

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

[Inspection/Restoration Status]
From November 18th, 2007 (Sun) to December 15th, 2007 (Sat)

System/Equipment	Items	Nov. 18th (Sun) to Nov. 24th (Sat)	Nov. 25th (Sun) to Dec. 1st (Sat)	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Status of Inspection/Restoration	
Unit No.1	Relating to the Open Inspection of Reactors	Refueling machine inspection				Inspection completed on Nov. 15.	
		Refueling floor service tools inspection (stud tensioners, etc.)				Coordinating for start date of inspection.	
		In-core inspection					Phase3* ¹ inspection preparation commenced on Oct. 2. Phase3* ¹ inspection planned from Nov. 26 to Dec. 11.
		Reactor pressure vessel inspection					Inspection of support structure (foundation bolts and sway brace) completed on Nov. 7.
	Relating to the Open Inspection of Turbines * ²	Turbine internal inspectioon					Low pressure turbine (B) casing opening and internal inspection planned from Nov. 9 to Nov. 30.
	Restoration/Inspection of Equipments	Submerged equipment inspection on ground floor 5 of the reactor combination building					LCW(A) partial restoration completed on Oct. 15. HCW(A) partial restoration completed on Nov. 9. SD(A) and (B) currently partially restored.
		Main transformers inspection (oil extraction/internal inspection) inspection					Preparation to be transported into the factory commenced on Oct. 29. Inspection planned from Nov. 19 to Nov. 22.
		Main exhaust duct inspection					Inspection for leakage due to the increased number of operating HVACs planned on Nov. 28. (Restoration to normal operating mode.)
		Skimmer surge tank inspection					Search and recovery of a red boot in the skimmer surge tank completed on Nov. 20.
	Unit No.2	Relating to the Open Inspection of Reactors	In-core inspection				
Fuel, control rod inspection							Inspection to be conducted from Nov. 27 to Nov. 30, and after completion of Phase 3 of in-core inspection.
Reactor pressure vessel inspection preparation inspection							Nozzle parts etc. to be prepared from Nov. 14. Support structure (foundation bolts and sway brace) inspection completed on Nov. 14. Inspection of Nozzle parts etc. due to be commenced on Dec. 14.
Relating to the Open Inspection of Turbines * ²		Turbine internal inspectioon					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 28 to late December.
Restoration/Inspection of Equipments		Main transformers inspection (preparation for tranportation into the factory)					Preparation to be transported into the factory commenced on Nov. 1.
		House transformers inspection (visual inspection) preparation inspection					2A Preparation completed on Nov. 7. 2B Preparation completed on Nov. 14. 2A Inspection completed on Nov. 8. 2B Inspection completed on Nov. 17.
		(oil extraction/internal inspection) preparation inspection					2A Preparation completed on Nov. 9. 2B Preparation completed on Nov. 16. 2A Inspection completed on Nov. 13. 2B Inspection completed on Nov. 19.
		Excitation transformers inspection (visual inspection) preparation inspection					Preparation completed on Nov. 15. Inspection completed on Nov. 17.
		(oil extraction/internal inspection) preparation inspection					To be prepared from Nov. 16 to Nov. 30. Inspection planned on Dec. 1.
		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 Kashiwazaki-Kariwa Nuclear Power Station in Response to the Niigata-Chuetsu-Oki Earthquake (during 4 Weeks) (2/4)

[Inspection/Restoration Status]

From November 18th, 2007 (Sun) to December 15th, 2007 (Sat)

System/Equipment	Items	Nov. 18th (Sun) to Nov. 24th (Sat)	Nov. 25th (Sun) to Dec. 1st (Sat)	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (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 late December.	
		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 pressure vessel inspection					Inspection of support structure (foundation bolts and sway brace) completed on Nov. 12.
	Relating to the Open Inspection of Turbines *2 Restoration/Inspection of Equipments	Turbine internal inspectioon					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 21 to Dec. 14.
		Main transformers inspection (preparation for tranportation into the factory)					Inspection completed on Nov. 26. Preparation for transportation into the factory from Oct. 18 to Nov. 26.
		House transformers inspection (oil extraction/internal inspection)					3A Inspection completed on Oct. 22. Coordinating for start date of transportation into the dactory. * 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 dactory.
		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 planned from Dec. 3 and 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 planned from Oct. 9 to Dec. 3.	
		Reactor head opening				Reactor head opening work planned from early December.	
		Reactor pressure vessel inspection inspection					Inspection of support structure (foundation bolts and sway brace) completed on Nov. 12.
	Relating to the Open Inspection of Turbines *2 Restoration/Inspection of Equipments	Turbine internal inspectioon					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Nov. 8 to Dec. 14.
		Main transformers inspection (oil extraction/internal preparation inspection)					Preparation planned from Dec. 3 to Dec. 10. Preparation for transportation into the factory from Dec. 14. 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 from Nov. 29 to Dec. 5.

