

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 January 18th, 2009 (Sun) to February 14, 2009 (Sat)

| System / Equipment | Items | Jan. 18th (Sun) to Jan. 24th (Sat) | Jan. 25th (Sun) to Jan. 31st (Sat) | Feb. 1st (Sun) to Feb. 7th (Sat) | Feb. 8th (Sun) to Feb. 14th (Sat) | Status of Inspection / Restoration |
|--|-----------------------|--|------------------------------------|--|-----------------------------------|---|
| Unit No.1 | Turbine facilities | Turbine inspection * | | | | Low-pressure turbine (B) internal inspection completed. High-pressure turbine and low pressure turbine (A) (B) (C) detailed inspection commenced on Nov. 17, 2008. |
| | Other facilities | Submerged equipment inspection on ground floor 5 of the reactor combination building | | | | Restoration work commenced on Mar. 17, 2008. |
| | | 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. 7, 2008. Withdrawal of rotor completed on Mar. 5, 2008. |
| | | Main exhaust duct inspection / restoration | | | | Preparation for restoration work commenced on Aug. 9, 2008. Restoration of substructure commenced on Dec. 1, 2008. |
| | | Circulating water pipe inspection | | | | Foundation improvement, excavating work, and inspection of pipes commenced on Aug. 6, 2008. |
| | Seismic reinforcement | Seismic reinforcement works for the fuel handling machine | | | | Preparation for reinforcement work to be commenced on Jan. 23. |
| | | Seismic reinforcement works for the roof truss of the reactor building | | | | Preparation for reinforcement work completed on Jan. 21. Reinforcement work to be commenced on Jan. 22. |
| | | Seismic reinforcement works for stack (Unit No.1 and Unit No.2) | | | | Preparation for reinforcement work to be commenced on Feb. 16. |
| Seismic reinforcement works for emergency intake channel | | | | Preparation for reinforcement work to be conducted from Dec. 8, 2008 to Feb. 8, 2009. Foundation improvement work to be commenced on Feb. 9. | | |
| Unit No.2 | Reactor facilities | Reactor recirculation piping preventive maintenance | | | | Preparation work commenced on Dec. 16, 2008. |
| | 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 | | | | Inspection commenced on Mar. 19, 2008. Transportation of rotor into the factory completed on Aug. 22, 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 | Reactor facilities | Reactor recirculation piping preventive maintenance | | | | Preventive maintenance commenced on Sep. 12, 2008. Ultrasonic testing completed on Jan. 22. Preparation for radio frequency induction heating to be commenced on Jan. 23. |
| | Turbine facilities | Turbine inspection * | | | | Low-pressure turbine (B) (C) detailed inspection commenced on May 7, 2008. High-pressure turbine and low pressure turbine (A) detailed inspection commenced on Jun. 25, 2008. Low-pressure turbine (A) (B) restoration work of blades commenced on Jun. 25, 2008. (Replacement of wear and contacted blades.) |
| | Other facilities | Main transformer inspection | | | | Transportation into the factory is underway. |
| | | 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. Rotor carrying in completed on Aug. 1, 2008. |
| | | Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive | | | | Transportation into the factory is underway. |
| | | Main exhaust duct inspection / restoration | | | | Preparation for restoration work commenced on Jul. 23, 2008. Restoration of substructure commenced on Jan. 9, 2009. |
| | Seismic reinforcement | Circulating water pipe inspection | | | | Foundation improvement, excavating work, and inspection of pipes commenced on Jun. 16, 2008. |
| | | Seismic reinforcement works for the roof truss of the reactor building | | | | Reinforcement work commenced on Nov. 27, 2008. |
| | | Seismic reinforcement works for stack | | | | Preparation for reinforcement work to be commenced on Feb. 2. |
| Unit No.4 | Turbine facilities | Turbine inspection * | | | | High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection conducted from Jun. 19 to to Sep. 30, 2008 and to be commenced in April 2009. |
| | Other facilities | House transformer inspection | | | | Transportation into the factory is underway. |
| | | Excitation transformer inspection | | | | Transportation into the factory is underway. |
| | | Main generator inspection | | | | Inspection commenced on Jan. 15, 2008. Transportation of rotor into the factory completed on Jun. 11, 2008. |
| | | Inspection of power supply input transformer of the primary loop recirculation system adjustable speed drive | | | | Transportation into the factory is underway. |
| | | Main exhaust duct inspection / restoration | | | | Preparation for restoration work commenced on Jun. 23, 2008. Restoration of substructure commenced on Nov. 4, 2008. |
| | Seismic reinforcement | Seismic reinforcement works for stack | | | | Preparation for reinforcement work to be commenced on Feb. 2. |

