

To: Kazuo Kitagawa, Minister of Land, Infrastructure, Transport and Tourism

Junzo Sato, Chairman, Aircraft and Railway Accidents Investigation Commission

**About Our Proposals Regarding the Train Derailment Accident
on the Fukuchiyama Line of the West Japan Railway Company**

The Commission is currently conducting, with all its might, the investigation to identify the cause of the train derailment accident that occurred at around 9:18 a.m., April 25, 2005, on the Fukuchiyama Line of the West Japan Railway Company (hereinafter referred to as JR-West). However, it is expected that we will have to continue the investigation for a significant number of days in order for us to draw final conclusions based on the results of multilateral examination of facts and scientific analyses.

On the other hand, the accident, in which 107 people were killed and more than 500 people were injured, is the most serious railway accident in the recent railway accident history of Japan, and it is considered that the planning of measures to prevent similar accidents should be started as early as possible. Therefore, we hereby provide and publish an overview of the progress of our investigation to date and make our proposals on measures to be taken pursuant to the provisions of Article 22 of the Act for Establishment of the Aircraft and Railway Accidents Investigation Commission before completion of the investigation of the accident.

Proposals

(Improving function of ATS etc.)

1. As described in the interim report, a record shows that the accident train entered at a speed higher than 110 km/h a curve section that includes the accident site and for which the speed limit is 70 km/h. In addition, a record shows that, prior to the accident, a down-going deadhead train that had been made up of the same railway cars as those of the accident train and driven by the train driver of the accident train (hereinafter referred to as "the deadhead train") had traveled at a speed higher than 60 km/h on a turnout section for which the speed limit is 40 km/h before arriving at Takarazuka Station.

Therefore, functions of ATS (automatic train stop) and similar devices should be improved, for example, by adding, taking into consideration the current situations regarding train operation and the current situations surrounding the individual line sections, functions to prevent trains from exceeding the speed limits in curve sections and at turnouts.

(Reliable execution of train protection actions during and after accidents)

2. As described in the interim report, power from the backup power supply would not have been supplied to the train protection radio equipment etc. of the seventh car unless the power supply switching switch had been set to the "Emergency" position. However, according to the confirmation after the accident, the power supply switching switch was set at the "Normal" position, which means that the train protection radio equipment had not functioned. In addition, the fuse of the seventh car had not been used and neither the portable fuse nor the track circuit shunt device had been used.

On the other hand, there was no provision requiring that the power supply switching switch be set to the "Emergency" position when it is necessary to use the train protection radio equipment when it is not possible to use the normal power supply in the internal regulations of JR-West regarding the response of train conductors during abnormal situations including the "Standard Work Procedures (for the Conventional Lines) for Train Conductors - Standard Work Procedures for Abnormal Situations."

Against this background, the train driver of Kita Kinki 3, which is the train that had arrived in the accident area from the opposite direction immediately after the accident, had stopped his train in response to the stop signal indication information received by the onboard ATS equipment and taking into consideration other information. However, Kita Kinki 3 did not receive any train protection radio transmission.

Therefore, efforts should be made to improve the reliability of the train protection radio equipment, enhance ease of operation and further improve the training for train drivers and conductors, so that train protection actions will be executed in a reliable manner during and after accidents and in situations where such actions are required.

(Installation and utilization of equipment that records the traveling of trains and related data)

3. As described in the interim report, the deadhead train had traveled through the turnout at a speed higher than the speed limit before arriving at Takarazuka Station, and had temporarily stopped as a result of the activation of the emergency brake by ATS. In addition, the accident train had run past the stop sign by about 70 m at Itami Station and the train driver had corrected the stop position prior to the accident.

In addition, there had been a similar incident on June 8, 2004, in which a train driven by the train driver of the accident train had run past the stop sign by about 100 m at Shimokoma Station of the Katamachi Line of JR-West and the driver had corrected the stop position.

In addition, 46 incidents had occurred in FY 2004 in JR-West's service area in which a train had stopped as a result of the activation of the emergency brake by an ATS-SW-type ground coil (long), according to a report from JR-West.

Grasping the situations of such incidents etc. accurately, analyzing the situations, and utilizing the analysis results would help prevent accidents.

Therefore, equipment that records the train position and speed, powering handle position, brake handle position, ATS operation status, etc., should be installed on trains (and on tracks where

necessary) so that incidents etc. can be grasped accurately.

In addition, the efforts described in 4 below to secure the accuracy of speed meters etc. should be made so that incidents etc. can be grasped more accurately using equipment that records the traveling of trains and related data.

(Securing accuracy of speed meters etc.)

4. As described in the interim report, speed values indicated on speed meters of the same type as that of the speed meter of the first car of the accident train may be as low as about 4 km/h below the actual speeds when the train is traveling at a speed of about 120 km/h, according to estimation calculations based on test results.

Speed meters are instruments that are important for the driving of trains, and inaccurate indication may adversely affect the driving of trains. In particular, indication of speed values on speed meters that are lower than the actual speeds may (1) cause trains to exceed speed limits or run past stop signs, (2) cause emergency brake activation by ATS etc. equipped with an over-speed prevention function, (3) cause incidents that reduce safety, and/or (4) prevent trains from traveling safely. Therefore, measures should be taken to secure the accuracy of speed meters etc.