

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)(1/2)

【Inspection/Restoration Status】

◆From November 22, 2009 (Sun) to December 19, 2009 (Sat)

System / Equipment	Items	November 22 (Sun) to November 28 (Sat)	November 29 (Sun) to December 5 (Sat)	December 6 (Sun) to December 12 (Sat)	December 13 (Sun) to December 19 (Sat)	Status of Inspection / Restoration
Unit No.1	Reactor facilities	Core shroud preventive maintenance				Preventive maintenance work to be conducted from Nov. 7 to Nov. 26.
	Turbine facilities	Turbine inspection				High-pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Nov. 17, 2008. Restoration of high-pressure turbine and low pressure turbine (A) (B) (C) commenced on Nov. 19.
		Other facilities	Main transformer inspection			
		House transformer inspection				1A, 1B Carrying in and installation work commenced on Mar. 30.
		Excitation transformer inspection				Carrying in and installation work commenced on Mar. 30.
		Main generator inspection				Inspection commenced on Feb. 7, 2008.
		500kV power cable inspection				Laying cables to be conducted from Jun. 2 to Nov. 28.
		Main exhaust duct inspection / restoration				Restoration work of main exhaust duct to be conducted from Jul. 29 to Dec. 2.
		Circulating water pipe inspection				Foundation improvement, excavating work, and inspection of pipes commenced on Aug. 6, 2008.
	Seismic reinforcement	Seismic reinforcement works such as pipe supports				Reinforcement work to be conducted from Jul. 16 to Dec. 9.
		Seismic reinforcement works for stack (Unit No.1 and Unit No.2)				Reinforcement work commenced on Jul. 27.
		Seismic reinforcement works for emergency intake channel				Foundation improvement work to be conducted from Feb. 9 to Dec. 10. Reinforcement work for the bank protection connection to be conducted from Oct. 5 to Dec.10.
	Verification of system integrity	System functional test				System functional test commenced on Nov. 17, 2009. Functional test of DC power source system conducted on Nov. 17 and Nov. 19. Functional test of standby liquid control system conducted on Nov. 20. Functional test of main control room emergency circulation system to be conducted on Nov. 26. Partial interlock functional test of reactor protection system to be commenced on Nov. 27. Partial interlock functional test of liquid waste storage facility and disposal equipment #1 to be conducted on Nov. 27 and Dec. 1. Functional test of standby gas treatment system to be conducted on Dec. 1. Functional test of flammability control system (Train B) to be conducted on Dec. 2. Rated capacity verification test for emergency diesel generator to be conducted on Dec. 3 and Dec. 4.
	Unit No.2	Turbine facilities	Turbine inspection			
Other facilities		House transformer inspection				Carrying in and installation work to be commenced on Nov. 30.
		Excitation transformer inspection				Carrying in and installation work to be commenced on Nov. 30.
		Main generator inspection				Inspection commenced on Mar. 19, 2008.
		Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Aug. 9, 2008. Restoration of substructure commenced on Dec. 1, 2008.
Unit No.3	Turbine facilities	Turbine inspection				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on May 7, 2008.
	Other facilities	Main transformer inspection				Carrying in and installation work commenced on Aug. 10.
		House transformer inspection				3A, 3B Installation work commenced on Nov. 18, 2008.
		Excitation transformer inspection				Installation work commenced on Nov. 18, 2008.
		Main generator inspection				Inspection commenced on Feb. 20, 2008.
		Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive				Transformer (B) carrying in and installation work commenced on May 27. Transformer (A) carrying in and installation work commenced on Jun. 3.
		500kV power cable inspection				Laying cables commenced on Jul. 17. Voltage application test to be conducted on Nov. 30.
		Main exhaust duct inspection / restoration				Restoration work of substructure commenced on Jan. 9. Restoration work of main exhaust duct commenced on Sep. 3.
		Circulating water pipe inspection				Foundation improvement, excavating work, and inspection of pipes commenced on Jun. 16, 2008.
	Seismic reinforcement	Seismic reinforcement works for reactor building overhead crane				Preparation for reinforcement work to be conducted from Nov. 2 to Dec. 3. Reinforcement work to be commenced on Dec. 4.
		Seismic reinforcement works for stack				Reinforcement work commenced on Jul. 21.
Seismic reinforcement works for the fuel handling machine					Reinforcement work commenced on Nov. 2.	
Unit No.4	Turbine facilities	Turbine inspection				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on Aug. 3. Low-pressure turbine (A) (B) restoration work of blades commenced on Sep. 28, 2009. (Replacement of wear and contacted blades.)
	Other facilities	Main transformer inspection				Carrying in and installation work commenced on Aug. 28.
		House transformer inspection				Carrying in and installation work commenced on Sep. 2.
		Excitation transformer inspection				Carrying in and installation work commenced on Sep. 2.
		Main generator inspection				Inspection commenced on Jan. 15, 2008.
		Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive				Carrying in and installation work commenced on Jun. 12.
		500kV power cable inspection				Preparation for laying cables to be commenced on Nov. 26.
		Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Jun. 23, 2008.
		Restoration work of standby gas treatment system piping duct substructure				Restoration work commenced on Oct. 30.
	Seismic reinforcement	Seismic reinforcement works for reactor building overhead crane				Reinforcement work commenced on Oct. 21.
Seismic reinforcement works for stack					Reinforcement work commenced on Jul. 6.	

