

Preparation and refinement of Preliminary Investigation Management Manual

Shigeki Akamura[1]; Tatsuya Tanaka[2]; Hiroshi Shiratsuchi[3]; Atsushi Horio[4]

[1] NUMO; [2] Nuclear,Obayashi Co.; [3] TEPSCO,Civil,Underground Eng.; [4] DIA Consultants

<http://www.numo.or.jp/>

A stepwise site selection process has been adopted for geological disposal of HLW in Japan. Literature surveys (LS), followed by preliminary investigations (PI) and finally, detailed investigations (DI) in underground facilities will be carried out in the successive selection stages. In the PI stage, surface-based investigations such as borehole surveys and geophysical prospecting will be implemented with the objective, which is to obtain information relating to legal requirements on siting, such as the occurrence of igneous or fault activity, and to confirm the extremely low likelihood of adverse impacts on the candidate site resulting from such phenomena.

In order to implement these preliminary investigations rigorously and efficiently within the constraints of a limited time period, budget and resources, PI planning before commencing investigations and on-site PI management during the investigation phase are very important issues.

NUMO therefore decided to compile existing knowledge and experience in the planning and management of investigations in the form of two manuals. This report focuses on the structure and scope of the preliminary investigation management manual.

The manual outlines the process of PI management in nine steps: 1) Preparation, 2) Specification setting, 3) Contract / order, 4) Detail planning, 5) Licensing, 6) on-site preparation, 7) on-site management during the investigation, 8) confirmation of the data processing and compilation, 9) survey completion. And thirty-eight survey methods within four types of surveys such as surface geological methods, geophysical methods, drilling and borehole investigations and laboratory test are considered for future PI activities in the manual. The manual follows the management step and presents information for management from the aspects: how to specify a survey, key components of the contract / order, Licensing, safety and environmental aspects, quality control, supervising data, reporting and documentation and common pitfalls and how to avoid them.

