

Work Schedule of the Main Inspection/Restoration of the Kashiwazaki-Kariwa Nuclear Power Station in Response to the Niigata-Chuetsu-Oki Earthquake (during 4 Weeks)(1/3)

【Inspection/Restoration Status】

◆From April 6th, 2008 (Sun) to May 3rd, 2008 (Sat)

System/Equipment	Items	Apr. 6th (Sun) to Apr. 12th (Sat)	Apr. 13th (Sun) to Apr. 19th (Sat)	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	Status of Inspection / Restoration	
Unit No.1	Reactor facilities	Fuel / control rod inspection *1				Visual inspection of control rod completed on Feb. 22. Inspection of spent fuel pool rack etc. completed on Feb. 28 and Feb. 29. Visual inspection of fuels to be commenced on Apr. 16. Visual inspection of channel boxes to be commenced on Apr. 24.	
	Turbine facilities	Turbine inspection *2				Low pressure turbine (B) internal inspection completed on Nov. 30.	
	Other facilities	Submerged equipment inspection on ground floor 5 of the reactor combination building					Restoration work commenced on Mar. 17.
		Main transformer inspection					Inspection completed on Nov. 23. Preparation for transportation into the factory conducted from Oct. 29 to Dec. 28. Coordinating for the start date of transportation into the factory.
		House transformers inspection					1A Inspection completed on Sept. 4. 1B Inspection completed on Oct. 12. Coordinating for the start date of transportation into the factory.
		Excitation transformers inspection					Inspection completed on Oct. 18. Coordinating for the start date of transportation into the factory.
		Main generator inspection					Inspection commenced on Feb. 7. Withdrawal of rotor completed on Mar. 5.
		Stack inspection					Inspection for substructure of piles commenced on Apr. 4.
Main exhaust duct inspection / restoration					Visual inspection completed on Sep. 14. Survey commenced on Apr. 9 prior to restoration work.		
Unit No.2	Reactor facilities	Pressure suppression chamber inspection				Inspection to be conducted from Mar. 25 to May 2.	
	Turbine facilities	Turbine inspection *2				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 21.	
	Other facilities	Main transformer inspection					Inspection completed on Nov. 28. In-site transportation to be commenced on April 21.
		House transformers inspection					2A Inspection completed on Nov. 15. 2B Inspection completed on Nov. 17. Preparation for transportation into the factory to be conducted from Mar. 24 to Apr. 3 and from Apr. 7. Coordinating for the start date of transportation into the factory.
		Excitation transformers inspection					Inspection completed on Dec. 6. Preparation for transportation into the factory to be conducted from Mar. 31 to Apr. 8 and from Apr. 21. Transportation into the factory to be conducted in mid-May.
		Main generator inspection					Inspection commenced on Mar. 19. Withdrawal of the rotor completed on Apr. 9.
		Main exhaust duct inspection / restoration					Visual inspection completed on Oct. 5. Survey to be commenced on Apr. 9 prior to restoration work.
Unit No.3	Reactor facilities	Pressure suppression chamber inspection				Preparation for inspection completed on Mar. 28. Inspection to be conducted from Mar. 31 to May 23.	
		Fuel / control rod inspection *1				Visual inspection of control rod to be conducted from Feb. 25 to Apr. 11. Inspection of spent fuel pool rack etc. completed on Mar. 10. Visual inspection of fuels to be conducted from Mar. 14 to Apr. 21. Visual inspection of channel boxes to be conducted from Mar. 20 to Apr. 11.	
		Inspection of reactor recirculation piping applicable to the Fitness-for-Service rule				Preparation for detailed inspection to be conducted from Mar. 14 to early May. Cutting out piping to be commenced on Apr. 15.	
	Turbine facilities	Turbine inspection *2				Coordinating for the start date of low pressure turbine (B) (C) detailed inspection.	
	Other facilities	Main transformer inspection					Inspection completed on Oct. 26. Preparation for transportation into the factory conducted from Oct. 18 to Nov. 26. Coordinating for the start date of transportation into the factory.
		House transformers inspection					3A Inspection completed on Sept. 20. 3A Inspection completed on Oct. 22. Preparation for transportation into the factory completed on Mar. 12. Transportation into the factory to be conducted in late May.
		Excitation transformers inspection					Inspection completed on Nov. 3. Preparation for transportation into the factory completed on Apr. 1. Transportation into the factory completed on Apr. 2.
		Main generator inspection					Inspection commenced on Feb. 20. Withdrawal of rotor completed on Mar. 19.
		Stack inspection					Inspection for substructure of piles commenced on Mar. 28.
		Main exhaust duct inspection / restoration					Visual inspection completed on Sep. 14. Survey commenced on Apr. 1 prior to restoration work.
Unit No.4	Reactor facilities	Pressure suppression chamber inspection				Inspection completed on Mar. 31.	
		Fuel / control rod inspection *1				Visual inspection of fuels to be conducted from Mar. 21 to Mar. 27, and in mid-June. Visual inspection of channel boxes to be conducted from Mar. 28 to Apr. 21. Visual inspection of control rod to be conducted from Apr. 9 to Apr. 21.	
	Turbine facilities	Turbine inspection *2				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 14.	
	Other facilities	Main transformer inspection					Inspection completed on Dec. 13. Preparation for transportation into the factory conducted from Dec. 14 to Dec. 27. Coordinating for the start date of transportation into the factory.
		House transformers inspection					4A, 4B Coordinating for the start date of inspection.
Main generator inspection						Inspection commenced on Jan. 15. Withdrawal of rotor completed on Feb. 14.	

