

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)(1/4)

【Inspection/Restoration Status】

◆ From December 9th, 2007 (Sun) to January 5th, 2008 (Sat)

System/Equipment	Items	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Dec. 30th (Sun) to Jan, 5th (Sat)	Status of Inspection/Restoration	
Unit No.1	Relating to the Open Inspection of Reactors	Refueling floor service tools inspection (stud tensioners, etc.)				Coordinating for the start date of inspection.	
		In-core inspection				Phase3*1 inspection planned from Nov. 26 to Dec. 14.	
		Reactor pressure vessel inspection preparation					Preparation for inspection of Nozzle parts etc. planned from Nov. 28 to Jan. 22. <Work suspended from Dec. 28>
		inspection				Inspection of support structure (foundation bolts and sway brace) completed on Nov. 7.	
	Relating to the Open Inspection of Turbine	Turbine internal inspections *2				Low pressure turbine (B) casing opening and internal inspection completed on Nov. 30.	
	Restoration/Inspection of Equipments	Submerged equipment inspection on ground floor 5 of the reactor combination building					Low conductivity waste system (A) partial restoration completed on Oct. 15. High conductivity waste system (A) partial restoration completed on Nov. 9. Storm drain system (A) and (B) currently partially restored. <Work suspended from Dec. 29>
Main transformers inspection (preparation for transportation into the factory)						Preparation for transportation into the factory Planned from Oct. 29 to Dec.28. Coordinating for the start date of transportation. Inspection completed on Nov. 23.	
Unit No.2	Relating to the Open Inspection of Reactors	In-core inspection preparation				Phase3*1 preparation for inspection completed on Dec. 2.	
		inspection				Phase3*1 inspection planned from Dec. 3 to Dec. 25. Inspection for spent fuel pool hangers, etc. on Dec. 7 and 8.	
		Fuel, control rod inspection				Inspection to be conducted from Nov. 27 to Nov. 30, and after completion of Phase 3*1 of in-core inspection. <Work suspended from Dec. 29>	
	Reactor pressure vessel inspection	preparation					Nozzle parts etc. to be prepared from Nov. 13 to Dec. 26.
		inspection				Support structure (foundation bolts and sway brace) inspection completed on Nov. 14. Inspection of Nozzle parts etc. planned from Dec. 14 to Dec. 26.	
	Relating to the Open Inspection of Turbine	Turbine internal inspections *2				High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 28 to Dec. 21.	
	Restoration/Inspection of Equipments	Main transformers inspection (preparation for transportation into the factory)					Preparation for transportation into the factory planned from Nov. 1 to Dec. 28. 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.	
Excitation transformers inspection (preparation for transportation into the factory)					Inspection completed on Dec. 6. Coordinating for the start date of transportation.		
Restoration for the blowout panel of turbine building					Provisional restoration completed. Restoration work commenced on Oct. 9. Work suspended from Nov. 9 due to turbine inner inspection.		

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)(2/4)

【Inspection/Restoration Status】

◆ From December 9th, 2007 (Sun) to January 5th, 2008 (Sat)

