⑤ Management measures to block groundwater from flowing into the site

【Current situation】

To prevent groundwater from flowing into the buildings, an impervious wall on the land side would be built. To reduce the risk that this measure turns out to be ineffective, it is necessary to consider the additional measures as follows:

- ―Reduce the rainwater infiltration on the area 35 meters above sea level (hereinafter referred to as the o.p. 35m area), which is a main source of on-site groundwater.
- ―Block groundwater flow from the hillside (i.e. lower the amount of groundwater flowing into the buildings by changing the direction of the groundwater flow from the hillside)

It is required to make a comprehensive package of feasible proposals that takes into account a variety of conditions such as on-site landforms, prerequisites for installing equipment, and ground sinking risks due to the drawdown of groundwater level.

【Technologies needed】

(1)Construction technologies for impervious walls

- Techniques to divert groundwater flow away from the area 10 meters above sea level (hereinafter referred to as the o.p. 10m area) where unit buildings are located, by installing, for example, slurry/grout walls at the hillside (See Figure ⑤-1). It is essential that this does not interfere with the construction of already planned impervious walls on the land side.
- Techniques to lower the amount of groundwater on the hillside, using, for example, slurry/grout walls on the o.p. 35m area (See Figure ⑤-1). There is a possibility that the construction area would have to be vast in order to function effectively, as this area is wide spread.

(2) Technique for covering surfaces

- Techniques for covering the vast hillside ground in order to prevent rainwater from infiltrating into the ground (See Figure ⑤-1).

(3) Technique for collecting radioactive Sr

- Techniques needed to enable trapping radioactive Sr selectively by chemical injection into the ground soil.

- Techniques needed to remove the trapped radioactive Sr from the ground soil.
- Techniques needed to collect the radioactive Sr without affecting groundwater flow.

Figure ⑤-1 Schematic Layout of Unit Building and Ground Layer