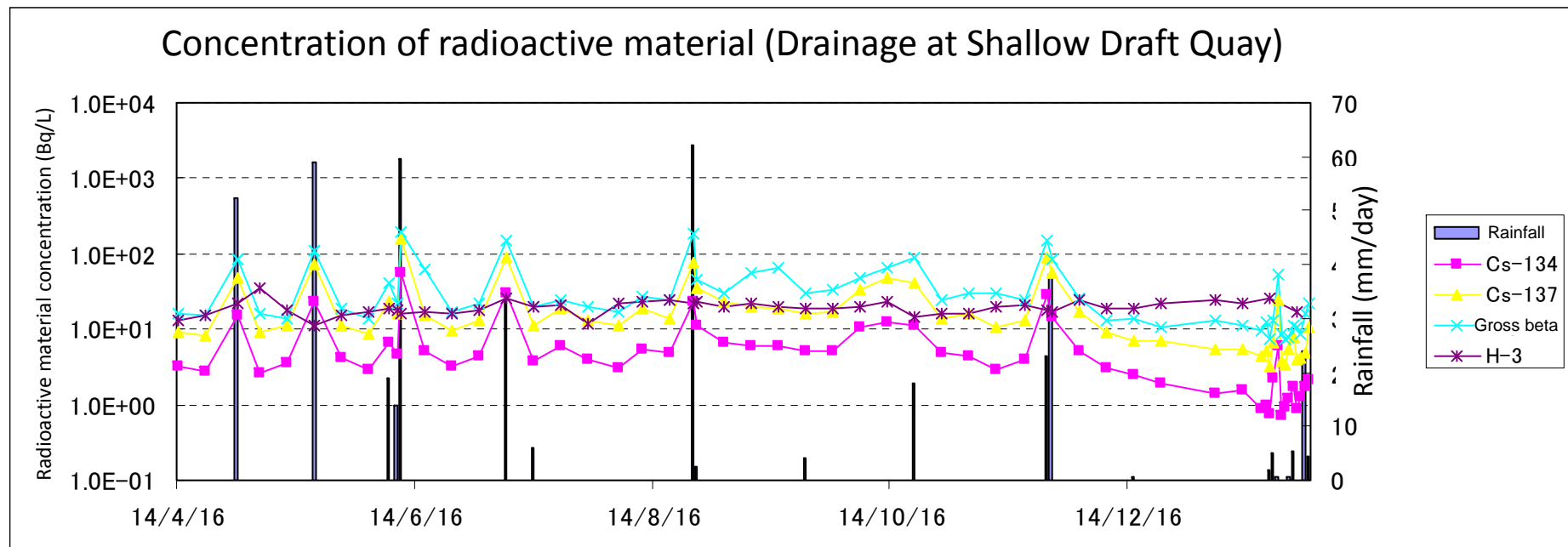
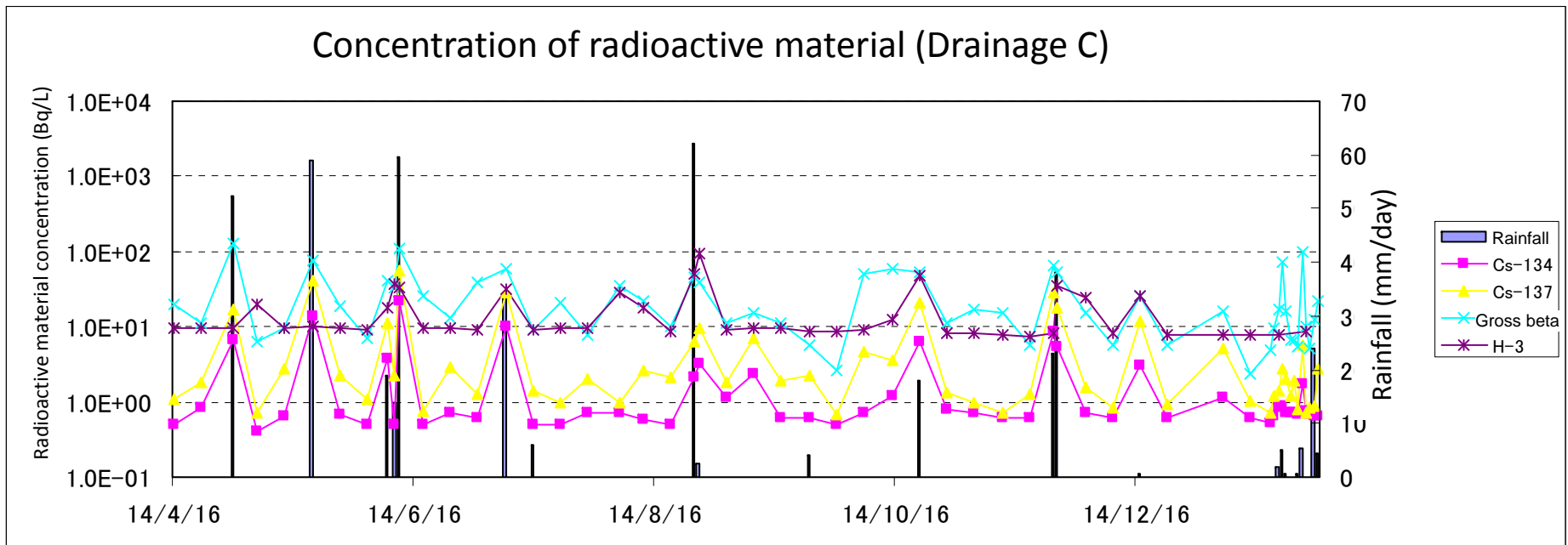
(Unit : Bq/L)

