

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 March 2nd, 2008 (Sun) to March 29th, 2008 (Sat)

System/Equipment	Items	Mar. 2nd (Sun) to Mar. 8th (Sat)	Mar. 9th (Sun) to Mar. 15th (Sat)	Mar. 16th (Sun) to Mar. 22nd (Sat)	Mar. 23rd (Sun) to Mar. 29th (Sat)	Status of Inspection/Restoration
Unit No.1	Reactor facilities	Reactor pressure vessel inspection				Inspection of nozzle parts etc. to be planned from Jan. 10 to Mar. 7.
		Pressure suppression chamber inspection				Inspection completed on Mar. 1.
		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 in late April. Visual inspection of channel boxes to be commenced in late April.
	Turbine facilities	Turbine internal inspections *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				Provisional restoration of low conductivity waste system (A) completed on Oct. 15, and (B) completed on Dec. 17. Provisional restoration of high conductivity waste system (A) completed on Nov. 9, and (B) completed on Dec. 26. Provisional restoration of storm drain system (B) completed on Dec. 18, and (A) completed on Dec. 25. Restoration work to be commenced in mid-March.
		Main transformer inspection (preparation for transportation into the factory)				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.
		House transformers inspection (preparation for transportation into the factory)				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 (preparation for transportation into the factory)				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 to be commenced in mid-March.	
Unit No.2	Reactor facilities	Pressure suppression chamber inspection preparation inspection				Preparation for inspection to be planned from Mar. 12 to Mar. 23. Inspection to be planned from Mar. 24 to early May.
		Fuel / control rod inspection *1				Visual inspection of control rod to be planned from Nov. 27 to mid-March. Visual inspection of fuels completed on Feb. 1. Visual inspection of channel boxes completed on Feb. 12. Inspection of spent fuel pool rack etc. to be planned on Mar. 18.
	Turbine facilities	Turbine internal inspections *2				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 21.
	Other facilities	Main transformer inspection (preparation for transportation into the factory)				Inspection completed on Nov. 28. Preparation for transportation into the factory to be planned from Nov. 1 to Dec. 28, and Feb. 12 to Mar. 7. Coordinating for the start date of transportation.
		House transformers inspection (preparation for transportation into the factory)				2A Inspection completed on Nov. 13. 2B Inspection completed on Nov. 19. Coordinating for the start date of transportation into the factory.
		Excitation transformers inspection (preparation for transportation into the factory)				Inspection completed on Dec. 6. Coordinating for the start date of transportation into the factory.
		Main generator inspection				Inspection to be commenced on Mar. 17.
Unit No.3	Reactor facilities	Reactor pressure vessel inspection				Inspection of nozzle parts etc. completed on Feb. 22.
		Pressure suppression chamber inspection preparation inspection				Preparation for inspection to be planned from Mar. 20 to Mar. 27. Inspection to be planned from Mar. 28 to mid-May.
		Fuel / control rod inspection *1				Visual inspection of control rod to be planned from Feb. 25 to mid-April. Inspection of spent fuel pool rack etc. to be planned on Mar. 10. Visual inspection of fuels to be commenced on Mar. 14. Visual inspection of channel boxes to be commenced on Mar. 20.
		Inspection of reactor recirculation piping applicable to the Fitness-for-Service rule preparation				Ultrasonic testing completed on Feb. 13. Preparation for detailed inspection to be planned from Mar. 14 to early May.
	Turbine facilities	Turbine internal inspections *2				Coordinating for the start date of low pressure turbine (B) (C) detailed inspection.
	Other facilities	Main transformer inspection (preparation for transportation into the factory)				Inspection completed on Oct. 26. Preparation for transportation into the factory to be planned from Oct. 18 to Nov. 26, and from Mar. 17 to Mar. 29. Coordinating for the start date of transportation into the factory.
		House transformers inspection (preparation for transportation into the factory)				3A Inspection completed on Oct. 22. Preparation for transportation into the factory to be planned from Feb. 20 to Mar. 12. * 3B Transportation completed on Sept. 20.
		Excitation transformers inspection (preparation for transportation into the factory)				Inspection completed on Nov. 3. Preparation for transportation into the factory to be commenced on Mar. 12.
Main generator inspection					Inspection commenced on Feb. 20. Withdrawal of rotor to be planned on Mar. 19.	
Stack inspection				Inspection for substructure of piles to be commenced in mid-March.		
Unit No.4	Reactor facilities	Pressure suppression chamber inspection preparation inspection				Preparation for inspection completed on Feb. 25. Inspection to be planned from Feb. 26 to Apr. 5.
		Fuel / control rod inspection *1				Visual inspection of fuels to be commenced on Mar. 21. Visual inspection of channel boxes to be commenced on Mar. 29. Visual inspection of control rod to be commenced in early April.
	Turbine facilities	Turbine internal inspections *2				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 14.
	Other facilities	Main transformer inspection (preparation for transportation into the factory)				Inspection completed on Dec. 13. Preparation for transportation into the factory conducted from Dec. 14 to Dec. 27. Coordinating for start date of transportation into the factory.
		House transformers inspection				4A, 4B Coordinating for the start date of inspection.
		Excitation transformers inspection				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 March 2nd, 2008 (Sun) to March 29th, 2008 (Sat)

