

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 20th, 2008 (Sun) to May 17th, 2008 (Sat)

System/Equipment		Items	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	May 4th (Sun) to May 10th (Sat)	May 4th (Sun) to May 10th (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 conducted from Apr. 16 to late May. <Work suspended from Apr. 27 to May 11.> Visual inspection of channel boxes to be conducted from Apr. 23 to late May. <Work suspended from Apr. 27 to May 11.>	
	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. <Work suspended from Apr. 26 to May 6.>
		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. <Work suspended from May 3 to May 6.>
		Stack inspection						Inspection for substructure of piles commenced on Apr. 4. <Work suspended from May 1 to May 6.>
Main exhaust duct inspection / restoration						Visual inspection completed on Sep. 14. Survey commenced on Apr. 9 prior to restoration work. <Work suspended from May 3 to May 6.>		
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. Preparation for on-site transportation commenced on April 21. On-site transportation to be conducted on May 5.
		House transformers inspection						2A Inspection completed on Nov. 13. 2B Inspection completed on Nov. 19. 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 on May 15.
		Main generator inspection						Inspection commenced on Mar. 19. Withdrawal of the rotor completed on Apr. 9. <Work suspended from May 3 to May 6.>
Main exhaust duct inspection / restoration						Visual inspection completed on Oct. 5. Survey to be commenced on Apr. 9 prior to restoration work. <Work suspended from May 3 to May 6.>		
Unit No.3	Reactor facilities	Pressure suppression chamber inspection					Inspection to be conducted from Mar. 31 to May 23. <Work suspended from May 3 to May 6.>	
	Reactor facilities	Fuel / control rod inspection *1					Inspection of spent fuel pool rack etc. completed on Mar. 10. Visual inspection of control rod completed on Apr. 11. Visual inspection of channel boxes completed on Apr. 11. Visual inspection of fuels completed on Apr. 17.	
		Inspection of reactor recirculation piping applicable to the Fitness-for-Service rule						Preparation for detailed inspection to be conducted from Mar. 14 to May 2. Cutting out piping commenced on Apr. 15.
		preparation inspection						Detailed inspection to be commenced on May 7.
	Turbine facilities	Turbine inspection *2					Low pressure turbine (B) (C) detailed inspection to be commenced on May 7. .	
	Other facilities	Main transformer inspection						Inspection completed on Oct. 26. Preparation for transportation into the factory to be conducted from Oct. 18 to Nov. 26, and from May 12. Coordinating for the start date of transportation into the factory.
		House transformers inspection						3B Transportation 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						Transportation into the factory completed on Apr. 2.
Main generator inspection						Inspection commenced on Feb. 20. Withdrawal of rotor completed on Mar. 19. <Work suspended from May 3 to May 6.>		
Stack inspection						Inspection for substructure of piles commenced on Mar. 28. <Work suspended from May 1 to May 6.>		
Main exhaust duct inspection / restoration						Visual inspection completed on Sep. 14. Survey commenced on Apr. 1 prior to restoration work. <Work suspended from May 3 to May 6.>		
Unit No.4	Reactor facilities	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 completed on Apr. 21. Visual inspection of control rod completed on 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.
		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 suspended from May 3 to May 6.>
Stack inspection						Detailed inspection for top of stack to be commenced on May 7. Inspection for substructure of piles to be commenced in mid-May.		

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 20th, 2008 (Sun) to May 17th, 2008 (Sat)

