

Investigation Results on the Causes of the Fire on Station Service Transformer 3B of Unit No.3 at Kashiwazaki Kariwa Nuclear Power Station (Summary)

August 23, 2007

1. Status when the Event Occurred

At 10:15 A.M. on July 16, 2007, two minutes after the Niigata-Chuetsu-Oki Earthquake occurred at 10:13 A.M, the operator observed smoke coming from House Transformer 3B of the Unit No.3. At 12:10 P.M, the local fire department confirmed that the fire of the transformer was brought under control. The firewall installed therein allowed other systems to escape the fire.

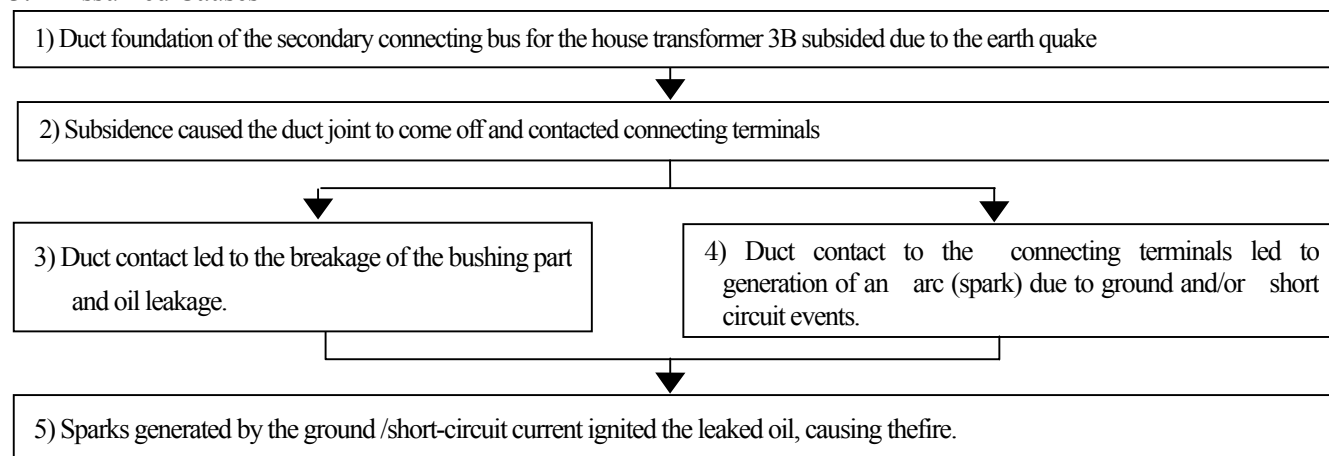
2. Investigation Results

(1) Results of Visual Inspection

- 1) The secondary connecting bus of the transformer was subsided against the foundation of the transformer.
- 2) The connecting bus between the transformer and its secondary side was vertically displaced.
- 3) Oil leakage from the bushing of the secondary side of the transformer.
- 4) Severe fire damage in the connection ducts of the secondary connecting bus of the transformer. Visual inspection through the hole in the bus revealed that a part of the bus had melted and ruptured.
- 5) No other abnormalities such as deformation or oil leakage in the main body of the transformer.
- 6) No abnormalities such as electrical discharge inside the transformer.

(2) Based on the records of voltages and currents of the generator circuit, since the records indicated a sudden rise of currents (from zero) in the generator circuit and an abrupt generator voltage reduction (approximately 1.6 seconds after the activation of the trip relay), while the generator voltage was decreasing subsequent to the opening of the generator circuit breaker after the turbine trip followed by the activation of the generator trip relay, it was presumed that some kind of ground or short-circuit events occurred in the circuit.