System/Equipment	Items	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Dec. 30th (Sun) to Jan, 5th (Sat)	Status of Inspection/Restoration		
Unit No.3	Relating to the Open Inspection of Reactors	Refueling machine inspection					Inspection planned from Nov. 12 to Dec. 18.	
		Refueling floor service tools inspection (stud tensioners, etc.)					Inspection planned from Oct. 24 to Dec. 21.	
		Restoration for the blowout panel of reactor building					Provisional restoration completed. Survey for restoration completed on Oct. 30. Coordinating for start date of restoration work for turbine inner inspection commenced on Nov. 21.	
		Reactor head opening					Reactor head opening work planned from Dec. 24 to Jan. 8. <Work suspended from Dec. 28 to Jan. 3>	
		In-core inspection					Inspection to be commenced in early January. Inspection for spent fuel pool rack hangers, etc. planned from Dec. 21 to Dec. 28.	
		Reactor pressure vessel inspection preparation					Preparation fo inspection of Nozzle parts etc. to be commenced in early January.	
		inspection				Inspection of support structure (foundation bolts and sway brace) completed on Nov. 12.		
	Relating to the Open Inspection of Turbine	Turbine internal inspections *2					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 21 to Dec. 14.	
	Restoration/Inspection of Equipments	Main transformers inspection (preparation for transportation into the factory)					Inspection completed on Oct. 26. Preparation for transportation into the factory completed on Nov. 26. Coordinating for start date of transportation into the factory.	
		House transformers inspection (preparation for transportation into the factory)					3A Inspection completed on Oct. 22. Coordinating for start date of transportation into the factory. * 3B Transportation completed on Sept. 20.	
Excitation transformers inspection (preparation for transportation into the factory)						Inspection completed on Nov. 3. Coordinating for start date of transportation into the factory.		
Restoration for the blowout panel of turbine building						Provisional restoration completed. Restoration work commenced on Oct. 29. Work suspended from Nov. 17 due to turbine inner inspection.		
Removal of spent fuel pool underwater work platform						Work completed on Dec. 4.		
Unit No.4	Relating to the Open Inspection of Reactors	Refueling machine inspection					Inspection completed on Dec. 10.	
		Refueling floor service tools inspection (stud tensioners, etc.)					Inspection completed on Dec. 3.	
		Reactor head opening					Reactor head opening work completed on Dec. 10. Equipment temporary strage pool and reactor-well filled up with water on Dec. 9.	
		In-core inspection inspection					Inspection to be commenced on Dec. 11. Phase1 & 2*1 inspection planned from Dec. 22 to Jan. 17. Inspection for spent fuel pool rack hangers, etc. completed on Dec. 12. <Work suspended from Dec. 29 to Jan. 6>	
		Reactor pressure vessel inspection inspection					Inspection of support structure (foundation bolts and sway brace) completed on Nov. 12. Nozzle parts etc. to be inspected from Dec. 8 to Dec. 18.	
	Relating to the Open Inspection of Turbine	Turbine internal inspections *2					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 8 to Dec. 14.	
	Restoration/Inspection of Equipments	Main transformers inspection (oil extraction/internal inspection)	preparation					Preparation completed on Dec. 10. Preparation for transportation into the factory planned from Dec. 14 to Dec. 24. Coordinating for start date of transportation into the factory.
			inspection					Inspection planned from Dec. 11 to Dec. 13.
		House transformers inspection					4A, 4B Coordinating for start date of inspection.	
		Excitation transformers inspection					Coordinating for start date of inspection.	
Removal of spent fuel pool underwater work platform						Work planned completed Dec. 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)(3/4)

【Inspection/Restoration Status】

◆ From December 9th, 2007 (Sun) to January 5th, 2008 (Sat)

System/Equipment		Items	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Dec. 30th (Sun) to Jan, 5th (Sat)	Status of Inspection/Restoration		
Unit No.5	Relating to the Open Inspection of Reactors	In-core inspection	preparation					Phase3* ¹ preparation for inspection completed on Dec. 12.	
			inspection					Inspection commenced on Oct. 30. Phase1 & 2* ¹ inspection completed on Dec. 6. Phase3* ¹ inspection planned from Dec. 13 to Dec. 27.	
		Reactor pressure vessel inspection	preparation						Inspection of Nozzle parts etc. due to be commenced on Dec. 6. <Work suspended from Dec. 29>
			inspection						Support structure (foundation bolts and sway brace) inspection completed on Nov. 2. Inspection of Nozzle parts etc. due to be commenced on Dec. 14. <Work suspended from Dec. 29>
	Relating to the Open Inspection of Turbine	Turbine internal inspections* ²						High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Oct. 24 to Dec. 14.	
	Restoration/Inspection of Equipments	Main transformers inspection (oil extraction/internal inspection)	preparation						Preparation completed on Nov. 26. Preparation for transportation into the factory planned from Nov. 30 to Dec. 15. Coordinating for start date of transportation into the factory.
			inspection						Inspection completed on Nov. 29.
		House transformers inspection							5A, 5B Coordinating for the start date of inspection.
		Excitation transformers inspection							Coordinating for start date of inspection.
		Main generator inspection							Inspection commenced on Nov. 3. Transportation of roter into the factory completed Dec. 1. <Work suspended from Dec. 28>
Unit No.6	Relating to the Open Inspection of Reactors	In-core inspection	preparation					Phase3* ¹ preparation for inspection due to be commenced on Dec. 22. <Work suspended from Dec. 29>	
			inspection					Inspection commenced on Nov. 13. Withdrawal of two control rods that experienced separation completed on Nov. 27. Control rod mechanism due to be disassembled and inspected from Dec. 1. Phase 1 & 2* ¹ inspection planned from Dec. 4 to Dec. 27.	
		Reactor pressure vessel inspection	preparation						Nozzle parts etc. preparation completed on Dec. 7.
			inspection						Support structure (foundation bolts and sway brace) inspection completed on Oct. 30. Nozzle parts etc. due to be inspected from Nov. 7 to Dec. 18.
	Relating to the Open Inspection of Turbine	Turbine internal inspections * ²						High pressure turbine and low pressure turbine (A) internal inspection completed on Oct. 25.	
	Restoration/Inspection of Equipments	Main transformers inspection							Transportation into the factory completed on Oct. 31.
		House transformers inspection							Transportation into the factory completed on Oct. 25.
		Reactor Internal Pump Input Transformer	preparation						Preparation for transportation into the factory completed on Dec. 2.
			transportation						Two units carried out to the factory on Nov. 20. Two units due to be carried out to the factory on Dec. 3 (total of 4 units).
		Discharge canal inspection	preparation						Discharge canal inspection completed on Sept. 29. Maintenance method under consideration. Preparation for maintenance commenced on Dec. 3. <Work suspended from Dec. 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)(4/4)

