The information in this case study is reprinted from the American Cyanamid AM-9 technical manual. AM-9 was American Cyanamid’s acrylamide grout product. Avanti’s AV-100 Chemical Grout matches the chemical formulation, usage and performance of AM-9.

**Title:** Controlling Seepage During Construction of Underground Missile Bases

**Location:** ICBM Missile Installation, Plattsburgh, New York, U.S.A.

**Owner:** U.S. Government

**Contractor:** R.K.M.P., Joint Venture

**Grouting Contractor:** The Penetryn System, Inc.

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**PROBLEM:**

With construction still in progress, numerous leaks appeared at the joints and bolt holes of corrugated steel-pipe tunnels connecting missile silos to control centers. Welding and sealing compounds failed to stop seepage.

**SOLUTION:**

Waterproofing specialists who were called in used AM-9 because it could be applied quickly and easily with minimal interference with other construction. Also its controllable gel time permitted economical use of materials.

**APPLICATION:**

Holes were drilled through the pipe tunnels at critical leaking points. Pipe nipples were welded into these holes. A three-man crew used proportioning pumps to control and vary the gel times between ½ and 1 ½ minutes. Pumping rate was about 1 ½ gallons per minute.

**RESULTS:**

All leaks were sealed. Many potential seepage areas were also sealed.