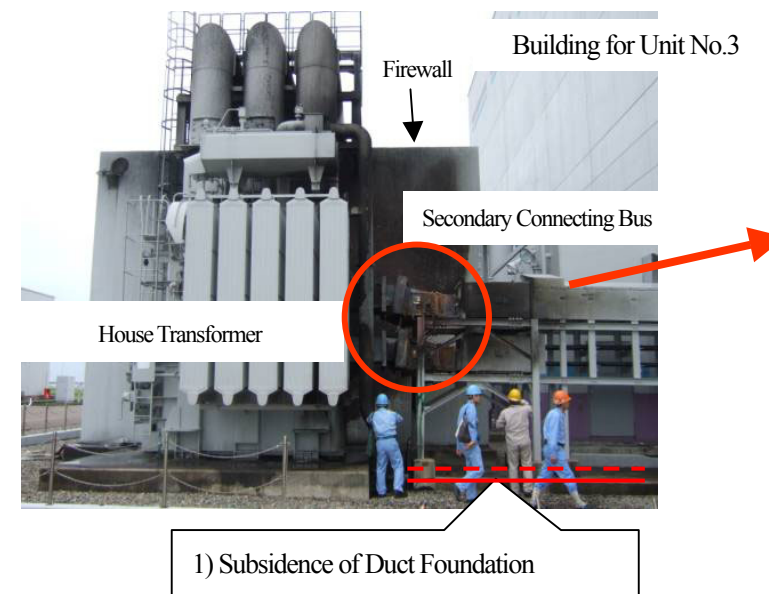
3. Assumed Causes



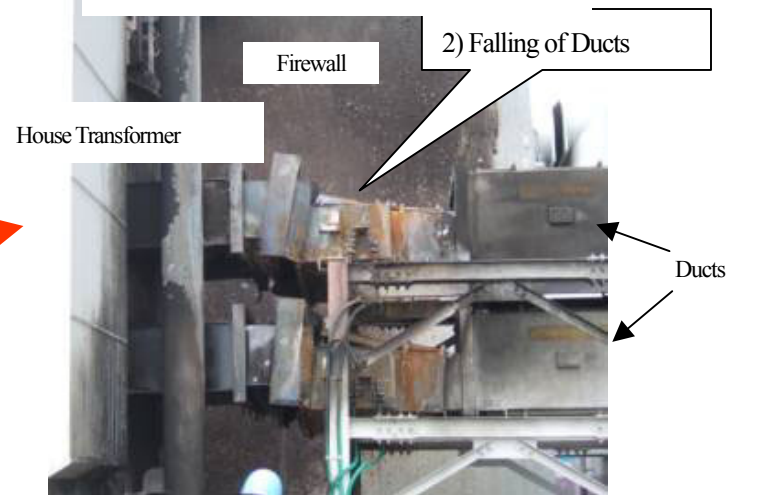
4. Future Measures

Based on the investigation results on the causes of this fire event, we are currently considering necessary measures.

Overview of House Transformer 3B

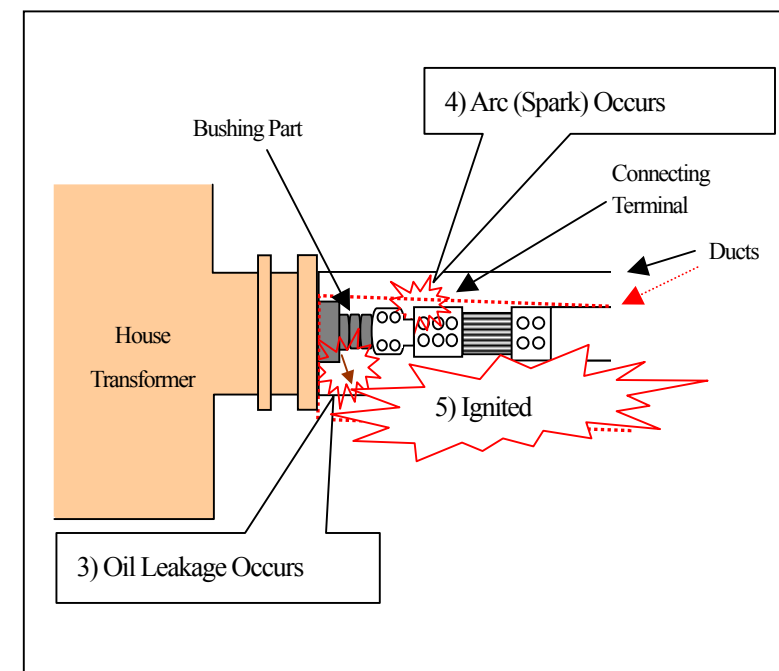


Secondary Connecting Bus of the House Transformer



1) Subsidence of Duct Foundation

Schematic Diagram of the Connecting Bus



Inside of the Duct



Connecting Terminal

Bushing Part