No.	place	Cs134	Cs137	Grossβ	Sr90	H-3	Sampling date
①	Unit 2 R/B rooftop (north)	200	650	920	10	ND(<100)	2015.1.16
②	Unit 2 R/B rooftop (center)	340	1,100	1,900	12	ND(<100)	2015.1.16
③	Unit 2 R/B rooftop (south)	300	990	1,900	20	ND(<100)	2015.1.16
④	Large carry-in entrance rooftop	6,400	23,000	52,000	Under analysis	600	2015.2.19
⑤	Vertical drainage pipe of carry-in (east)	920	3,200	9,700	Under analysis	ND(<100)	2015.2.18

2.3 Water quality of the drainage channels (1/2)

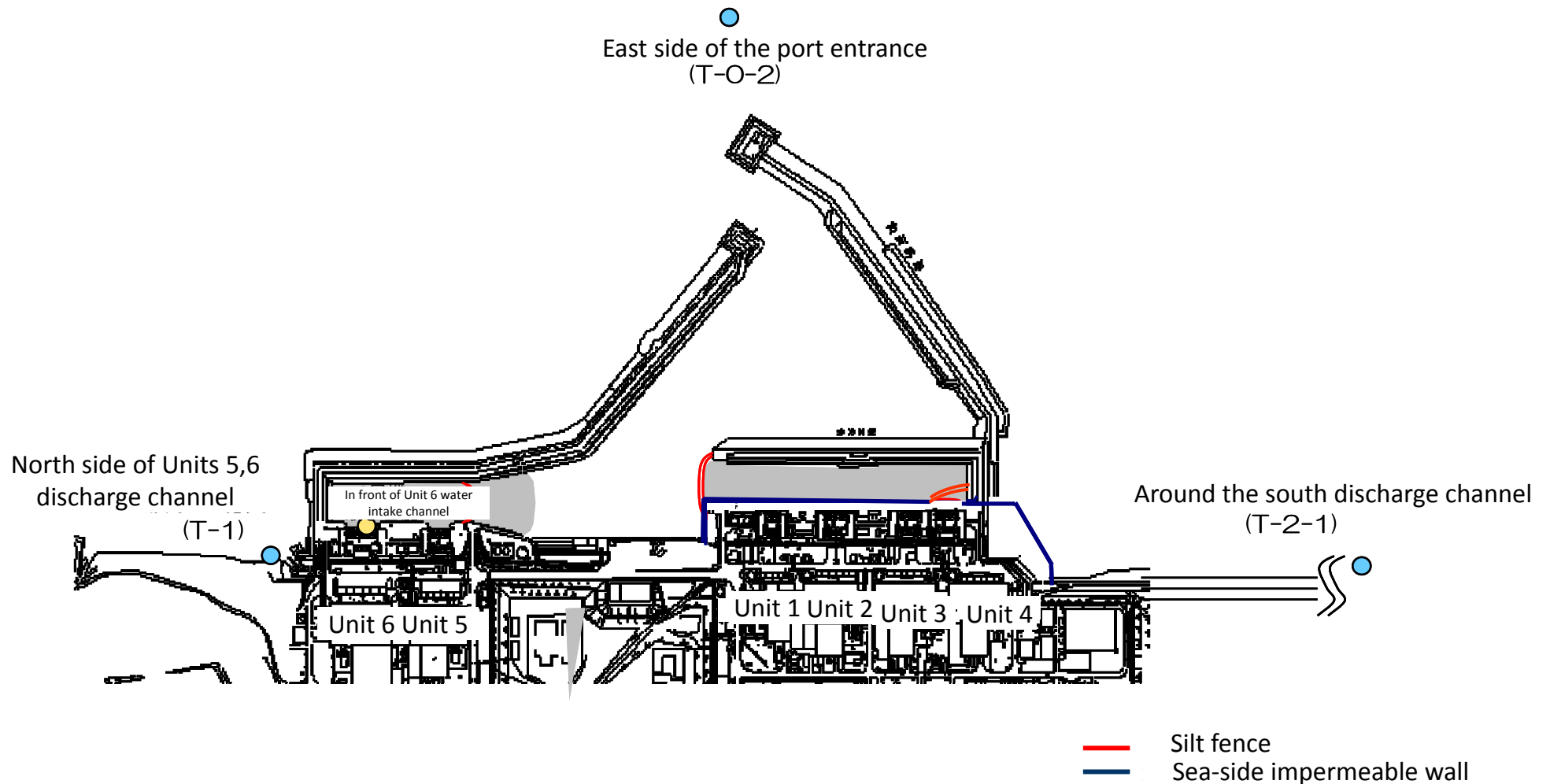


2.3 Water quality of the drainage channels (2/2)



2. 4 ocean water condition (at sampling point)

