

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 September 7th, 2008 (Sun) to October 4th, 2008 (Sat)

System / Equipment	Items	Sep. 7th (Sun) to Sep. 13th (Sat)	Sep. 14th (Sun) to Sep. 20th (Sat)	Sep. 21st (Sun) to Sep. 27th (Sat)	Sep. 28th (Sun) to Oct. 4th (Sat)	Status of Inspection / Restoration
Unit No.1	Turbine facilities	Turbine inspection *				Low-pressure turbine (B) internal inspection completed.
	Other facilities	Submerged equipment inspection on ground floor 5 of the reactor combination building				Restoration work commenced on Mar. 17.
		House transformer inspection				1A, 1B On-site transportation completed on Jul. 9.
		Excitation transformer inspection				Transportation into the factory is underway.
		Main generator inspection				Inspection commenced on Feb. 7. Withdrawal of rotor completed on Mar. 5.
		500kV power cable inspection				Removal of cables to be conducted from Jul. 7 to Sep. 27.
		Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Aug. 9.
Circulating water pipe inspection				Foundation improvement, excavating work, and inspection of pipes commenced on Aug. 6.		
Unit No.2	Turbine facilities	Turbine inspection *				High-pressure turbine and low-pressure turbine (A) internal inspection completed.
	Other facilities	House transformer inspection				Transportation into the factory is underway.
		Excitation transformer inspection				On-site transportation completed on May 16.
		Main generator inspection				Inspection commenced on Mar. 19. Transportation of rotor into the factory completed on Aug. 22.
Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Aug. 9.		
Unit No.3	Reactor facilities	Reactor recirculation piping preventive maintenance				Preparation work commenced on Jul. 14. Preventive maintenance to be commenced on Sep. 12.
		Inspection of new fuel storage warehouse and new fuels in the warehouse				Inspection of new fuels to be conducted from Sep. 2 to Sep. 5 and Sep.9 to Sep. 26. Inspection of new fuel storage warehouse to be conducted on Sep. 8.
	Turbine facilities	Turbine inspection *				Low-pressure turbine (B) (C) detailed inspection commenced on May 7. High-pressure turbine and low pressure turbine (A) detailed inspection commenced on Jun. 25. Low-pressure turbine (A) (B) restoration work of blades commenced on Jun. 25. (Replacement of wear and contacted blades.)
	Other facilities	Main transformer inspection				Transportation into the factory is underway.
		House transformer inspection				Transportation into the factory is underway.
		Excitation transformer inspection				Transportation into the factory is underway.
		Main generator inspection				Inspection commenced on Feb. 20. Rotor carrying in completed on Aug. 1.
		Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive				Preparation for transportation into the factory completed on Sep. 10. Transportation into the factory to be conducted on Sep. 11.
		Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Jul. 23.
	Circulating water pipe inspection				Foundation improvement, excavating work, and inspection of pipes commenced on Jun. 16.	
Unit No.4	Turbine facilities	Turbine inspection *				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on Jun. 19.
	Other facilities	House transformer inspection				4A 4B Transportation into the factory completed on Aug. 29.
		Excitation transformer inspection				Transportation into the factory completed on Aug. 29.
		Main generator inspection				Inspection commenced on Jan. 15. Transportation of rotor into the factory completed on Jun. 11.
		Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive				Preparation for transportation into the factory commenced on Aug. 25.
		Stack inspection				Inspection for substructure of piles commenced on Jul. 1. Internal inspection of stack completed on Aug. 25.
Main exhaust duct inspection / restoration				Preparation for restoration work commenced on Jun. 23.		

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 September 7th, 2008 (Sun) to October 4th, 2008 (Sat)

