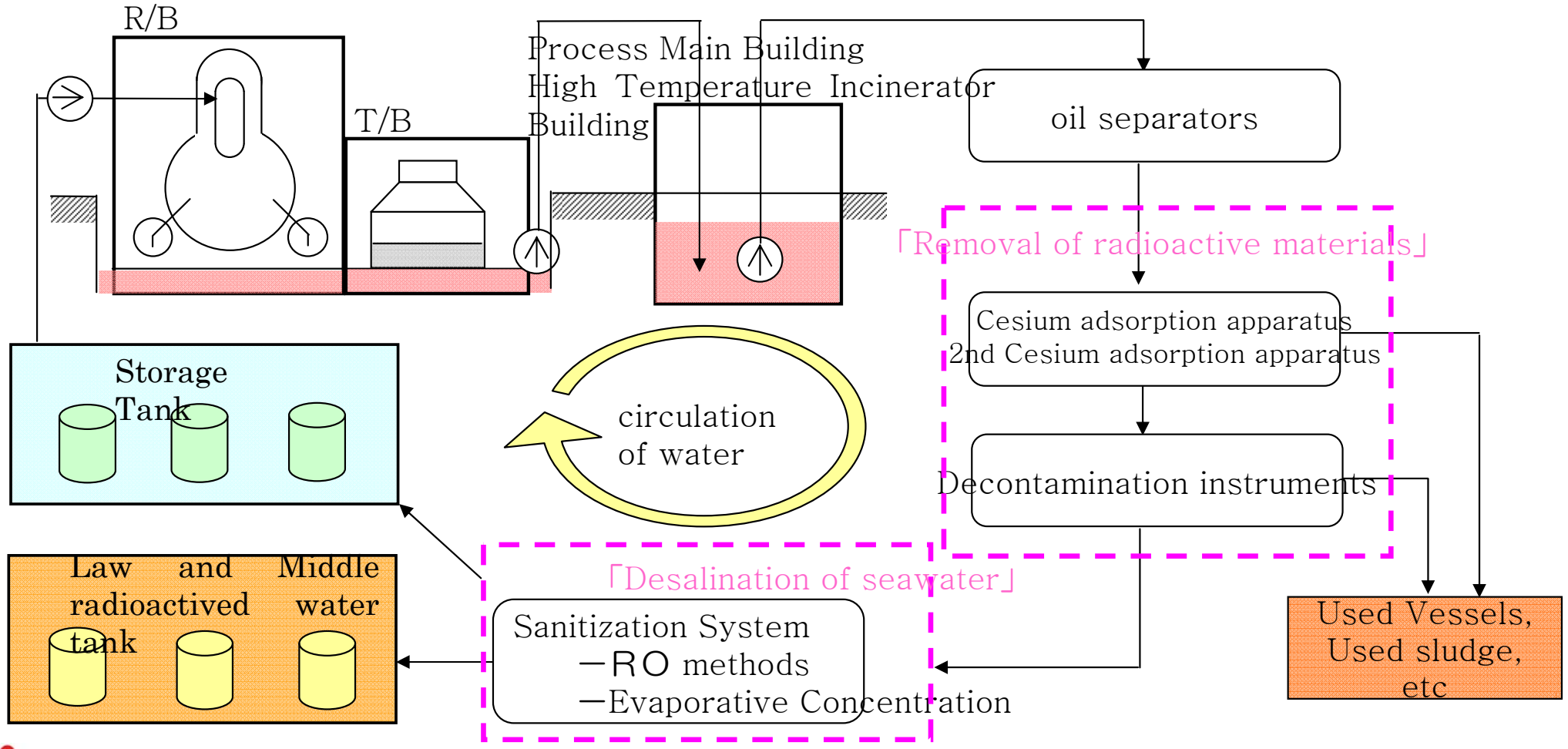
＜ Reference ＞
October 22, 2011
Tokyo Electric Power Comapny