System/Equipment	Items	Mar. 2nd (Sun) to Mar. 8th (Sat)	Mar. 9th (Sun) to Mar. 15th (Sat)	Mar. 16th (Sun) to Mar. 22nd (Sat)	Mar. 23rd (Sun) to Mar. 29th (Sat)	Status of Inspection/Restoration	
Unit No.5	Reactor facilities	Jet pump inspection				No.1 Visual inspection to be conducted on Jan. 18 prior to disassembly. No.1 Disassembly completed on Feb. 28.	
		Fuel / control rod inspection ⁴⁾				Visual inspection of fuels to be planned from Feb. 14 to late March. Visual inspection of channel boxes to be planned from Feb. 15 to early April. Visual inspection of control rod to be commenced on Mar. 24.	
		Inspection of reactor recirculation piping applicable to the Fitness-for-Service rule				Ultrasonic testing to be planned from Feb. 25 to Mar. 13.	
	Turbine facilities	Turbine internal inspections ⁴⁾				High pressure turbine and low pressure turbine (A) internal inspection completed on Dec. 14.	
	Other facilities	Main transformer inspection (preparation for transportation into the factory)					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 (oil extraction / internal inspection) preparation					5A Preparation for inspection completed on Feb. 24. 5B Preparation for inspection completed on Feb. 29.
		(preparation for transportation into the factory) preparation					5A Internal inspection completed on Feb. 26. 5B Internal inspection completed on Mar. 3.
		Excitation transformers inspection (oil extraction / internal inspection) preparation					5A, 5B Preparation for transportation into the factory to be planned from Mar. 4 to Mar. 8. Coordinating for the start date of transportation into the factory.
		(preparation for transportation into the factory) preparation					Preparation for inspection to be planned from Mar. 10 to Mar. 14. Internal inspection to be planned on Mar. 17.
	Main generator inspection					Preparation for transportation into the factory to be planned from Mar. 18 to Mar. 22. Coordinating for the start date of transportation into the factory. Inspection commenced on Nov. 3. Transportation of rotor into the factory completed on Dec. 1.	
Unit No.6	Reactor facilities	Pressure suppression chamber inspection				Inspection to be planned from Feb. 7 to Mar. 6.	
		Fuel / control rod inspection ⁴⁾				Visual inspection of control rod to be planned from Feb. 1 to mid-March. Visual inspection of fuels to be planned from Feb. 13 to mid-March. Visual inspection of channel boxes to be planned from Feb. 16 to mid-March.	
	Turbine facilities	Turbine internal inspections ⁴⁾				High pressure turbine and low pressure turbine (A) internal inspection completed on Oct. 25.	
	Other facilities	Main transformer inspection preparation					Transportation into the factory completed on Oct. 31. Preparation for carrying in to be commenced on early April.
		House transformers inspection					6A, 6B Preparation for carrying in completed on Feb. 27.
		Reactor internal pump input transformer inspection					Preparation for carrying in to be planned from Feb. 26 to Mar. 15 and on Mar. 25. (Total 4 units.) All of 4 units to be installed on Mar. 26 and Mar. 27.
		Main generator inspection					Inspection to be commenced on Mar. 10.
		500kV power cable (OF cable) inspection					Inspection commenced on Feb. 9. Energization for testing without load to be planned from Mar. 29 to Apr. 12.
		Discharge canal inspection / restoration preparation					Discharge canal underwater inspection completed on Oct. 10. Preparation for restoration work completed on Feb. 25.
		Stack inspection inspection					Internal inspection of discharge canal commenced on Feb. 26. Maintenance work to be commenced on Mar. 10. Detailed inspection for top of stack to be commenced on Mar. 10.
Unit No.7	Reactor facilities	Pressure suppression chamber inspection				Inspection completed on Feb. 23.	
		Fuel / control rod inspection ⁴⁾				Visual inspection of fuels completed on Feb. 15. Visual inspection of channel boxes completed on Feb. 22. Visual inspection of control rod completed on Feb. 22.	
		Reactor-well inspection				Inspection and provisional restoration completed on Nov. 15. (Vacuum work is still underway.) Repair of lining completed on Feb. 26. Repair of leakage to be confirmed on Mar. 14 and Mar. 15 when the reactor well would be filled up with water.	
		Reactor core isolation cooling system inspection				Inspection of pumps to be planned from Jan. 14 to Mar. 20. Turbine inspection to be planned from Feb. 14 to Mar. 26.	
	Turbine facilities	Turbine internal inspections ⁴⁾				High pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Dec. 1.	
	Other facilities	Main transformer inspection preparation					Preparation for carrying in to be commenced on Mar. 10.
		House transformers inspection preparation					7A, 7B Preparation for carrying in to be planned from Mar. 21 to Mar. 23.
		carrying in					7A Installation work to be commenced on Mar. 24.
		Reactor internal pump input transformer inspection					Two units carrying in (from unloading to temporary installation) to be planned on Mar. 21. (Total of 4 units.) Two units carrying in to be planned on Mar. 25. Installation work to be commenced on Mar. 25.
		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 to be planned from Mar. 8 to Mar. 22.	
Discharge canal inspection / restoration preparation					Discharge canal underwater inspection completed on Oct. 10. Preparation for restoration work completed on Feb. 25.		
inspection					Internal inspection of discharge canal commenced on Feb. 26. Maintenance work to be commenced on Mar. 10.		