System / Equipment	Items	Sep. 7th (Sun) to Sep. 13th (Sat)	Sep. 14th (Sun) to Sep. 20th (Sat)	Sep. 21st (Sun) to Sep. 27th (Sat)	Sep. 28th (Sun) to Oct. 4th (Sat)	Status of Inspection / Restoration	
Unit No.5	Reactor facilities	Jet pump inspection				Root-cause analysis is under consideration.	
	Turbine facilities	Turbine inspection *				High-pressure turbine and low-pressure turbine (A) internal inspection completed.	
	Other facilities	House transformer inspection					Transportation into the factory is underway.
		Excitation transformer inspection					Transportation into the factory is underway.
		Main generator inspection		▼			Rotor carrying in completed on Apr. 24. Preparation for restoration work to be commenced on Sep. 11.
		500kV power cable inspection					Removal of cables commenced on Jun. 30.
		Stack inspection					Inspection for substructure of piles commenced on Jun. 23.
Main exhaust duct inspection / restoration					Preparation for restoration work commenced on Jun. 2.		
Unit No.6	Turbine facilities	Turbine inspection *				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on May 12.	
	Other facilities	Main transformer inspection					Installation work commenced on Apr. 30.
		House transformer inspection					6A, 6B Installation work commenced on Apr. 14.
		Reactor internal pump input transformer inspection					Installation work commenced on Mar. 26.
		Main generator inspection					Inspection commenced on Mar. 10. Withdrawal of rotor completed on Apr. 3.
		500kV power cable inspection					Inspection commenced on Feb. 9. Energization for testing without load completed on Apr. 12.
		Discharge canal inspection / restoration					Internal inspection of discharge canal and restoration work completed on Jun. 26. Removal of bypass pipe etc. to be conducted from Jul.10 to Oct. 10.
	Seismic reinforcement	Seismic reinforcement works such as pipe supports					Reinforcement work commenced on Jul. 4.
		Seismic reinforcement works for the roof truss of the reactor building					Preparation work completed on Sep. 2. Reinforcement work commenced on Sep. 3.
		Seismic reinforcement works for exhaust stack					Preparation work commenced on Jul. 19. Reinforcement work commenced on Sep. 5.
		Seismic reinforcement works for fuel handling machine					Reinforcement work commenced on Aug. 22.
	Unit No.7	Turbine facilities	Turbine inspection *				High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection is underway. Low-pressure turbine (A) (B) restoration work of blades commenced on Apr. 14. (Replacement of wear and contacted blade.) Low-pressure turbine (A) (B) (C) restoration work of blades on the 15th stage commenced on Aug. 1.
		Other facilities	Main transformer inspection				▼
House transformer inspection				▼			7B Installation work to be conducted from Mar. 24 to Sep. 12. 7A Installation work to be conducted from Apr. 11 to Sep. 12.
Reactor internal pump input transformer inspection							Electrical testing completed on Jun. 7. Coordinating for the start date of energization for testing without load.
Main generator inspection							Restoration work commenced on Jul. 14.
500kV power cable inspection							Inspection commenced on Jan. 22. Energization for testing without load completed on Mar. 22.
Discharge canal inspection / restoration					▼		Internal inspection of discharge canal and restoration work completed on Jun. 7. Removal of bypass pipe etc. to be conducted from Jul.18 to Sep. 20.
Seismic reinforcement		Seismic reinforcement works such as pipe supports					Reinforcement work commenced on Jun. 16.
		Seismic reinforcement works for the roof truss of the reactor building					Reinforcement work commenced on Jul. 14.
		Seismic reinforcement works for exhaust stack					Preparation work commenced on Jul. 19. Reinforcement work commenced on Sep. 5.
		Seismic reinforcement works for reactor building ceiling crane		▼			Preparation work commenced on Aug. 25. Reinforcement work to be commenced on Sep. 16.
		Seismic reinforcement works for fuel handling machine					Reinforcement work commenced on Aug. 8.
Verification of system integrity		System functional test		▼			System functional test to be commenced on Sep. 18.

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 September 7th, 2008 (Sun) to October 4th, 2008 (Sat)

System / Equipment	Items	Sep. 7th (Sun) to Sep. 13th (Sat)	Sep. 14th (Sun) to Sep. 20th (Sat)	Sep. 21st (Sun) to Sep. 27th (Sat)	Sep. 28th (Sun) to Oct. 4th (Sat)	Status of Inspection / Restoration
Transformer (common) / Switch Yard	High-voltage start-up transformer #3 inspection					Preparation for installation work completed on Sep. 4. Carrying in completed on Sep. 5. Installation work to be conducted from Sep. 6 to mid-November.
	On-site check / inspection / restoration of the oil protection bank for the transformer					Unit No.1 Preparation for restoration work commenced on Jul. 7. Recovery of oil-contaminated soil completed on Aug. 22. Restoration work to be commenced on Oct. 1. Unit No.2 Preparation for restoration work commenced on May 20. Recovery of oil-contaminated soil commenced on Jul. 12. Unit No.3 Restoration work commenced on Aug. 2. Unit No.4 Preparation for restoration work commenced on Sep. 2. Recovery of oil-contaminated soil to be commenced on Sep. 18. Unit No.5 Preparation for restoration work commenced on Jun. 3. Restoration work commenced on Aug. 27. Recovery of oil-contaminated soil to be commenced on Sep. 18. Unit No.6 Restoration work to be conducted from Jun. 24 to Sep. 30. Unit No.7 Restoration work completed on Aug. 29. Scrubbing of soil contaminated by oil leakage to be commenced on Sep. 16.
Environmental Facilities	House boilers inspection					(Arahama-side) 1A Inspection to be conducted from Apr. 8 to late December. 2A Inspection completed on Aug. 28. 2B Inspection commenced on Apr. 8. 3A Inspection commenced on Sep. 9. (Ohminato-side) 4C Inspection commenced on May 26.
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.
	Inspection of spent fuel transportation cask storage facility					Inspection for substructure of piles commenced on Jul. 30.
	Restoration work for administration building / information building, etc.					Repair work of the second floor of administration building is underway.
	Construction of seismic-isolated essential buildings					Site preparation work commenced on Jun. 23.
	Outdoor fire protection system piping to be placed above ground, etc.					(Ohminato-side) Work on installing fire protection system piping above ground completed on Jun. 27. (Arahama-side) Work on installing fire protection system piping above ground commenced on Apr. 28. Replacement work on the fire protection system piping around the Arahama-side building from underground to above ground completed on Jun. 28.
	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. Reinforcement work commenced on May 16.
	Restoration work for port facility					Restoration work for bank protection commenced on Apr. 3.

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.

\* 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.