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)(2/2)

[Inspection/Restoration Status]

◆From November 22, 2009 (Sun) to December 19, 2009 (Sat)

System / Equipment	Items	November 22 (Sun) to November 28 (Sat)	November 29 (Sun) to December 5 (Sat)	December 6 (Sun) to December 12 (Sat)	December 13 (Sun) to December 19 (Sat)	Status of Inspection / Restoration
Unit No.5	Turbine facilities	Turbine inspection				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on May 25. Restoration work of high-pressure turbine and low-pressure turbine (A) (B) (C) commenced on Oct. 29.
	Other facilities	Main transformer inspection				Carrying in and installation work commenced on Mar. 25. Pre-operational test to be conducted on Dec. 2 and Dec. 3.
		House transformer inspection				5A, 5B Carrying in and installation work commenced on Apr. 25.
		Excitation transformer inspection				Carrying in and installation work commenced on Mar. 2.
		500kV power cable inspection				Laying cables to be conducted from Aug. 10 to Nov. 28.
		Circulating water pipe inspection				Foundation improvement, excavating work, and inspection of pipes commenced on Oct. 25, 2008.
	Seismic reinforcement	Seismic reinforcement works such as pipe supports				Reinforcement work to be conducted from Apr. 28 to Dec. 3.
		Seismic reinforcement works for stack				Reinforcement work commenced on Jun. 23.
	Verification of system integrity	System functional test				System functional test commenced on Nov. 13, 2009. Interlock functional test of reactor protection system commenced on Nov. 16. Functional test of standby gas treatment system conducted on Nov. 19. Functional test of instrument compression air system conducted on Nov. 19. Functional test of flammability control system conducted on Nov. 20. Functional test of primary containment vessel spray system conducted on Nov. 23. Rated capacity verification test for emergency diesel generator conducted on Nov. 23. Functional test of the emergency diesel generator, high pressure core spray system diesel generator, high pressure core spray system, low pressure core spray system, low pressure flood system and reactor component cooling water system to be conducted from Nov. 26 to Nov. 27. Functional test of main control room emergency circulation system to be conducted on Nov. 30. Functional test of main steam isolation valve to be conducted on Dec. 3.
	Unit No.6	Functional test for the entire plant				Final evaluation of functional tests for the entire plant completed on Sep. 28.
Unit No.7	Functional test for the entire plant				Final evaluation of functional tests for the entire plant completed on Jun. 19.	
Transformer (common) / Switch Yard	High-voltage start-up transformer #2 inspection				Carrying in and installation work commenced on Nov. 9.	
	On-site check / inspection / restoration of the oil protection bank for the transformer				Unit No.2 Restoration work commenced on 17.	
Environmental Facilities	House boilers inspection				(Arahama-side) 1A Inspection to be conducted from Apr. 8, 2008 to mid-December 2009. 3A Electric boiler transformer carrying in and installation work commenced on Oct. 13.	
	Restoration work of filtrate tank / demineralized tank on Arahama-side				Restoration work of No.1 demineralized tank commenced on May 26. Restoration work of No.1 filtrate tank commenced on Jun. 1.	
Others	Restoration work for solid waste storage facility				Prevention countermeasure for drum falling commenced on Jan. 16.	
	Restoration work for administration building / information building, etc.				Restoration work for administration building and information building is underway.	
	Reinforcement works for spent fuel transportation cask storage building				Reinforcement work commenced on Nov. 2.	
	Construction of seismic-isolated essential buildings				Construction commenced on Oct. 14, 2008.	
	Restoration of laundry facility building on Arahama-side				Restoration work commenced on Jan. 30.	
	Reconstruction of arrestor steel tower on Arahama-side				Reconstruction commenced on Jun. 17.	
	Reconstruction of arrestor steel tower on Ominato-side				Reconstruction commenced on Sep. 3.	
	Restoration and reinforcement work for the on-site / outside roads & slope, etc.				Restoration work for roads inside and outside of the site currently in progress. Maintenance work of the slope in front of sub protection headquarter office conducted from May 13 to Nov. 30. Restoration work of Daini Takamachi Bridge commenced on May 12. Maintenance work for the slope behind Daini Kigyou Center commenced on Oct. 20.	
	Restoration work for port facility				Restoration work for bank protection to be conducted from Apr. 3, 2008 to Nov. 30, 2009.	

※ 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.

※ Unit No. 6 and Unit No. 7 are in the pre-conditioning operation at rated thermal output.