Effort for treating radioactive accumulated water

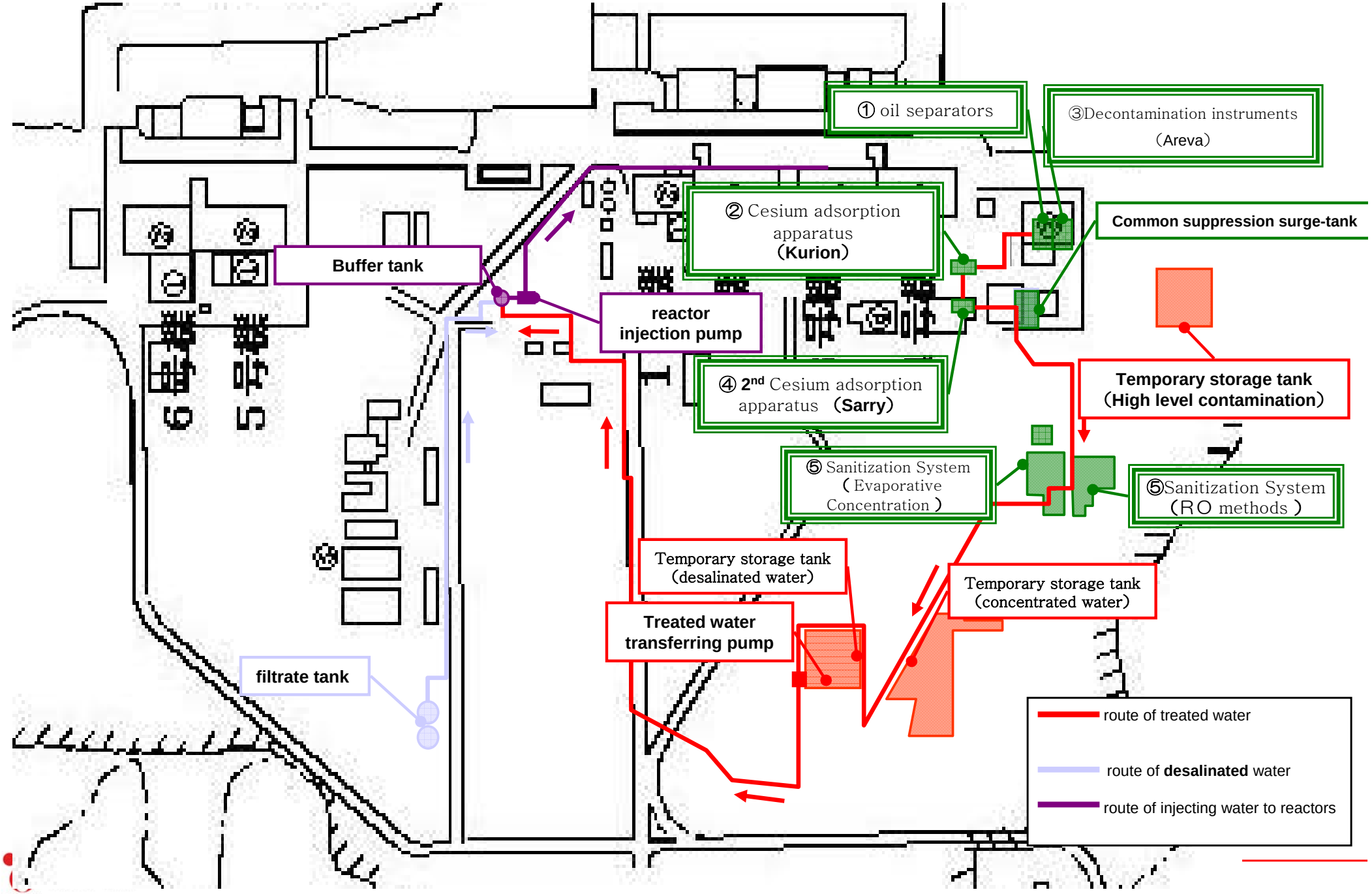
～Outline Version～

Summary

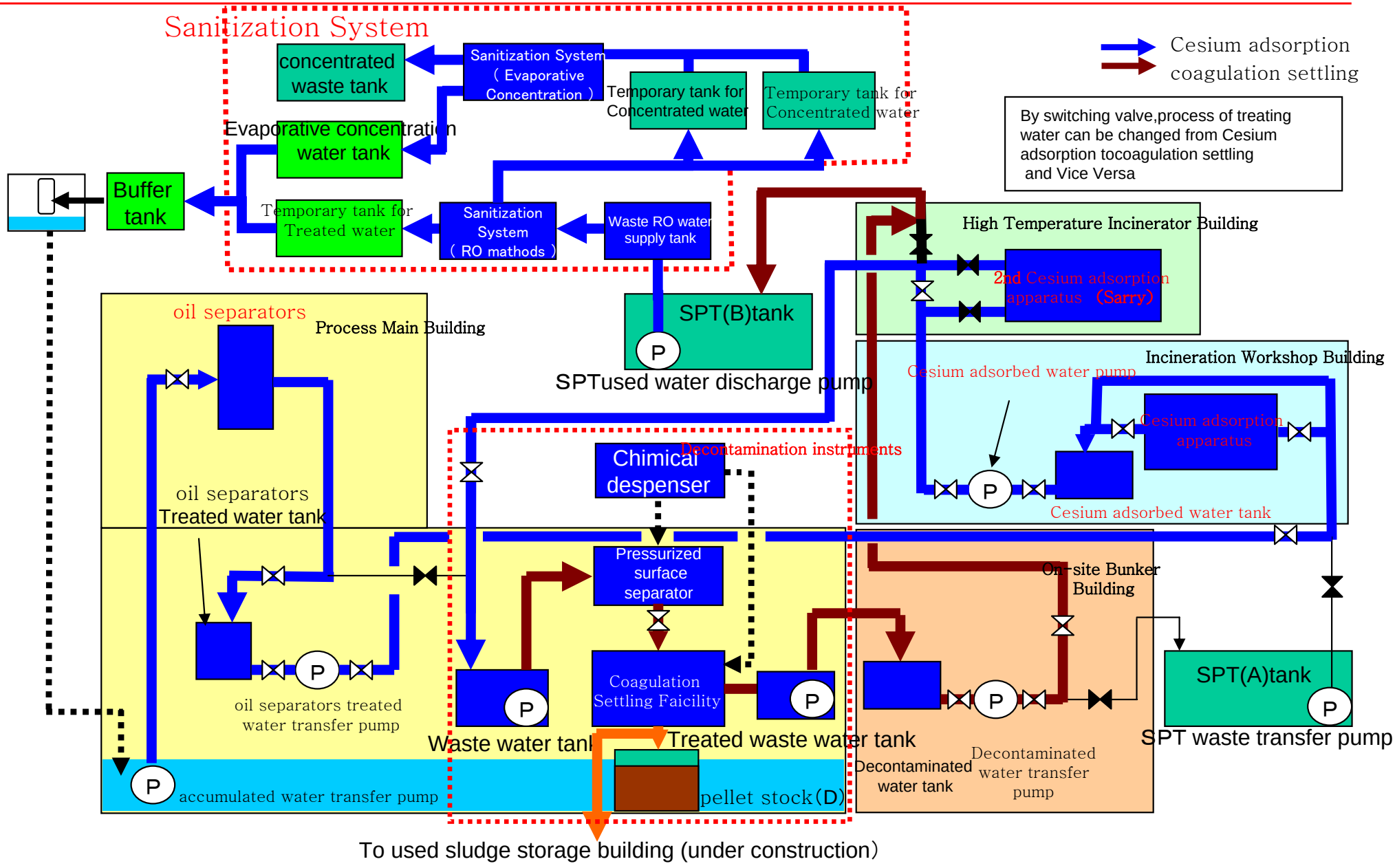
- To make the reactors be cold shutdown, we plan to establish ”Circulation cooling of reactors by circulating water cooling” system that treat the radioactive water accumulated in the buildings and reuse as a injecting water to reactors.
- “removal of radioactive materials” and ” desalinations” constitute the sanitization system for radioactive accumulated water