【Inspection/Restoration Status】

◆ From December 9th, 2007 (Sun) to January 5th, 2008 (Sat)

System/Equipment	Items	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Dec. 30th (Sun) to Jan. 5th (Sat)	Status of Inspection/Restoration	
Unit No.7	Relating to the Open Inspection of Reactors	In-core inspection preparation					Phase3*1 preparation for inspection completed on Dec. 9.
		In-core inspection					Disassembling and inspection of control rod mechanism mechanism completed on Nov. 19. Phase1 & 2*1 inspection completed on Nov. 30. Phase3*1 inspection planned from Dec. 10 to Dec 26.
	Fuel, control rod inspection					Control rod to be inspected from Nov. 17 to Nov. 20, and after completion of the Phase 3*1 inspection. Fuel to be inspected from on Dec. 4 and 5, and after completion of the Phase 3*1 inspection.	
	Reactor pressure vessel inspection preparation					Preparation for Nozzle parts etc. completed on Dec.7.	
	Reactor pressure vessel inspection					Inspection of support structure (foundation bolts and sway brace) completed on Oct. 29. Nozzle parts etc. to be inspected from Nov. 15 to Dec. 14.	
	Reactor-well inspection					Inspection and provisional restoration completed on Nov. 15. (Reactor well is currently full.) Restoration method under consideration. (Vacuum work is still underway.)	
Relating to the Open Inspection of Turbine	Turbine internal inspections *2					High pressure turbine and low pressure turbine (A) casing opening and internal inspection completed on Nov. 30. High pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Dec. 1. <Work suspended from Dec. 29>	
Restoration/Inspection of Equipments	Main transformers inspection					Transportation into the factory completed on Oct. 25.	
	House transformers inspection					7A, 7B Transportation into the factory completed on Dec. 6.	
	Reactor Internal Pump Input Transformer					Two units carried out to the factory on Nov. 19. Two units carried out to the factory on Nov. 24. (total of 4 units).	
	Main generator inspection					Inspection commenced on Nov. 2. Withdrawal of the rotor completed on Nov. 20. <Work suspended from Dec. 28>	
	Discharge canal inspection preparation					Discharge canal inspection completed on Oct. 10. Maintenance method under consideration. Preparation for maintenance commenced on Dec.3. <Work suspended from Dec. 27>	
Transformer (common)/Switch Yard	High-voltage start-up transformer #1 inspection					Work of carrying in completed on Dec. 6. Work for installation commenced on Dec. 7. <Work suspended from Dec. 29>	
	On-site check & inspection of the oil protection bank for the transformer					Provisional restoration completed on Sept. 20. Unit No.7 restoration work to be commenced on Dec. 17. <Work suspended from Dec. 30>	
	Inspection of the Minami Niigata trunk line #2 buslines					Inspection planned from Nov. 23 to Dec. 23. Planned to receive power on Dec. 23.	
Environmental Facilities	On-site check & inspection of the incineration facility					For incinerators situated at Arahama side, inspection completed on Nov. 30. Re-fired on Dec. 5.	
	Inspection of house boilers					House boiler (Arahama-side) 1A, 2A, 2B: Inspection underway. (Ohminato-side) 4A: Inspection underway. 4B: Inspection completed on Oct. 23. <Work suspended from Dec. 29>	
Solid Waste Storage Facility	Restoration work					Drum soundness verification work commenced on Oct. 9. <Work suspended from Dec. 28>	
Others	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 underway. <Work suspended from Dec. 29>	
	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. <Work suspended from Dec. 29>	
	Replacement of seismic data recorders					Unit No.1, 5, and 6 Replacement planned from Dec. 11 to Feb. 8. <Work suspended from Dec. 29>	

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

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

*1 Phase 1: Inspection for the upper part of reactors, Phase 2: Inspection for the middle part (reactor core) of the reactor, Phase 3: Inspection for the bottom part of the reactor.

*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.

※ Period to suspend the works for the year-end and new year recess.