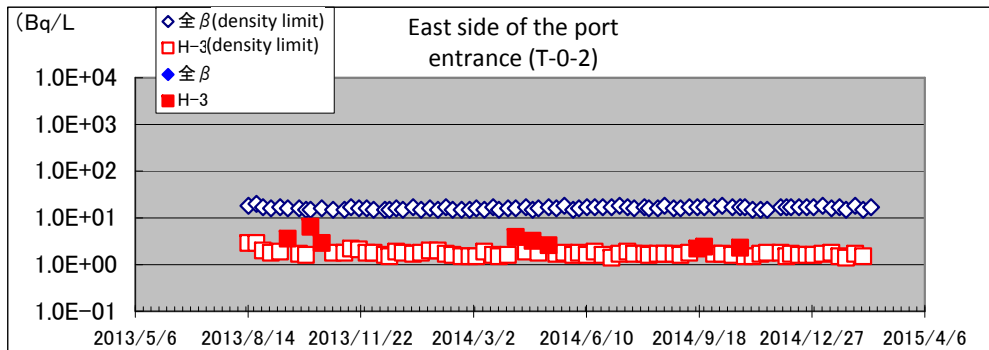
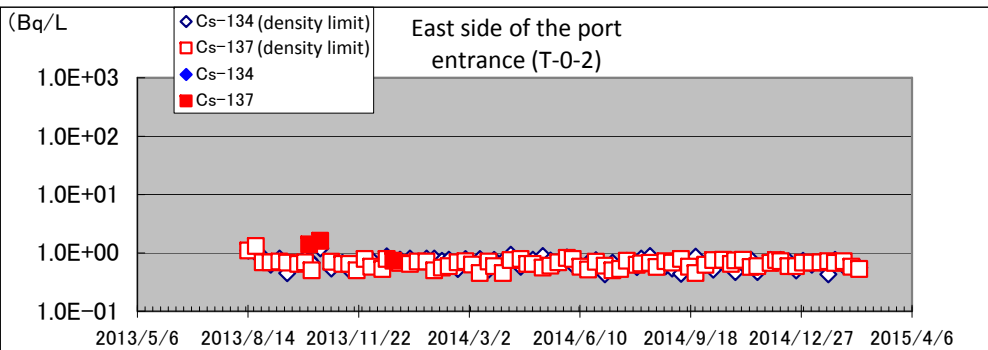
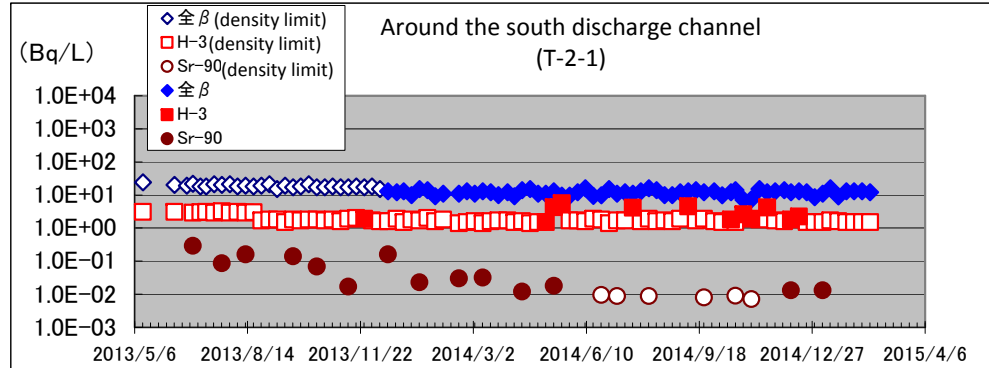
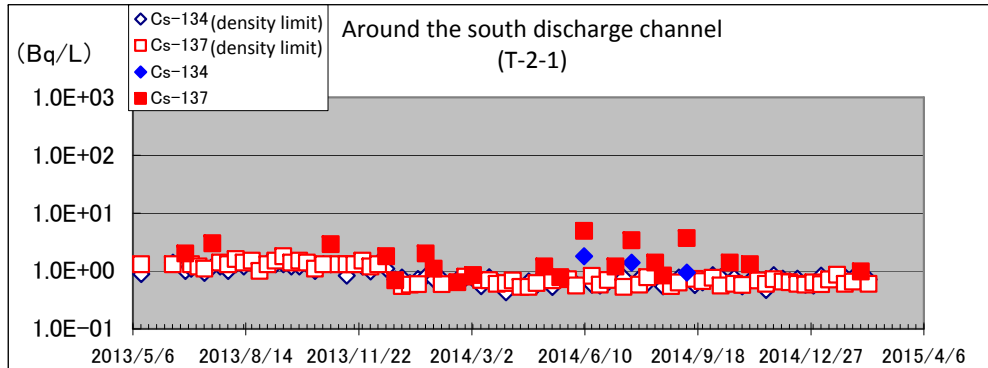
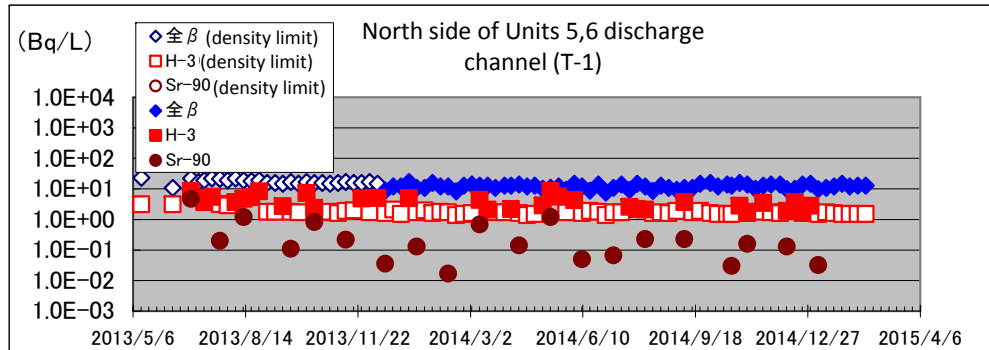
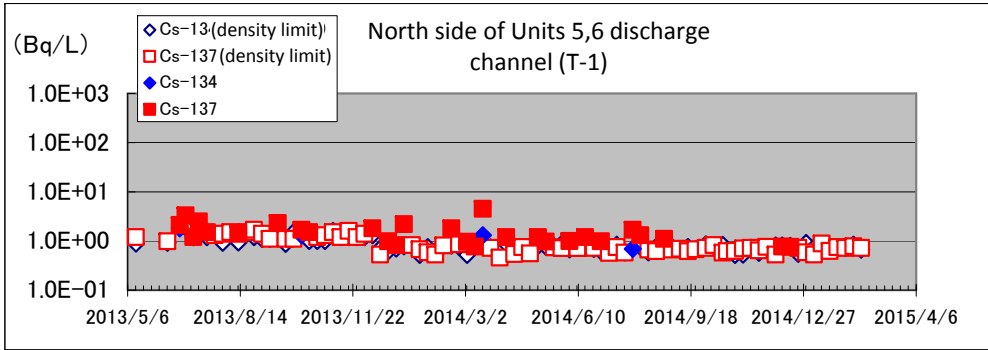
■ Ocean water was monitored for dosage levels at the points below, but there have been no large changes seen in the condition.



