31Q1: We are trying to keep piping construction site clean. It is necessary to show customers how tap water is clean and drinkable. Please show me an example way to keep cleanness. Is the freezing construction method with liquid nitrogen effective to that purpose?

**A:** Freezing construction method is mainly used for small diameter pipe such as service piping. The method has advantage that drainage is not necessary and total time of construction is shorter. But for keeping cleanness, it has no evident advantage compared with usual construction method.

**Picture 1** shows a construction site. A road was cut and dug. Both side of connecting place is fenced with steel plates to stop soil slide. It keeps piping clean from soil. Fence is necessary around only connection point, not entire pipe.

Note: Pipe is covered with polyethylene sleeve against corrosion not for cleanness.

**Picture 2** shows that a worker is wiping inside the edge of pipe with cloth.

**Picture 3** shows that connection is completed. No soil around pipe because of fence.

Construction companies should understand that clean condition is necessary for piping to supply safe water. It should be noticed in the contract if necessary

(Answerer: Mr. SASAYAMA Hiroshi, Yokohama City Waterworks Bureau, 2009)



**Picture-1 Construction Site** 



Picture-2 Cleaning inside pipe



Picture-3 Connected without dirt