4.4 River Course Countermeasures

A total of 30 oil fences were set up at 15 locations by the various organizations by 19:00 on February 20, and the oil recovery operations were carried out around the clock. By 9 o'clock on the morning of February 20, 35,250 l of oil contaminated water had been recovered, and more than 24,500 oil mats had been used in the operations.

The supervision of all of these oil fences was taken over by the Kake Public Works Office at 8:30 on the morning of the 21st. The river course countermeasures continued with the maintenance of the fences, mat recovery work, and four daily patrols being conducted by local businesses in cooperation with the ski ground.

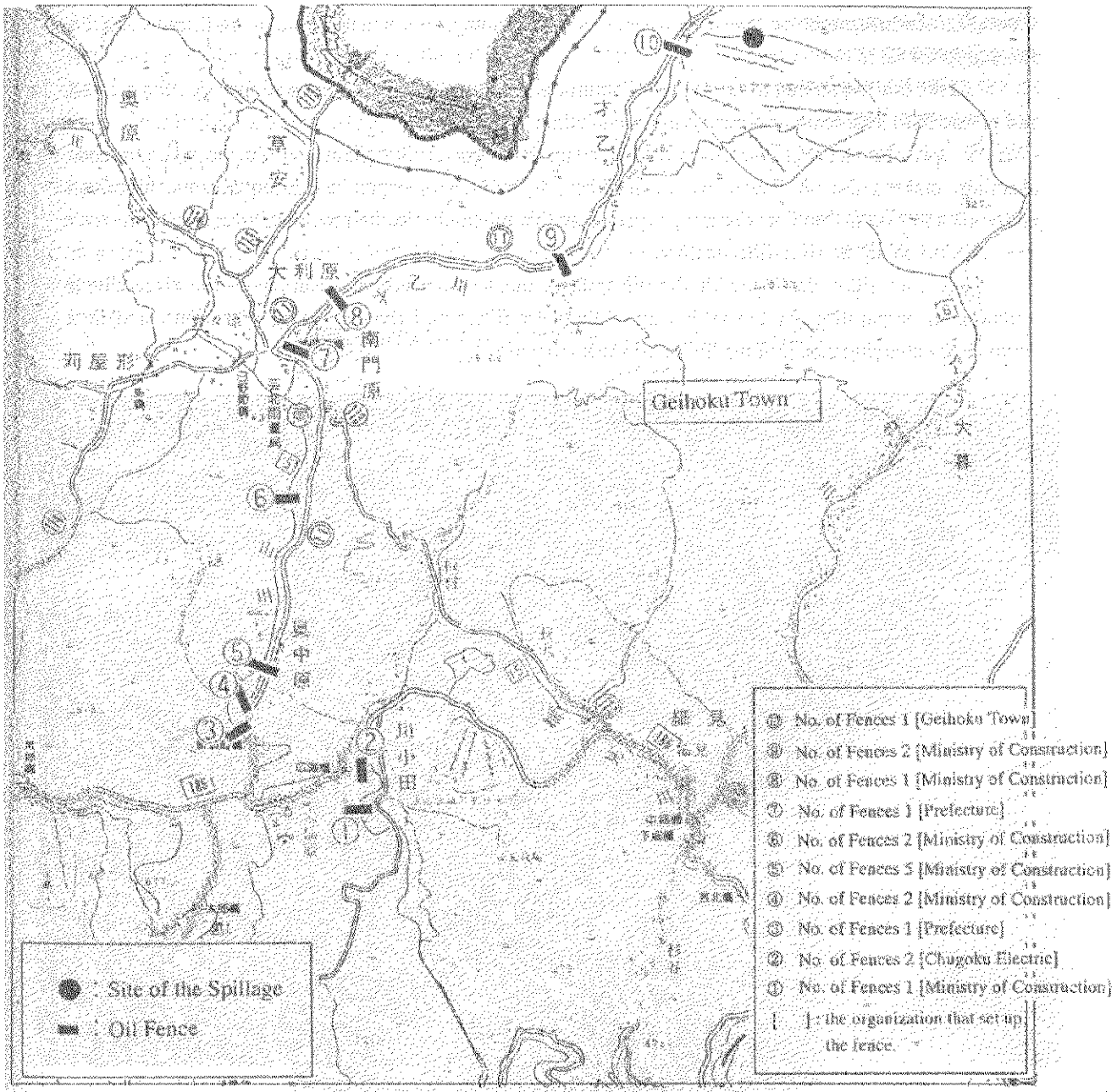

Fig.6 Locations at which Oil Fences were Set Up (As of 20:00 February 18)

Initially, oil fences were set up across the river and the fuel oil recovered using absorbent mats (oil mats). However, as time went by, the fuel oil began to settle and recovery of surface oil became inadequate. It was therefore necessary to carry out oil recovery from the middle and lower layers of the river as well as from the riverbed gravel and where oil had become deposited along the riverbanks.

At this time, a specialist manufacturer proposed to the On-site Committee the use of filter that, when set over the entire river cross section, enables only the water to pass through. The filter is filled with an oil blotter in which the oil is recovered.

The material used for the oil blotter is BL-4 that is most effective in absorbing the oil when the speed of the flow through the filter is less than 20 cm/min. Therefore, to reduce the speed of the flow as far as practically possible, it was decided to place gabions over the entire downstream cross section. Also, it was planned to use rubbish removing filters to prevent damage to the fuel oil removing filter by rubbish flowing in the river.

At the fourth meeting of the On-site Committee (February 23), it was decided to adopt this method, and on the 24th a directive was issued for manufacture

It was also decided to recover the oil attached to gravel and plants within the river by river cleaning, making the oil flow downstream where it could be scooped out using ceramic absorbent materials and rakes. Good results were expected as this oil could also be recovered over the entire river cross section using the river filter method.

The committee dealing with the oil spillage incident performed a survey of the river course pollution in preparation for the setting up of the river filters and river cleaning operations, and then commenced studying cleaning methods and work schedule.

Photo 2 Setting up the river filter just upstream of the Nanmonbara Bridge (March 7)