2.4 Seawater sampling historical results (Outside port: Gamma nuclides, Gross beta, H-3, Sr-90)

Gamma nuclides concentration

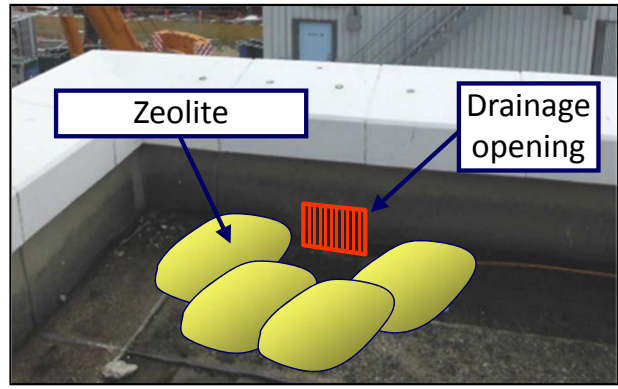
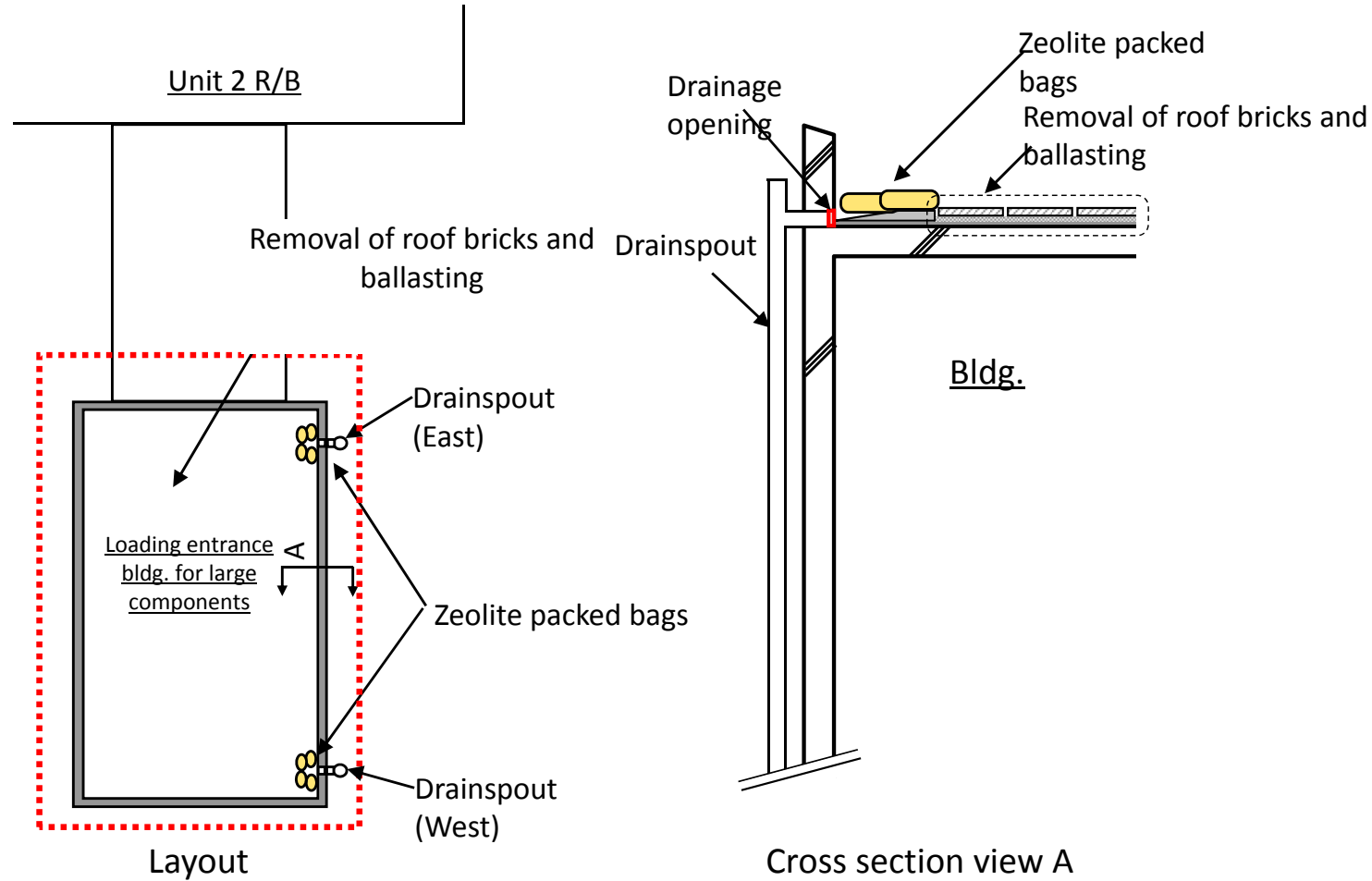
Gross beta, H-3, Sr-90 nuclides concentration



