

Introduction



- Replacement of KORI #1 RVH¹ was the 1st case in Korea.
- Period : 12APR13 ~ 06OCT13 during overhaul

Preparation

- Oranization

	KHNP	Contractor	Total
Worker	23	101	124

- Facility

Hot Machine Shop	NRVH warehouse
	
ORVH ² storage	NRVH ³ storage

- Approve Licensing

RVH replacement	APR13
special approval of transport	MAY13
Hot Machine Shop	NOV12

- Training

CRDM ⁴ cutting	Concrete wall cutting	Transport ORVH
		

- Work Procedure

ALARA procedure
Transport ORVH procedure
ORVH emergency response procedure
ORVH radiation shielding procedure
Radioactive waste management procedure
Decontamination procedure

¹ Reactor Vessel Head
² Old Reactor Vessel Head
³ New Reactor Vessel Head
⁴ Control Rod Drive Mechanism

Work Process

- Disassemble CSS⁵, Seismic Plate, etc.
- Withdraw RPI⁶, Dummy Can, etc.
- Take ORVH out and put NRVH in.
- Install lead plates on ORVH for shielding radiation.
- During CRDM cutting, HEPA Ventilation system was operated and tent was installed to prevent diffusion.
- C/V concrete wall was cut by wire saw and set RCA⁷.
- ORVH was decontaminated by water and wrapped big shield.
- ORVH was transported from KORI #1 to Hot Machine Shop(1.4 km).

Radiation Protection

Radiation Work Permit		
SRWP ⁸	RRWP ⁹	ERWP ¹⁰
21	80	5

- Total dose : 120.76 man-mSv.

⁵ Cask Support Structure
⁶ Rod Position Indicator
⁷ Radiation Controlled Area
⁸ Specific Radiation Work Permit
⁹ Regular Radiation Work Permit
¹⁰ Extended Radiation Work Permit