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 March 2nd, 2008 (Sun) to March 29th, 2008 (Sat)

System/Equipment	Items	Mar. 2nd (Sun) to Mar. 8th (Sat)	Mar. 9th (Sun) to Mar. 15th (Sat)	Mar. 16th (Sun) to Mar. 22nd (Sat)	Mar. 23rd (Sun) to Mar. 29th (Sat)	Status of Inspection/Restoration
Transformer (common) / Switch Yard	High-voltage start-up transformer #1 inspection					In operation on Feb. 27.
	High-voltage start-up transformer #3 inspection		▼	▶	▶	Preparation for inspection to be planned from Mar. 14 to Mar. 28. Internal inspection to be planned from Mar. 29 to Apr. 3.
	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. (Pile drive works.) Unit No.3 Preparation for restoration work commenced on Feb. 12.
Environmental Facilities	Inspection of house boilers					House boiler (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 to be commenced on Mar. 3. No.4 Restoration work to be commenced on Mar. 16.
Others	Restoration work for solid waste storage facility					Drum soundness verification work commenced on Oct. 9. Drums to be transferred to temporary warehouse from 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.					Inatallation of fire protection tank commenced on Feb. 19 (17 tanks). Replacement of onsite panel of foam fire extinguisher to be commenced on Mar. 12. (Arahama-side) Work on installing fire protection system piping above ground to be commenced on Mar. 17. (Ohminato-side) Work on installing fire protection system piping above ground to be commenced on Mar. 27.
	Pre-construction geological survey for seismic-isolated essential buildings					Survey completed on Feb. 23.
	Inspection of spent fuel transportation cask					Inspection to be commenced on Feb. 5.
	Restoration work for port facility	▶	▶	▶	▶	Preparation for restoration work commenced on Mar. 3. Restoration works on the wharf to be commenced on Mar. 10. South-side discharge canal sea water monitor to be transferred from Mar. 17 to Mar. 31.

※ 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 fiberoscopes.

"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 three 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 three 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.