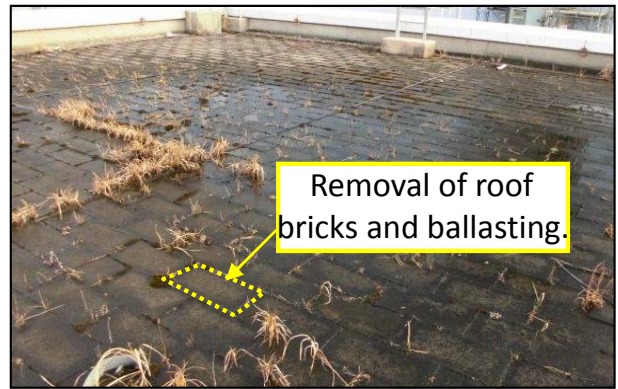
3. 2 Measures for the rooftop of the large carry-in entrance at Unit 2 reactor Bldg.

- Preventive measures were carried out for rainwater contamination on the rooftop of the large carry-in entrance at Unit 2 reactor building.
- Place Zeolite packed bags around the drainage opening on the rooftop. (to be carried out once prepared)
- Block the roof likely to be the contamination source, and remove the ballasting, etc. from the roof. (to be carried out before the end of March)

Legend  Area subject to preventive measures for contamination



Installation of Zeolite packed bags

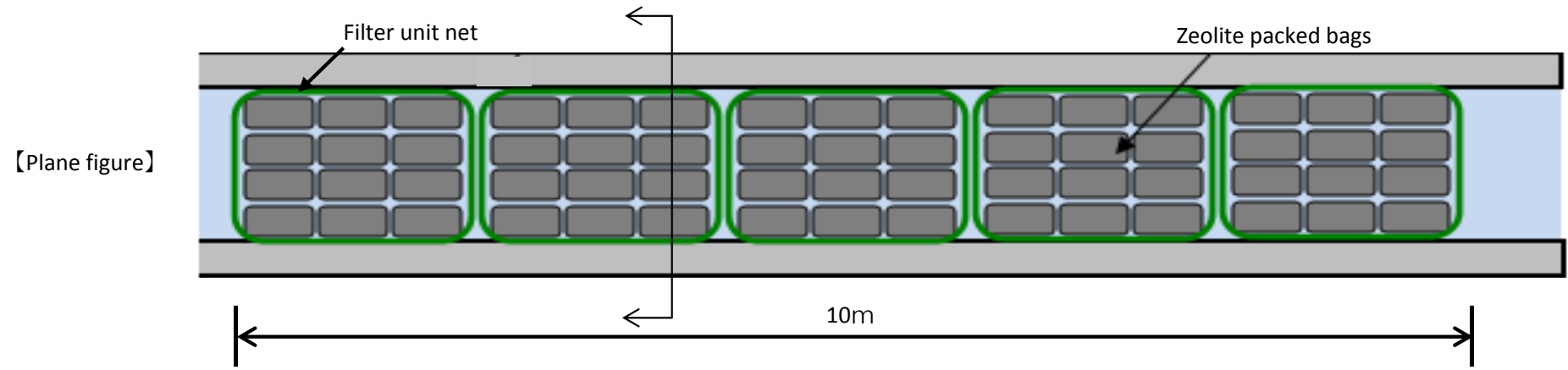


Rooftop

3.2 Measures for major parts of K drainage

<Major parts of drainage> To be installed before the end of March (to be started in order from Feb 9)