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 January 18th, 2009 (Sun) to February 14, 2009 (Sat)

| System / Equipment | Items | Jan. 18th (Sun) to Jan. 24th (Sat) | Jan. 25th (Sun) to Jan. 31st (Sat) | Feb. 1st (Sun) to Feb. 7th (Sat) | Feb. 8th (Sun) to Feb. 14th (Sat) | Status of Inspection / Restoration |
|---------------------------------------|---|--|------------------------------------|---|---|---|
| Unit No.5 | 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 | | | | Restoration work commenced on Sep. 11, 2008. |
| | | 500kV power cable inspection | | | | Removal of cables commenced on Jun. 30, 2008. |
| | | Main exhaust duct inspection / restoration | | | | Preparation for restoration work commenced on Jun. 2, 2008. Restoration of substructure commenced on Nov. 20, 2008. |
| | | Circulating water pipe inspection | | | | Foundation improvement, excavating work, and inspection of pipes commenced on Oct. 25, 2008. |
| | Seismic reinforcement | Seismic reinforcement works for the roof truss of the reactor building | | | | Preparation for reinforcement work completed on Jan. 18, 2009. Reinforcement work commenced on Jan. 19. |
| Seismic reinforcement works for stack | | | | Preparation for reinforcement work to be commenced on Feb. 2. | | |
| Unit No.6 | Reactor facilities | Reactor head opening | | | | Reactor head opening to be conducted from Jan. 21 to Jan. 25. |
| | | Control rod drive inspection | | | | Disassembly and inspection test of the control rod drive to be conducted from Jan. 26 to Feb. 3. |
| | Turbine facilities | Turbine inspection * | | | | High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection commenced on May 12, 2008. Low-pressure turbine restoration work of blades commenced on Jan. 8. |
| | Other facilities | Reactor internal pump input transformer inspection | | | | Installation work completed on Jan. 10. Electrical testing completed on Jan. 10. |
| | | Main generator inspection | | | | Inspection commenced on Mar. 10, 2008. Withdrawal of rotor completed on Apr. 3, 2008. Restoration work commenced on Dec. 13, 2008. |
| | Seismic reinforcement | Seismic reinforcement works such as pipe supports | | | | Reinforcement work completed on Jan. 19. Pressure leakage test to be conducted in some parts in the future. |
| | | Seismic reinforcement works for reactor building overhead crane | | | | Reinforcement work completed on Jan. 12. |
| | | Seismic reinforcement works for fuel handling machine | | | | Reinforcement work to be conducted from Aug. 22, 2008 to Jan. 25, 2009. |
| | Verification of system integrity | System functional test | | | | System functional test commenced on Dec. 4, 2008. Functional test of emergency diesel generator, high pressure core flood system, low pressure flood system and reactor component cooling water system conducted on Jan. 15 and Jan. 16. Functional test of stand-by gas treatment system conducted on Jan. 21. Interlock functional tests of reactor protection system #1 to be partially conducted. |
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| Unit No.7 | Turbine facilities | Turbine inspection * | | | | High-pressure turbine and low-pressure turbine (A) (B) (C) detailed inspection to be completed in early February. Low-pressure turbine restoration of casing to be conducted from Dec. 19, 2008 to Jan. 28, 2009. |
| | Other facilities | Main generator inspection | | | | Restoration work commenced on Jul. 14, 2008. |
| | Verification of system integrity | System functional test | | | | System functional test commenced on Sep. 18, 2008. |
| Transformer (common) / Switch Yard | High-voltage start-up transformer #2 inspection | | | | Preparation for inspection completed on Jan. 18. Inspection commenced on Jan. 19. | |
| | On-site check / inspection / restoration of the oil protection bank for the transformer | | | | Unit No.1 Restoration work commenced on Oct. 4, 2008. Unit No.2 Preparation for restoration work commenced on May 20, 2008. Recovery of oil-contaminated soil commenced on Jul. 12, 2008. Unit No.3 Restoration work commenced on Aug. 2, 2008. Unit No.4 Restoration work commenced on Dec. 13, 2008. Unit No.5 Restoration work commenced on Aug. 27, 2008. Scrubbing of soil contaminated by oil leakage commenced on Sep. 16, 2008. | |
| Environmental Facilities | House boilers inspection | | | | (Arahama-side) 1A Inspection to be conducted from Apr. 8, 2008 to July 2009. 2B Inspection to be conducted from Apr. 8, 2008 to mid-February 2009. | |
| | Restoration work of filtrate tank / demineralized tank on Arahama-side | | | | Preparation for restoration work of No.1 filtrate tank/demineralized tank commenced on Dec. 2, 2008. | |
| Others | Restoration work for solid waste storage facility | | | | Preparation work for prevention countermeasure for drum falling completed on Jan. 15. 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. | |
| | Construction of seismic-isolated essential buildings | | | | Construction commenced on Oct. 14, 2008. | |
| | Outdoor fire protection system piping to be placed above ground, etc. | | | | (Arahama-side) Work on installing fire protection system piping above ground commenced on Apr. 28, 2008. Replacement work on the fire protection system piping around the Arahama-side building from underground to above ground completed on Jun. 28, 2008. | |
| | Relocation work of ground motion observation points | | | | Boring work to be conducted from Oct. 20, 2008 to Jan. 25, 2009. Seismometer installation work to be commenced on Jan. 26. | |
| | Restoration of laundry facility building on Arahama-side | | | | Preparation for restoration work commenced on Jan. 13. | |
| | 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. | |
| | Restoration work for port facility | | | | Restoration work for bank protection commenced on Apr. 3, 2008. The works to be suspended from Dec. 13, 2008 to March 2009 for the winter season. | |

※ 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.