THE PITOMETER ASSOCIATES
ENGINEERS
NEW YORK, N. Y.

REPORT
ON
PITOMETER LOSS OF HEAD TESTS
MARINE CORPS AIR STATION (H),
NEW RIVER
CAMP LEJEUNE, NORTH CAROLINA
1984

The Pitometer Associates
Engineers
New York, N.Y.

Dec 11 '84

Pitometer Associates *Consulting Engineers*
Serving the Water Industry Through Leak Detection and Distribution Analysis — Since 1904

P.O. Box 43189, Upper Montclair, N. J. 07043 • (201) 783-6400

November, 1984

J. P. Sewerooter Inc.
2251 Lewis Avenue
Rockville, Maryland 20851

RE: Marine Corps Air Station (H), New River
Camp Lejeune, North Carolina

Gentlemen:

In accordance with our agreement, we have completed eight loss of head tests on specified mains in the water distribution system of the Marine Corps Air Station (H), New River, and herewith submit our report.

The purpose of a loss of head test is to determine the Williams-Hazen coefficient of friction "C" of a pipe. This is a measure of the carrying capacity of the pipe and a direct comparison may be made with new pipe to determine the improvement in carrying capacity due to cleaning the pipe.

Flows in each test were measured with a hydrant pitot gauge and the head losses were measured directly by means of a parallel hose and "U" tube manometer. Valves were closed around each test section so that water would flow in only one direction toward the flow hydrant with the hydrant pitot gauge.

The test data and results are tabulated on the following pages.

Loss of Head Test No. 1 - October 30, 1984

Location	Baxter St. from hydrant west of Compton St. to hydrant west of Jones St.
Diameter-in.	6
Quantity-mgd.	0.55
Total Loss-ft.	13.8
Length-ft.	954
Loss-ft./1,000 ft.	14.5
Coefficient (W-H Formula)	120
Date Cleaned	1983

Loss of Head Test No. 2 - October 30, 1984

Location	Baxter St. from hydrant at 1040 Baxter St. to dead end west
Diameter-in.	6
Quantity-mgd.	0.55
Total Loss-ft.	4.1
Length-ft.	312
Loss-ft./1,000 ft.	13.4
Coefficient (W-H Formula)	126
Date Cleaned	1983

Loss of Head Test No. 3 - October 31, 1984

Location	Baxter St. from hydrant west of Jones St. to Langtry St.; Langtry St. from Baxter St. to hydrant at Jones St.
Diameter-in.	6
Quantity-mgd.	0.52
Total Loss-ft.	12.6
Length-ft.	1,046
Loss-ft./1,000 ft.	12.0
Coefficient (W-H Formula)	126
Date Cleaned	1983

Loss of Head Test No. 4 - October 31, 1984

Location	McAvoy St. from hydrant at Grier St. to hydrant east of Sumner St.
Diameter-in.	6
Quantity-mgd.	0.63
Total Loss-ft.	9.2
Length-ft.	544
Loss-ft./1,000 ft.	16.9
Coefficient (W-H Formula)	127
Date Cleaned	1983

Loss of Head Test No. 5 - October 31, 1984

Location	Grier St. from hydrant at 1215 Grier St. to Radford St.; Radford St. from Grier St. to hydrant at 1332 Radford St.
Diameter-in.	6
Quantity-mgd.	0.45
Total Loss-ft.	12.0
Length-ft.	1,263
Loss-ft./1,000 ft.	9.5
Coefficient (W-H Formula)	124
Date Cleaned	1983

Loss of Head Test No. 6 - October 31, 1984

Location	McAvoy St. from hydrant at 1215 Grier St. to hydrant at 1180 McAvoy St.
Diameter-in.	6
Quantity-mgd.	0.59
Total Loss-ft.	13.6
Length-ft.	866
Loss-ft./1,000 ft.	15.7
Coefficient (W-H Formula)	123
Date Cleaned	1983

Loss of Head Test No. 7 - November 1, 1984

Location	Compton St. from hydrant at 1145 Compton St. to Grier St.; Grier St. from Compton St. to 1219 Grier St.; Compton St. extension from Grier St. to hydrant at Jones St.
Diameter-in.	6
Quantity-mgd.	0.52
Total Loss-ft.	12.0
Length-ft.	1,075
Loss-ft./1,000 ft.	11.2
Coefficient (W-H Formula)	125
Date Cleaned	1983

Loss of Head Test No. 8 - November 1, 1984

Location	Curtis Rd. from hydrant at 205 Curtis Rd. to 240 Curtis Rd.; McAvoy St. extension from Curtis St. to Grier St.; Grier St. from 1209 Grier St. to hydrant at 1215 Grier St.
Diameter-in.	6 and 8
Quantity-mgd.	0.52
Total Loss-ft.	8.8
Length-ft.	700*
Loss-ft./1,000 ft.	12.6
Coefficient (W-H Formula)	122
Date Cleaned	1983

* The actual length of 600 feet of 6-inch main and 400 feet of 8-inch main resulted in an equivalent length of 700 feet of 6-inch main

In closing, we wish to express our appreciation for the cooperation extended to us by the personnel of Marine Corps Air Station (H), New River and J. P. Sewerooter, Inc. during the course of these tests.

Respectfully submitted,

THE PITOMETER ASSOCIATES

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