

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 2nd, 2007 (Sun) to December 29th, 2007 (Sat)

System/Equipment	Items	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (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	preparation				Phase3*1 preparation for inspection completed on Nov. 25.	
			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.	
	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.	
		Main transformers inspection (preparation for transportation into the factory)					Preparation for transportation into the factory commenced on Oct. 29. Inspection completed on Nov. 23. Coordinating for the start date of transportation.	
		Main exhaust duct inspection					Inspection for leakage due to the increased number of operating Heating Ventilation and Air-Conditioning system completed on Nov. 28. (Restoration to normal operating mode.)	
	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.	
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 commenced on Nov. 1.	
		House transformers inspection (oil extraction/internal inspection)					2A Inspection completed on Nov. 13. 2B Inspection completed on Nov. 19. Coordinating for the start date of transportation.	
		Excitation transformers inspection (oil extraction/internal inspection)	preparation					Preparation completed on Nov. 30.
			inspection					Inspection completed on Dec. 3.
	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 2nd, 2007 (Sun) to December 29th, 2007 (Sat)

System/Equipment	Items	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (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.	
		Reactor head opening					Reactor head opening work planned from Dec. 24 to Jan. 8.	
		In-core inspection					Inspection for spent fuel pool rack hangers, etc. planned from Dec. 21 to Dec. 28. Inspection to be commenced in early January.	
		Reactor pressure vessel inspection					Inspection of support structure (foundation bolts and sway brace) completed on Nov. 12. Inspection to be commenced in early January.	
	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.	
		House transformers inspection (oil extraction/internal inspection)					3A Inspection completed on Oct. 22. Coordinating for start date of transportation into the factory. * 3B Transportation completed on Sept. 20.	
		Excitation transformers inspection (oil extraction/ internal inspection)					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 planned from Oct. 24 to Dec. 10.
			Refueling floor service tools inspection (stud tensioners, etc.)					Inspection completed on Dec. 3.
			Reactor head opening					Reactor head opening work planned from Dec. 4 to Dec. 10. Equipment temporary strage pool and reactor-well to be filled with water from Dec. 7 to Dec. 9.
In-core inspection inspection							Inspection to be commenced on Dec. 11. Phase1 & 2* ¹ inspection to be commenced on Dec. 22. Inspection for spent fuel pool rack hangers, etc. commenced on Nov. 26.	
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. 13.	
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 inspection	preparation				Preparation planned from Dec. 3 to Dec. 10. Preparation for transportation into the factory planned from Dec. 14 to Dec. 24.	
			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 2nd, 2007 (Sun) to December 29th, 2007 (Sat)

System/Equipment		Items	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Status of Inspection/Restoration
Unit No.5	Relating to the Open Inspection of Reactors	In-core inspection	preparation				Phase3*1 preparation for inspection planned from Dec. 3 to Dec. 12.
			inspection				Inspection commenced on Oct. 30. Phase1 & 2*1 inspection planned from Nov. 22 to 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.
			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.
	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. 12.
			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. Withdrawal of the rotor completed on Nov. 23. Transportation of roter into the factory completed Dec. 1.	
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.
			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. due to be prepared from Nov. 6 to Dec. 7.
			inspection				Nozzle parts etc. due to be inspected from Nov. 7 to Dec. 14.
	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 inspetion	preparation				Discharge canal inspection completed on Sept. 29. Maintenance method under consideration. Preparation for maintenance commenced on Dec. 3.

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 2nd, 2007 (Sun) to December 29th, 2007 (Sat)

System/Equipment	Items	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Dec. 16th (Sun) to Dec. 22nd (Sat)	Dec. 23rd (Sun) to Dec. 29th (Sat)	Status of Inspection/Restoration
Unit No.7	Relating to the Open Inspection of Reactors	In-core inspection preparation	[Bar with arrow pointing down on Dec. 8]			Phase3* ¹ preparation for inspection planned from Nov. 28 to Dec. 9. 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.
		In-core inspection	[Bar with arrow pointing down on Dec. 9]			
		Fuel, control rod inspection	[Bar with arrow pointing down on Dec. 2]			
		Reactor pressure vessel inspection preparation	[Bar with arrow pointing down on Dec. 7]			
		Reactor pressure vessel inspection	[Bar with arrow pointing down on Dec. 14]			
	Reactor-well inspection	[Bar]			Inspection and provisional restoration completed on Nov. 15. (Reactor well is currently full.) Restoration method under consideration.	
	Relating to the Open Inspection of Turbine	Turbine internal inspections * ²	[Bar]			High pressure turbine and low pressure turbine (A) casing opening and internal inspection completed Nov. 30. High pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Dec. 1.
	Restoration/Inspection of Equipments	Main transformers inspection	[Bar]			Transportation into the factory completed on Oct. 25.
		House transformers inspection (oil extraction/internal inspection) preparation	[Bar with arrow pointing down on Dec. 7]			7A, 7B Preparation for transportation commenced on Nov. 11. Transportation into the factory planned on Dec. 7.
		House transformers inspection (oil extraction/internal inspection)	[Bar]			7A Inspection completed on Nov. 14. 7B Inspection completed on Nov. 10.
Reactor Internal Pump Input Transformer		[Bar]			Two units carried out to the factory on Dec. 19. Two units due to be carried out to the factory on Nov. 24. (total of 4 units).	
Main generator inspection		[Bar]			Inspection commenced on Nov. 2. Withdrawal of the rotor completed on Nov. 20.	
Discharge canal inspection preparation	[Bar with arrow pointing down on Dec. 2]			Discharge canal inspection completed on Oct. 10. Maintenance method under consideration. Preparation for maintenance due to be commenced on Dec.3.		
Transformer (common)/Switch Yard	High-voltage start-up transformer #1 inspection	[Bar with arrow pointing down on Dec. 6]			Preparation work for carrying in to commenced on Nov. 19. To be carried in planned on Dec. 6. Work for installation to be commenced on Dec. 7.	
	On-site check & inspection of the oil protection bank for the transformer	[Bar with arrow pointing down on Dec. 17]			Provisional restoration completed on Sept. 20. Unit No.7 restoration work to be commenced on Dec. 17.	
	inspection of the MINAMI NIIGATA TRUNK LINE #2 busbars	[Bar with arrow pointing down on Dec. 23]			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	[Bar with arrow pointing down on Dec. 30]			For incinerators situated at Arahama side, inspection completed on Nov. 30. Re-fired on Dec. 5.	
	Inspection of house boilers	[Bar]			House boiler (Arahama-side) 1A, 2A, 2B: Inspection underway. (Ohminato-side) 4A: Inspection underway. 4B: Inspection completed on Oct. 23.	
Solid Waste Storage Facility	Restoration work	[Bar]			Drum soundness verification work commenced on Oct. 9.	
Others	Restoration work for administration building/information building, etc.	[Bar]			Repair work of the second floor of the administrative building, and the first and second floors of information building underway.	
	Restoration work for the on-site/outside roads & slope, etc.	[Bar]			Restoration of the slope completed on Oct. 22. Restoration work for roads inside and outside of the site currently in progress.	
	Replacement of seismic data recorders	[Bar with arrow pointing down on Dec. 10]			Unit No.1, 5, and 6 Replacement planned from Dec. 10 to Feb. 8.	

※ 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 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.