



March 4, 1985

ICS/Penetron International Ltd.  
45 Research Way  
Suite 203  
East Setauket, NY 11733

Re: Information of Client

In accordance with the request of Client, tests were made in the laboratory to determine compressive strength of concrete is affected by treatment with Penetron.

To make this determination, the following Portland cement concrete mix was made in the laboratory and six (6) cylinders were cast. Three (3) cylinders were treated with Penetron and the remaining three(3) cylinders were untreated and used as reference specimens.

### **CONCRETE MIX DESIGN**

#### Materials per Cubic Yard

(Aggregates S.S.D.)

CEMENT (sk)	6.0
CEMENT (lb)	564
SAND (lb)	1450
TRAP ROCK (lb)	1860
GALS OF WATER	39.9
SLUMP (in)	4.5
W/C RATIO (gal/sk)	6.65

#### **PROCEDURE USED:**

After the initial set had taken place approximately 2.5 lbs. per sq. yd. of Penetron was sprinkled onto the concrete surface of 3 cylinders and worked into the top surface by means of an ordinary wood float. When the concrete was 24 hours old the molds were removed and the opposite ends of these cylinders were brushed to roughen the surface. Penetron was mixed with water (2.0 Penetron by volume mixed with 0.8 water by volume) to a slurry consistency and brushed onto the concrete surface. Twenty-four hours later this surface was dampened and kept damp for a period of 48 hour. The three treated cylinders and the three untreated cylinders were then stored under

the same conditions until tested at 28 days.

**Results of the 28-Day Compression Tests are as follows:**

<b>CYLINDER IDENT</b>	<b>PLAIN UNTREATED (PSI)</b>	<b>PENETRON TREATED (PSI)</b>
1	4864	4917
2	4917	5077
3	4652	5236
AVERAGE OF 3 CYLINDERS	4811	5077

**TEST SUMMARY:**

The use of Penetron resulted in a strength gain of approximately 5.52% over the untreated concrete.