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

[Inspection/Restoration Status]

From November 18th, 2007 (Sun) to December 15th, 2007 (Sat)

System/Equipment	Items	Nov. 18th (Sun) to Nov. 24th (Sat)	Nov. 25th (Sun) to Dec. 1st (Sat)	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Status of Inspection/Restoration	
Unit No.5	Relating to the Open Inspection of Reactors	In-core inspection				Inspection commenced on Oct. 30. Phase1* ¹ & Phase2* ¹ inspection planned from Nov. 22 to Dec. 6.	
		Reactor pressure vessel inspection				Inspection of support structure (foundation bolts and sway brace) completed on Nov. 2. Inspection of Nozzle parts etc. due to be commenced on Dec. 14.	
	Relating to the Open Inspection of Turbines * ²	Turbine internal inspectioon				High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Oct. 24 to mid-December.	
	Restoration/Inspection of Equipments	Main transformers inspection (oil extraction/internal preparation inspection)				Preparation planned from Nov. 16 to Nov. 26. Preparation for transportation to be commenced on Nov. 30. Inspection planned from Nov. 27 to Nov. 29.	
		House transformers inspection				5A , 5B Coordinating for start date of inspection.	
		Excitation transformers inspection				Coordinating for start date of inspection.	
		Main generator inspection				Inspection commenced on Nov. 3. Rotor to be withdrawn on Nov. 23.	
Unit No.6	Relating to the Open Inspection of Reactors	In-core inspection				Inspection commenced on Nov. 13. Phase1* ¹ & Phase2* ¹ inspection planned from Nov. 26 to Dec. 18.	
		Reactor pressure vessel inspection preparation inspection	preparation				Nozzle parts etc. due to be prepared from Nov. 6 to early December.
			inspection				Nozzle parts etc. due to be inspected from Nov. 7 to early December.
	Relating to the Open Inspection of Turbines * ²	Turbine internal inspectioon				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 transportation	preparation				Preparation for transportation into the factory to be planned from Nov. 1 to 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 due to be commenced on Dec.3.			

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

[Inspection/Restoration Status]

From November 18th, 2007 (Sun) to December 15th, 2007 (Sat)

System/Equipment		Items	Nov. 18th (Sun) to Nov. 24th (Sat)	Nov. 25th (Sun) to Dec. 1st (Sat)	Dec. 2nd (Sun) to Dec. 8th (Sat)	Dec. 9th (Sun) to Dec. 15th (Sat)	Status of Inspection/Restoration			
Unit No.7	Relating to the Open Inspection of Reactors	In-core inspection						Disassembling and inspection of control rod drive mechanism completed on Nov. 19. Phase1* ¹ & Phase2* ¹ inspection planned from Nov. 20 to Nov. 30.		
		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 in early December, and after completion of the Phase 3* ¹ inspection.		
		Reactor pressure vessel inspection	preparation						Nozzle parts etc. to be prepared from Nov. 8.	
			inspection						Inspection of support structure (foundation bolts and sway brace) completed on Oct. 29. Nozzle parts etc. to be inspected from Nov. 15.	
		Reactor-well inspection						Inspection and provisional restoration completed on Nov. 15. (Reactor well is currently full.) Restoration method under consideration.		
	Relating to the Open Inspection of Turbines * ²	Restoration/Inspection of Equipments	Turbine internal inspection					High pressure turbine and low pressure turbine (A) casing opening and internal inspection planned from Oct. 8 to Nov. 30.		
			Main transformers inspection					Transportation into the factory completed on Oct. 25.		
			House transformers inspection (oil extraction/internal inspection)	preparation						7A , 7B Preparation for transportation to be commenced on Nov. 11. Transportation into the factory planned on Dec. 4.
				inspection						7A Inspection completed on Nov. 14. 7B Inspection completed on Nov. 10.
			Reactor Internal Pump Input Transformer	preparation						Preparation for transportation into the factory completed on Nov. 18.
transportation							Two units carried out to the factory on Dec. 19. Two units due to be carried out to the factory on Nov. 23. (total of 4 units).			
	Main generator inspection						Inspection commenced on Nov. 2. Withdrawal of the rotor completed on Nov. 20.			
	Discharge canal inspection						Discharge canal inspection completed on Oct. 10. Maintenance method under consideration. Preparation for maintenance due to be commenced on Dec.3.			
Common Activities for the Power Plant		Verification operation of stand-by equipments operation						Unit No. 1, 3 and 4 Stand-by Liquid Control System verification test run planned on Nov. 15, 16, 19, 20 and 21.		
		Verification operation of feedwater pump and condensate pump						Unit No.7 Verification operation completed on Nov. 12.		
Transformer (common) / Switch Yard		High-voltage start-up transformer #1 inspection					Preparation work for carrying out to the factory to be commenced on Nov. 19. To be carried in on Dec. 5 and to be installed from Dec. 6.			
		On-site check & inspection of the oil protection bank for the transformer						Provisional restoration completed on Sept. 20. Restoration method under consideration.		
		Inspection of the Minami Niigata trunk line #2 bushing						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 currently under way. Inspection to be completed on Nov. 30.		
		Inspection of house boilers						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						Drum soundness verification work to be commenced on Oct. 9.		
Others		Restoration work for administration building/information building						Repair work of the second floor of the administrative building to be commenced on Oct. 17.		
		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.		
		Dismantling of Arahama-side arrestor steel tower						Dismantling work Completed on Nov. 12. Dismantling of the steel tower completed on Oct. 26.		

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 Work related to turbine inspection for all units will be conducted in the order of; internal inspection followed by opening of all turbine casing for detailed inspection..

"Internal inspection": Visual inspection for damage and significant deformation in major equipments such as turbine casing and blades of high pressure turbine and low pressure turbine (A), both of which have narrow clearance between the rotor and the stator.

For units 1, low pressure turbine (B) will be inspected since all other turbine have already been opened.

"Detailed inspection": Although specific inspection items are yet to be determined, inspection items conducted during normal full-scope inspection, earthquake-specific items, and repair work in case damage is identified, are considered for all turbine casings for high pressure turbine, and low pressure turbines (A), (B) and (C).