- Spread Zeolite packed bags all over the bottom of drainage.



- Place several Zeolite packed bags in a unit in the filter unit net and fix the net with bolts.

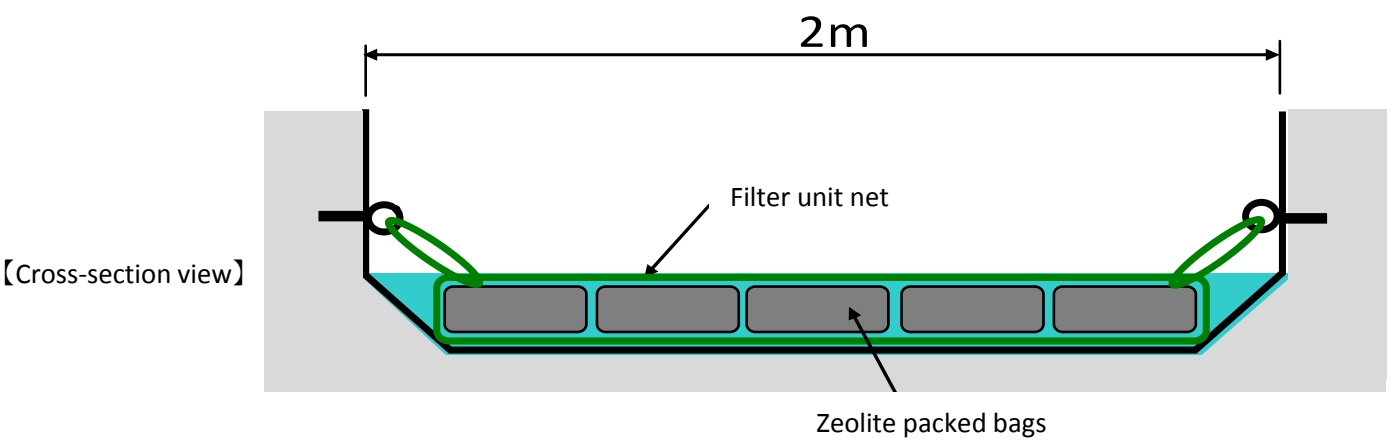


Photo taken on 2/10 (K dainage)

3. 2 Measures taken toward "Drainage K" east side branch pipe (installation of decontamination material)

- <branch pipe opening> to be installed by end of March
- Zeolite-filled bags will be installed and the water level will be raised in order for the chenille-like adsorption material.
- During rain, the upper part is opened wide for the water to flow across, and the material is also fixed to the metal wires to prevent it from being washed away.
- The lower part of the immersed parts is installed with the chenille-like adsorption material in order for it to close according to the amount of water flow.