Layout of water treatment system



The system of radioactive accumulated water treatment



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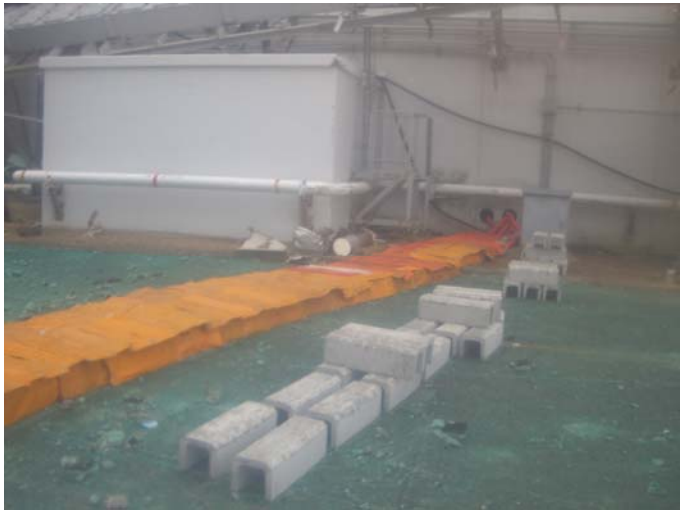
Installation status of accumulated water transfer hose

Installation status of the hose
(T/B～Centralized Radiation Waste Treatment Facility) No1

Installation status of the hose
(T/B～Centralized Radiation Waste Treatment Facility) No2



Installation status of the hose
(T/B～Centralized Radiation Waste Treatment Facility) No3

①Oil separators

Appearance of oil separators

Inside of oil separators

②Cesium adsorption apparatus（Kurion）

- Using zeolite nature of ion exchange, the system adsorb radioactive materials such as cesium and strontium to sanitize contaminated water

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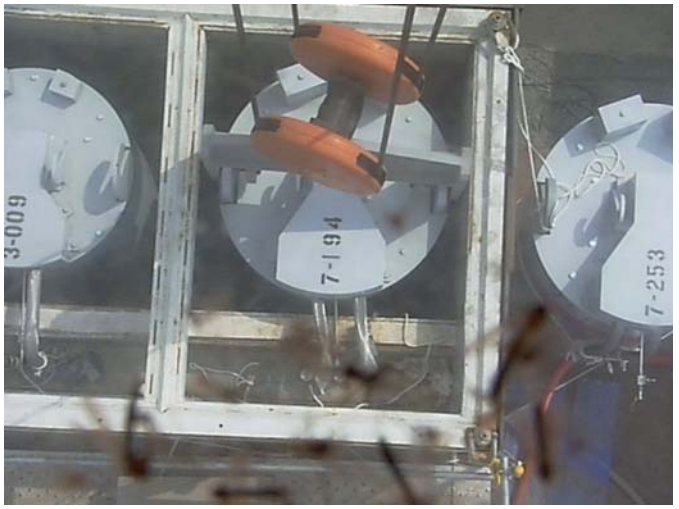

Replacing vessels

Manupilating the replacement of vessels

③Decontamination instruments（Areva）

Appearance of Decontamination instruments

Chemical tank

④ 2nd Cesium adsorption apparatus（Sally）

- The system lead the contaminated water through Cesium which adsorb radioactive materials
- Operate the system with replacing vessels at periodic intervals
- Using the know how earned by Cesium adsorption apparatus

2nd Cesium adsorption apparatus No1

2nd Cesium adsorption apparatus No2

④ 2nd Cesium adsorption apparatus（Sally）(Placing vessels)

2nd Cesium adsorption apparatus (carrying vessel into building)

2nd Cesium adsorption apparatus (Placing vessel in position)

⑤Water desalinations (RO/Evaporative concentration)

- RO method system uses ordinal water desalinations.
- Evaporative concentration apparatus desalinizes concentrated water, which was treated by RO method system before, by evaporating the water
- It is not expected that the system decontaminates radioactive materials in contaminated water.

Water Desalinations （RO module)

Water Desalinations （filtering apparatus)

⑤Water desalinations (RO/Evaporative concentration)

Evaporative concentration apparatus No1

Evaporative concentration apparatus No2

Water desalinations (RO) concentrated water tank

RO concentrated water storage tank No1

RO concentrated water storage tank No2

RO concentrated water storage tank No3

Controlling accumulated water recovering and processing

Appearance of control room

Inside of control room

Controlling accumulated water recovering and processing

Moniters (Main Anti-Earthquake Building)

Kurion Areva Control Room