

Appendix

A Summary of the Interim Report on the Results of Geological and Geological Structure Surveys in Areas Adjoining the Kashiwazaki-Kariwa Nuclear Power Station

1. Introduction

Following the occurrence of Niigata-Chuetsu-Oki Earthquake on July 16, 2007, the Tokyo Electric Power Company, Inc. (TEPCO) has received an instruction from the NISA of the Ministry of Economy, Trade, and Industry (METI) to ensure safety at the Kashiwazaki-Kariwa Nuclear Power Station (NPS) [*1]. Currently, TEPCO is conducting operations to confirm the seismic safety of its facilities that are important in terms of security.

As a part of such operations, TEPCO submits reports on the progress and results of its geological and geological structure surveys to review boards [*2] of METI's the NISA whenever appropriate. The Company then comes up with summary reports based on the feedbacks from the review boards. TEPCO compiled the results of its geological and geological structure surveys as an interim report, and submitted it to the NISA on May 12, 2008. The following is a summary of the interim report.

*1 The instruction of the NISA on ensuring safety at the Kashiwazaki-Kariwa Nuclear Power Station:

“[TEPCO] is to analyze the seismic observation data obtained during the [Niigata-Chuetsu-Oki] Earthquake, and make a progress on the confirmation of the seismic safety of its safety-significant facilities.” An excerpt from *On Ensuring Safety at the Kashiwazaki-Kariwa Nuclear Power Station, which Sustained Damages by Niigata-Chuetsu-Oki Earthquake of 2007*, issued on July 16, 2007, Instruction No. 2, 19-07-16.

* 2 The review boards at the NISA of the Ministry of Economy, Trade, and Industry: Nuclear and Industrial Safety Subcommittee, Advisory Committee for Natural Resources and Energy, the Resource Energy Research Council; the Subcommittee on Quakeproof Structure and Design and the Joint Working Group on Earthquake, Tsunami, Geology, and Ground Foundation.

2. Implementation of geological surveys

We evaluated faults using the results of the geological survey conducted after the occurrence of Niigata-Chuetsu-Oki Earthquake on July 16, 2007, as well as the results of another geological survey which has been conducted since June 2006. The latter complies with the newly revised [Review Guidelines for Earthquake-Resistance Design of Nuclear Power Plants] (“the new earthquake-resistance guidelines”), which TEPCO

began using even before the guidelines officially took effect in September 2006. Major investigation items in the surveys are shown in Figure 1.

3. Evaluation of faults

We based our evaluation of faults on the evaluation methods and the intensions of the new earthquake-resistance guidelines and “The Items that Should Be Reflected in the Evaluation of Seismic Safety of Nuclear Power Plants and Other Facilities Following the Occurrence of Niigata-Chuetsu-Oki Earthquake,” a notice issued on December 27, 2007, by the NISA. In addition, by taking into consideration the literature that was published after the issuance of the approval for the Units 6 and 7 of the NPS, we made a conservative evaluation. (Chart 1 and Figure 2)

(1) Land area

We have concluded from the results of the surveys that the fault which is likely to most severely impact the NPS premise is the Nagaoka Plain Western Rim Fault Zone. We are in the opinion that the activities of the Kakuda/Yahiko fault, the Kihinomiya fault, and the Katagai fault, all of which comprise the Nagaoka Plain Western Rim Fault Zone, occur independent of each other. However, because the faults are adjoining each other, we have decided to make a conservative seismic safety evaluation considering the possibility of concurrent activities of the three faults (which, in total, stretches for about 90km).

(2) Water area

We have concluded from the results of the surveys that major faults that are likely to have an impact on the NPS premise are the Sado Eastern fault, the F-B undersea fault, the Sado Southern fault, the F-D undersea fault, and the Takada Bay fault. We are in the opinion that activities of the F-D undersea fault and the Takada Bay fault occurs independent of each other. However, because the faults are close to each other, we have decided to make a conservative seismic safety evaluation, considering the possibility of concurrent activities of the two faults (which, in total, stretches for about 55km).

Chart 1 The results of fault evaluation

	Fault name	Lengths of faults determined by evaluation	Lengths of faults written in the application for units 6 and 7	
Land area	1. Kakuda/Yahiko fault	Approx. 54km	— [*1]	
	2. Kihinomiya fault	Approx. 22km	Approx. 17.5km	
	3. Katagai fault	Approx. 16km	Approx. 10km	
	4. Central Hills Western fault	Approx. 12.5km	Approx. 12.5km	
Water area	5. Sado Eastern fault	Approx. 37km	Sado Eastern fault	Approx. 27km
			F-A fault	Approx. 4km (Approx. 5km maximum) [*2]
	6. F-B fault	Approx. 34km	Approx. 7km (Approx. 8km maximum) [*2]	
	7. Sado Southern fault	Approx. 29km	—	
	8. F-D fault	Approx. 30km	Approx. 9km (Approx. 10km maximum) [*2]	
	9. Takada Bay fault	Approx. 25km	Approx. 29km	

*1 The Kakuda/Yahiko fault was excluded because it is located beyond 30km from the NPS premise.