Work Schedule of the Main Inspection/Restoration of the Kashiwazaki-Kariwa Nuclear Power Station in Response to the Niigata-Chuetsu-Oki Earthquake (during 4 Weeks)(2/3)

【Inspection/Restoration Status】

◆ From April 6th, 2008 (Sun) to May 3rd, 2008 (Sat)

System/Equipment	Items	Apr. 6th (Sun) to Apr. 12th (Sat)	Apr. 13th (Sun) to Apr. 19th (Sat)	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	Status of Inspection / Restoration
Unit No.5	Reactor facilities	Jet pump inspection				No.1 Disassembly completed on Feb. 28. Root-cause analysis and restoration policy under consideration.
		Pressure suppression chamber inspection	preparation inspection			Preparation for inspection completed on Apr. 6. Inspection to be conducted from Apr. 7 to May 17.
		Fuel / control rod inspection ⁴⁾				Visual inspection of fuels completed on Mar. 24. Inspection of spent fuel pool rack etc. completed on Apr. 2. Visual inspection of control rod completed on Apr. 4. Visual inspection of channel boxes completed on Apr. 4.
	Turbine facilities	Turbine inspection ⁴²⁾				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 14.
	Other facilities	Main transformer inspection				Inspection completed on Nov. 29. Preparation for transportation into the factory conducted from Nov. 30 to Dec. 25. Coordinating for the start date of transportation into the factory.
		House transformers inspection				5A Inspection completed on Feb. 26. 5B Inspection completed on Mar. 3. Preparation for transportation into the factory completed on Mar. 8. Coordinating for the start date of transportation into the factory.
		Excitation transformers inspection				Preparation for transportation into the factory completed on Mar. 22. Coordinating for the start date of transportation into the factory.
		Main generator inspection				Inspection commenced on Nov. 3. Transportation of rotor into the factory completed on Dec. 1. Carrying in (unloading) to be conducted on Apr. 21.
		Stack inspection				Detailed inspection for top of stack to be commenced on Apr. 15.
		Main exhaust duct inspection / restoration				Visual inspection completed on Sep. 14. Survey commenced on Apr. 15 prior to restoration work.
Unit No.6	Reactor facilities	Fuel / control rod inspection ⁴⁾				Visual inspection of fuels completed on Mar. 17. Visual inspection of control rod completed on Mar. 24. Visual inspection of channel boxes completed on Mar. 24. Inspection of spent fuel pool rack etc. to be conducted on Apr. 7.
		Turbine facilities	Turbine inspection ⁴²⁾			High pressure turbine and low pressure turbine (A) internal inspection completed on Oct. 25.
	Other facilities	Main transformer inspection	preparation carrying in			Preparation for carrying in to be conducted from Apr. 9 to Apr. 16. Carrying in to be commenced on Apr. 17.
		House transformers inspection	preparation carrying in			6A, 6B Preparation for carrying in completed on Apr. 8. Carrying in to be conducted from Apr. 9 to Apr. 16. Installation work to be commenced on Apr. 17.
		Reactor internal pump input transformer inspection				Carrying in completed and installation work commenced on Mar. 26. (All of 4 units.)
		Main generator inspection				Inspection commenced on Mar. 10. Withdrawal of the rotor completed on Apr. 3.
		500kV power cable (OF cable) inspection				Inspection commenced on Feb. 9. Energization for testing without load to be conducted from Mar. 29 to Apr. 12.
		Discharge canal inspection / restoration				Discharge canal underwater inspection completed on Oct. 10. Internal inspection of discharge canal commenced on Feb. 26. Maintenance work commenced on Mar. 10.
		Stack inspection				Detailed inspection for top of stack commenced on Mar. 19. Internal inspection of stack completed on Apr. 7.
		Unit No.7	Reactor facilities	Reactor-well inspection		
Fuel / control rod inspection ⁴⁾						Inspection of spent fuel pool rack etc. to be conducted on Apr. 15.
Inspection of new fuel storage warehouse and new fuels in the warehouse						Inspection of new fuel storage warehouse completed on Apr. 1. Inspection of new fuels in the warehouse completed on Apr. 7.
Turbine facilities	Turbine inspection ⁴²⁾					High pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Dec. 1. Low pressure turbine (A) (B) restoration work of blade to be commenced on Apr. 14. (Replacement of wear and contacted blade.)
Other facilities	Main transformer inspection					Carrying in completed on Apr. 9. Installation work to be commenced on Apr. 10.
	House transformers inspection					7B Installation work commenced on Mar. 24. 7A Installation work to be commenced on Apr. 11.
	Reactor internal pump input transformer inspection					Carrying in and installation work commenced on Mar. 25. (All of 4 units.)
	Main generator inspection					Inspection commenced on Nov. 2. Withdrawal of the rotor completed on Nov. 20.
	500kV power cable (OF cable) inspection					Inspection commenced on Jan. 22. Energization for testing without load completed on Mar. 22.
	Discharge canal inspection / restoration					Discharge canal underwater inspection completed on Oct. 10. Internal inspection of discharge canal commenced on Feb. 26. Restoration work commenced on Mar. 10.
	Stack inspection				Internal inspection of stack completed on Mar. 27.	