System/Equipment	Items	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	May 4th (Sun) to May 10th (Sat)	May 4th (Sun) to May 10th (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					Inspection to be conducted from Apr. 7 to May 14. <Work suspended from Apr.29 to May 6.>	
	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 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					5B On-site transportation completed on Apr. 15 (temporary installation on wharf). 5A On-site transportation to be conducted on Apr. 28 and Apr. 29. (temporary installation on wharf). 5A, 5B Transportation into the factory to be conducted on May 16.	
		Excitation transformers inspection					Preparation for transportation into the factory completed on Mar. 22. On-site transportation to be conducted on Apr. 28 and Apr. 29. (temporary installation on wharf). Transportation into the factory to be conducted on May 16.	
		Main generator inspection					Inspection commenced on Nov. 3. Carrying in (unloading) to be conducted on Apr. 24. <Work suspended from May 3 to May 6.>	
	Stack inspection					Detailed inspection for top of stack commenced on Apr. 16. <Work suspended from May 1 to May 6.>		
Main exhaust duct inspection / restoration						Visual inspection completed on Sep. 14. Survey commenced on Apr. 21 prior to restoration work. <Work suspended from Apr.26 to May 6.>		
Unit No.6	Turbine facilities	Turbine inspection * 2				High pressure turbine and low pressure turbine (A) internal inspection completed on Oct. 25. High pressure turbine and low pressure turbine (A) (B) (C) detailed inspection to be commenced on May 12.		
	Other facilities	Main transformer inspection	preparation				Preparation for carrying in completed on Apr. 16.	
		carrying in						Carrying in and installation work to be commenced on Apr. 25. <Work suspended from May 3 to May 6.>
		House transformers inspection	preparation				6A, 6B Preparation for carrying in completed on Apr. 8.	
		carrying in						6A, 6B Carrying in completed on Apr. 12. Installation work commenced on Apr. 14. <Work suspended from Apr.30 to May 6.>
	Reactor internal pump input transformer inspection					Carrying in completed and installation work commenced on Mar. 26. (All of 4 units.) <Work suspended from May 3 to May 6.>		
	Main generator inspection					Inspection commenced on Mar. 10. Withdrawal of the rotor completed on Apr. 3. <Work suspended from May 3 to May 6.>		
	500kV power cable (OF cable) inspection					Inspection commenced on Feb. 9. Energization for testing without load completed on Apr. 12. <Work suspended from May 3 to May 6.>		
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. <Work suspended from May 4 to May 5.>			
Stack inspection					Detailed inspection for top of stack to be conducted from Mar. 19 to Mar. 28, and from early June. Internal inspection of stack completed on Apr. 7.			
Unit No.7	Reactor facilities	Reactor-well inspection					Inspection and provisional restoration completed on Nov. 15. (Vacuum work is still underway. Work suspended from May 2 to May 6.) Repair of lining completed on Feb. 26. Repair of leakage confirmed on Mar. 14 and Mar. 15 when the reactor well was filled up with water.	
		Fuel / control rod inspection * 1					Inspection of spent fuel pool rack etc. completed on Apr. 15.	
	Turbine facilities	Turbine inspection * 2					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					Installation work commenced on Apr. 10. <Work suspended from Apr.30 to May 6.>	
		House transformers inspection					7B Installation work commenced on Mar. 24. 7A Installation work commenced on Apr. 11. <Work suspended from May 3 to May 6.>	
		Reactor internal pump input transformer inspection					Carrying in and installation work commenced on Mar. 25. (All of 4 units.) <Work suspended from May 3 to May 6.>	
		Main generator inspection					Inspection commenced on Nov. 2. Withdrawal of the rotor completed on Nov. 20. <Work suspended from May 3 to May 6.>	
	500kV power cable (OF cable) inspection					Inspection commenced on Jan. 22. Energization for testing without load completed on Mar. 22. <Work suspended from May 3 to May 6.>		
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. <Work suspended from May 4 to May 5.>			

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 20th, 2008 (Sun) to May 17th, 2008 (Sat)

System/Equipment	Items	Apr. 20th (Sun) to Apr. 26th (Sat)	Apr. 27th (Sun) to May 3rd (Sat)	May 4th (Sun) to May 10th (Sat)	May 11th (Sun) to May 17th (Sat)	Status of Inspection / Restoration
Transformer (common) / Switch Yard	High-voltage start-up transformer #3 inspection					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 conducted on May 15.
	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. Unit No.3 Recovery of oil-contaminated soil to be commenced on May. 7. <Work suspended from May 3 to May 6.>
Environmental Facilities	Inspection of house boilers					(Arahama-side) 1A, 2A, 2B: Restoration work commenced on Apr. 8. <Work suspended from May 3 to May 6.> (Ohminato-side) 4A: Inspection underway. 4B: Inspection completed on Oct. 23. <Work suspended from Apr. 26 to May 6.>
	Restoration work for filtrate tank #3 and #4					Preparation for restoration work commenced on Mar. 3. No.4 Restoration work commenced on Mar. 14. <Work suspended from May 3 to May 6.>
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. <Work suspended from May 3 to May 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. <Work suspended from May 3 to May 6.>
	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. Preparation for reinforcement work to be commenced on Apr. 25.
	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. <Work suspended from May 3 to May 6.> (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. <Work suspended from May 1 to May 11.>
	Restoration work for port facility					Restoration work on the wharf commenced on Mar. 17. Restoration work for bank protection to be commenced on Apr. 3. <Work suspended from May 2 to May 6.>

※ 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.

※ Period to suspend the works for "Golden Week" holidays.

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

"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.