

KNF-  
WASTE-03

# Treatment of waste water containing uranium

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It is an eco-friendly technology to minimize radioactive materials of drainage, which is generated from nuclear fuel processing facility and UF<sub>6</sub> cylinder washing process, through vacuum evaporation concentration in a low temperature and low pressure

## Description

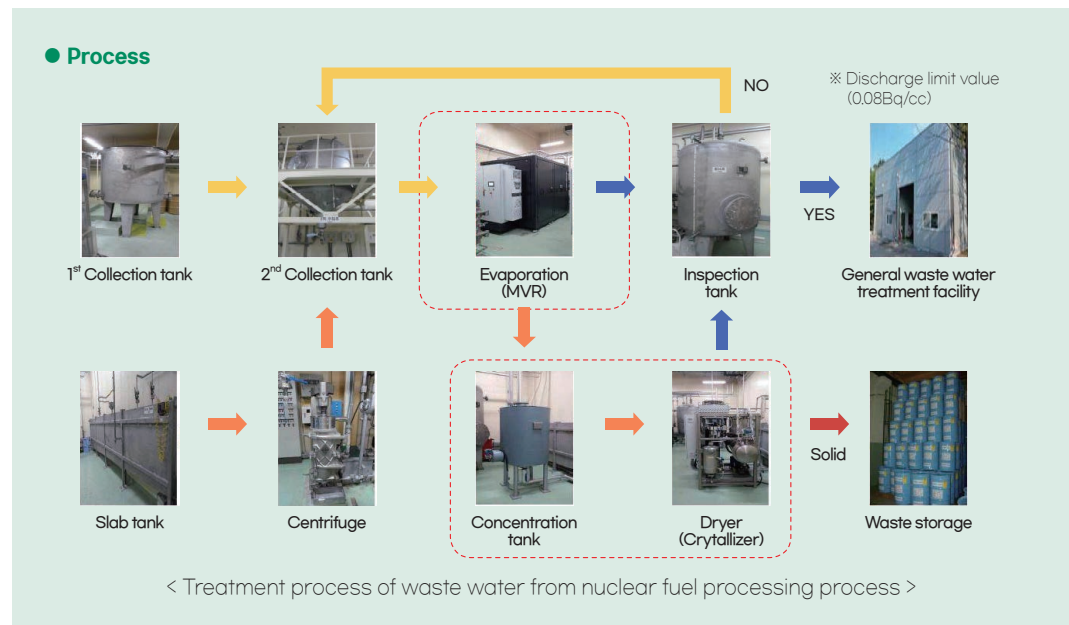
### ● Background

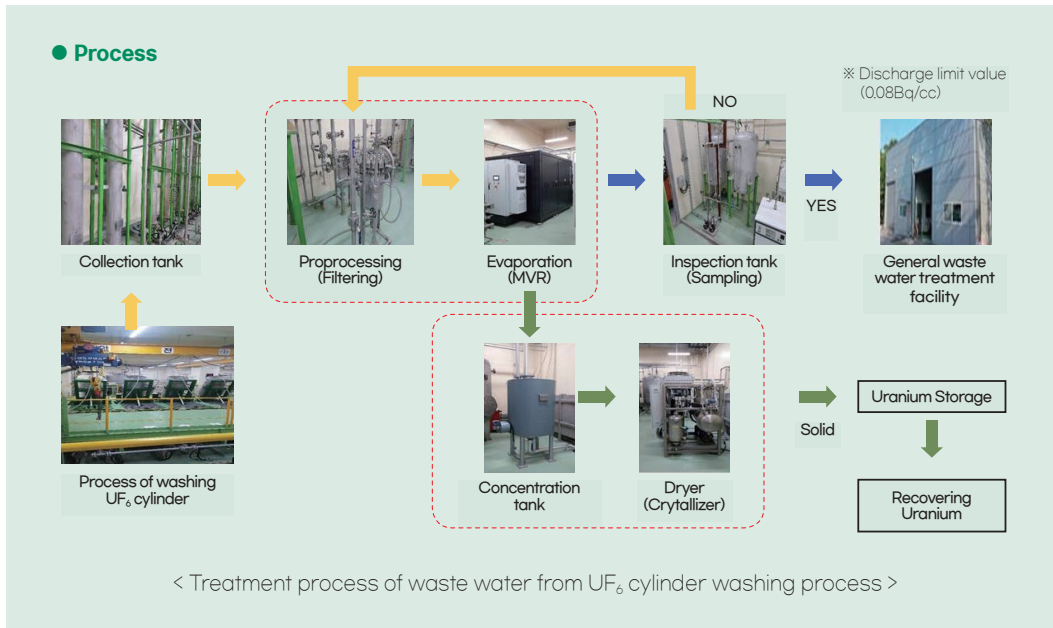
- To discharge treated waste water to the general environment when processing nuclear fuel and washing UF<sub>6</sub> cylinder, the radioactivity of waste water and secondary waste need to be reduced.

### ● Purpose and Necessity

- Secure an ECO-friendly and economical waste water treatment technology
- Minimize radioactive materials in drainage and secondary waste

### ● Process





**Technology  
Readiness  
Level (TRL)**

Actual system  
proven through  
operation

**Business  
Model**

- Technology Transfer
- Licensing**
- Joint Search
- Service Execution
- Others

**● Principle**

- Utilizing the characteristic that Uranium in waste water from nuclear fuel processing process and UF<sub>6</sub> cylinder washing process is not vaporized, waste water is separated into radioactive and condensed water with evaporation in low pressure and is discharged.
- non-evaporated waste water is concentrated and dried. it is stored as radioactive solid waste by nuclear fuel processing process and it is reused with recover and refine process by UF<sub>6</sub> cylinder washing process.

**● Benefits**

- Minimizing radioactive materials in drainage
- Reduction of waste water treatment time
- Efficient manpower management by improving the treatment method and automatizing the machines
- Minimum machine space
- Reduction of secondary waste and management costs of waste

**Distinctiveness**

**● Characteristic**

- Remove more than 99% of uranium in waste water by vacuum evaporation concentration process in low pressure
- Simplified process and no use to chemicals
- Collect waste water, refine and reuse uranium

**Experience**

- Commercial operation phase

**Deliverables**

- Facility design, installation and operation
- Operational training and consultation