Work Schedule of the Main Inspection/Restoration of the Kashiwazaki-Kariwa Nuclear Power Station in Response to the Niigata-Chuetsu-Oki Earthquake (during 4 Weeks)(3/3)

【Inspection/Restoration Status】
◆ From April 6th, 2008 (Sun) to May 3rd, 2008 (Sat)

System/Equipment	Items	Apr. 6th (Sun) to Apr. 12th (Sat)	Apr. 13th (Sun) to Apr. 19th (Sat)	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	Status of Inspection / Restoration
Transformer (common) / Switch Yard	High-voltage start-up transformer #3 inspection					Preparation for inspection completed on Apr. 1. Internal inspection completed on Apr. 5. Preparation for transportation into the factory to be conducted from Apr. 7 to Apr. 26. Transportation into the factory to be commenced in mid-May.
	On-site check / inspection / restoration of the oil protection bank for the transformer					Unit No.7 Restoration work commenced on Dec. 25. Unit No.7 Foundation repair work commenced on Feb. 20. Unit No.3 Preparation for restoration work commenced on Feb. 12.
Environmental Facilities	Inspection of house boilers					(Arahama-side) 1A, 2A, 2B: Inspection underway. (Ohminato-side) 4A: Inspection underway. 4B: Inspection completed on Oct. 23.
	Restoration work for filtrate tank #3 and #4					Preparation for restoration work commenced on Mar. 3. No.4 Restoration work commenced on Mar. 14.
Others	Restoration work for solid waste storage facility					Drum soundness verification work completed on Mar. 17. Transportation of drums to temporary warehouse commenced on Feb. 6.
	Restoration work for administration building / information building, etc.					Repair work of the second floor of the administrative building, and the first and second floors of information building is underway.
	Restoration work for the on-site / outside roads & slope, etc.					Restoration of the slope completed on Oct. 22. Restoration work for roads inside and outside of the site currently in progress.
	Outdoor fire protection system piping to be placed above ground, installation of fire protection tank, etc.					(Ohminato-side) Work on installing fire protection system piping above ground commenced on Mar. 21. Replacement of onsite panel of foam fire extinguisher completed on Mar. 27. Installation of fire protection tank completed on Apr. 3 (17 tanks). (Arahama-side) Work on installing fire protection system piping above ground to be commenced in mid-May.
	Inspection of spent fuel transportation cask					Inspection commenced on Feb. 5.
	Restoration work for port facility					Restoration work on the wharf commenced on Mar. 17. Preparation for restoration work completed on Mar. 31. Restoration work for bank protection to be commenced on Apr. 3.

※ Inspection results for each facilities will be announced as soon as they compiled.

※ Inspection and restoration work and execution date for each item may alter according to the situation.

*1 Fuels and control rods were inspected visually by either underwater cameras or fiberscopes.

"Fuel visual inspection": Representative fuels that had been withdrawn will be inspected. The number of fuel bundles and fuel rods to be inspected differ among units based on the type of fuels and the size of the reactor core of each unit.
"Channel box visual inspection": Channel boxes adjacent to those control rods subject to inspection will be inspected.
For unit 1, since all fuels and channel boxes were placed in the spent fuel pool at the time of the earthquake, channel boxes that housed fuels that were subject to inspection will be inspected.
"Control rod visual inspection": Representative control rods that had been withdrawn will be inspected. The number of control rods to be inspected differ among units based on the type of fuels and the size of the reactor core of each unit.

*2 Turbine inspection work will be conducted as follows:

- All units will be inspected in detail by opening all turbine casings after conducting internal inspection.
- Internal inspection will be conducted by opening the high-pressure turbine and low-pressure turbine (A) and visually checking for damages or significant deformation in major components such as the casings and blades.
(For the unit No. 1, since the high-pressure turbine and low-pressure turbines (A) and (C) had been opened for regular outage at the time of the earthquake, inspections will be conducted for the low-pressure turbine (B) that had not been opened.)
- Detailed inspection includes, in addition to regular full-scope inspection, special inspection in consideration of the impact of the earthquake and necessary repairs in case damages are found.