

April 29, 2008

Mr. Mike Kieley
Facility Manager
Yale University
Sterling Power Plant
309 Congress Avenue
New Haven, CT 06520

Re: SPP Chilled Water System Pressurization Study

Dear Mike:

Per your request, we are pleased to submit our proposal to provide engineering services related to the referenced project at the Sterling Power Plant (SPP) as follows:

A. Background

The chilled water system at SPP is currently pressurized to approximately 60 psig at the expansion tank. The 60-psig pressure is adequate to keep the chilled water system under positive pressure in buildings that are within 125 feet tall from the chilled water pumps in SPP. Yale Medical Center is planning to build the Smilow Cancer Research Building that will impose 110 psig static head on the chilled water system. The SPP chilled water piping system has 125 lb class cast iron fittings that are rated at 200 psig working pressure for chilled water service. The high static head from the Smilow Building would raise the SPP chilled water system working pressure to a level beyond the maximum allowable working pressure for the cast iron fittings.

A common solution would be to use water-to-water heat exchangers to isolate the Smilow Building from the SPP chilled water system. However, Yale would like to explore other options than installing the heat exchangers, and intends to retain WM Group Engineers (WMGE) to perform the analysis and prepare a technical report with recommendations

B. Objective

Provide technical solution to maintain 110 psi pressurization for both static and dynamic operation of the chilled water system

C. Scope of Work

1. Review and document existing chilled water system pressurization piping connections at SPP
2. Survey system pressure at various points of the system including current highest point to establish system pressure behavior.
3. Review chilled water system design of the Smilow Cancer Research building

4. Brainstorm options with Yale team for other pressurization options such as Split pressurization.
5. Analyze various options and prepare system pressurization diagrams for the static (system off) and dynamic condition (system on)
6. Determine the highest possible pressure that could be applied to the system for dynamic condition at pump close off pressure
7. Determine pressure ratings of existing fittings, valves and piping of the chilled water system
8. Analyze any exposure to the system based on highest possible pressure and pressure ratings of fittings, valves and pipes.
9. Recommend cost effective and reliable options to meet system static and dynamic pressure requirements.
10. Prepare a written technical report summarizing the analysis
11. Present findings to the Yale management in a Power Point format

D. Assistance from Yale University

Yale University will provide the following to support the analysis effort:

- Installation of calibrated pressure gauges at locations recommended by WMGE
- Access to medical Center Buildings

E. Compensation

Our fee for the engineering services described above at an average hourly cost of \$140 will be a lump sum of **\$28,000** plus reimbursement expenses for travel, per diem, courier, computer plotting, reproduction and other project related costs. We estimate the reimbursable expenses not to exceed **\$500**, which will be billed at cost.

Please call me at (646) 827-6400, if you require any additional information and/or clarification.

Very truly yours,

WM GROUP ENGINEERS, PC

Hemant Mehta

Hemant Mehta, P.E.
President