*2 Although the faults were confirmed to have existed, we determined that they are currently inactive.

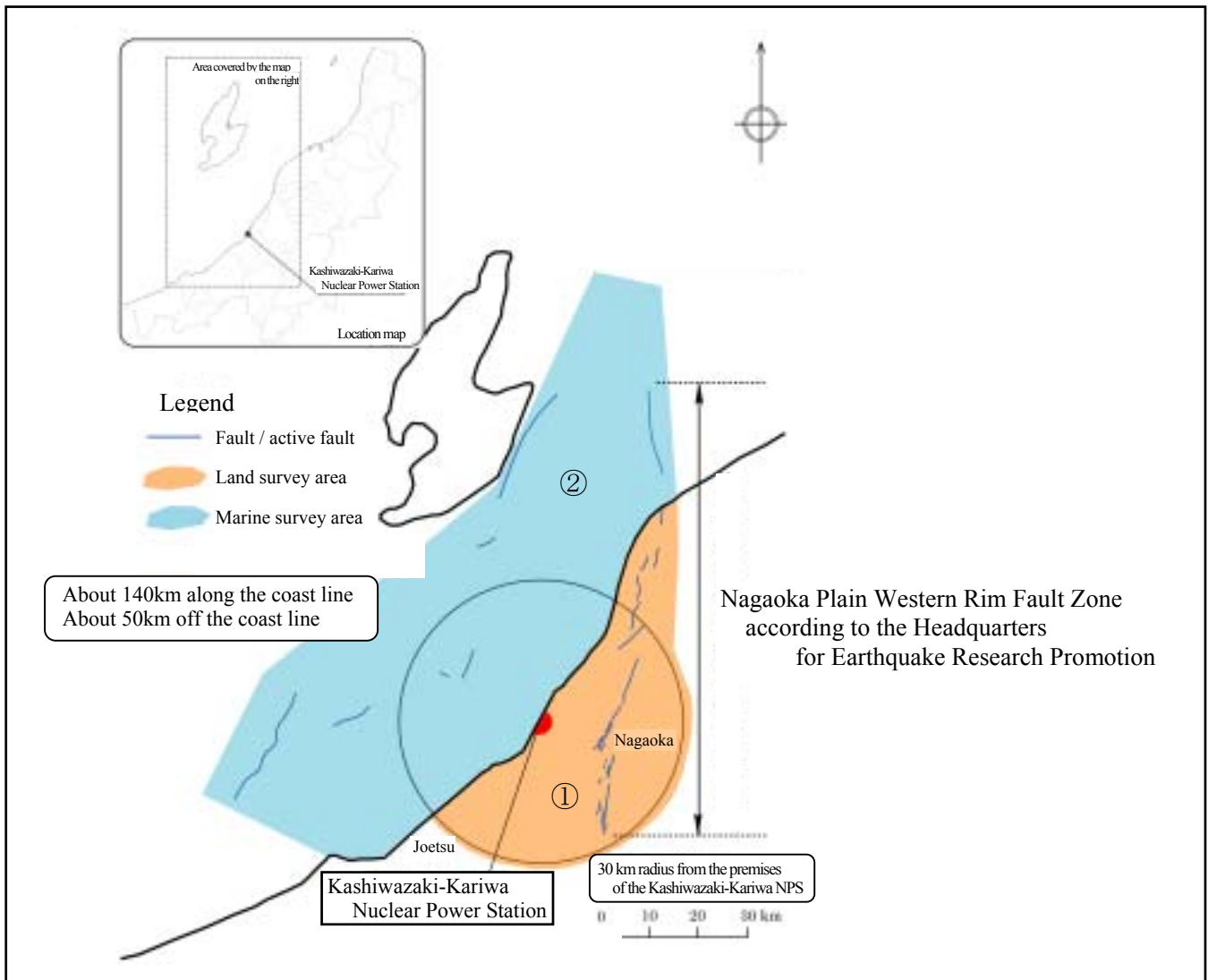
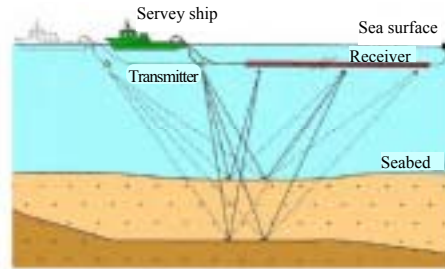
Geomorphologic survey (Covered range 1)
Subsurface exploration (Covered range 1)
Underground exploration using the reflection method (Covered range 1)

Boring survey (Covered range 1)

We have conducted a geomorphologic survey, a subsurface exploration, an underground exploration, and a boring survey in the land area covered by an approximately 30km radius from the center of the premise of the Kashiwazaki-Kariwa Nuclear Power Station. In addition, we have implemented a similar investigation on the areas along major faults located beyond the 30km radius.

Maritime sonic prospecting and data analysis (Covered range 2)
Seafloor topography survey (Covered range 2)

We have conducted a maritime sonic prospecting and a seafloor topography survey along the area stretching parallel for about 140km to the coast line with the center point of the premise of the Kashiwazaki-Kariwa Nuclear Power Station, and the ocean area covered by an approximately 50km radius from the center of the NPS premise. We also analyzed maritime sonic prospecting data obtained by other institutions.



【The scope of geological examination】

Figure 1: Major geological survey items

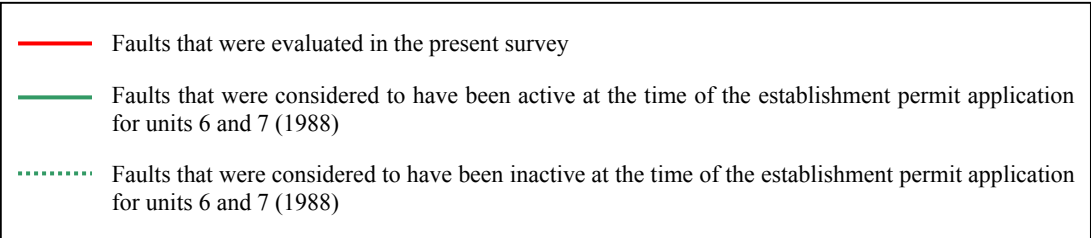
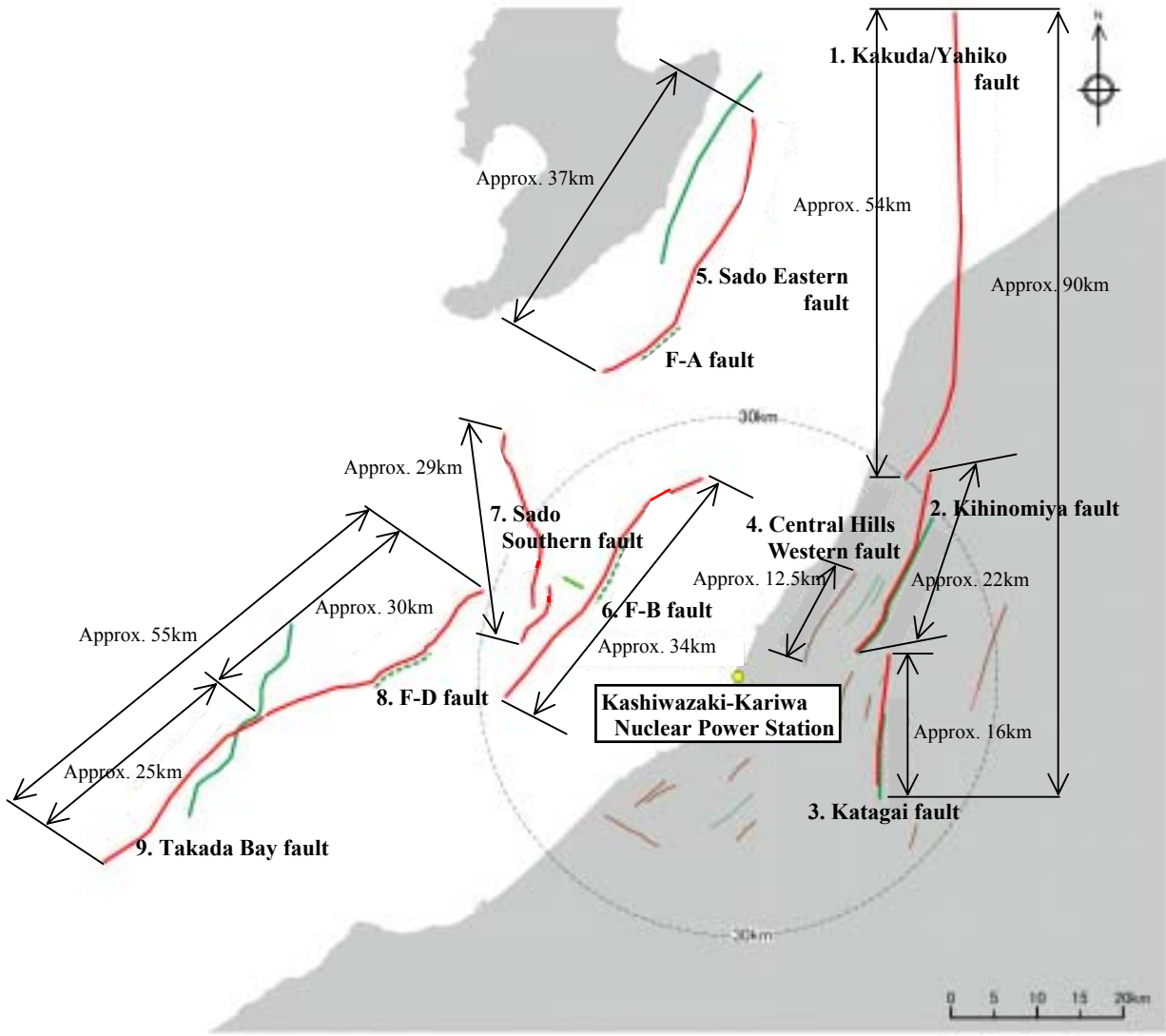


Figure 2: Faults around the premise of the Kashiwazaki-Kariwa Nuclear Power