BEESON & BEESON
ARCHITECTS
D. R. BEESON -::- D. R. BEESON, JR.
Phone WAlnut 8-1175 Johnson City, Tenn.

December 15, 1962

Mr. Ray Stahl
Milligan College, Tennessee

Re: Welshimer Library
Basement A.C. Unit

Dear Mr. Stahl:

We have checked the above unit as to the cause of the heating ooil freeze-up last Tuesday night. The outdoor temperature at the time of the trouble was very close to 0 degrees F. This was the coldest temperature in our area since the building was constructed.

Actually, we believe that the frozen coil resulted when there was a power failure which caused power to be off for about 3 hours Tuesday night. The trouble was in the electrical utility distribution system.

When the power failure happened, the controls on the unit functioned properly for the shut-down, but the reason for the coil freezing was the cold air blast which went thru the return duct from the exhaust or relief damper. This damper was specified a fixed type. At one place the specifications mention ball bearings for the relief but the other has the same fixed type specification number for intake, exhaust and relief louvers. Refer to specifications section 1100-26, paragraph i, and 1100-27, paragraph 40. See also the detail on plans Sheet H-4, exhaust fan and louver.

White this may never happen again, there is no denying that it has happened once and could again. With this in mind, it might be desirable to install either a gravity relief or a motorized relief damper at these locations, so in event of a future power failure, cold air from the outside would be prevented from entering the relief ducts. If motorized, they can be made to close when the fan goes to "off".

We have always felt that this mechanical system is an excellent design and installation. Even in this case, it is fortunate that the coil is a type which can be repaired completely at a minimum of expense for this type failure. Also, it is an advantage to have the convectors and radiant panels continuing in operation and serving the building well. The coil which froze is in an air handling unit that is mainly a ventilating unit during the heating season.

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We trust that this will explain the situation to you. While it is upsetting to have this trouble, there have been many similar and worse failures during the sub-zero weather just encountered.

Yours very truly,

BEESON & BEESON

Harris A. Hardison

Harris A. Hardison

HAH:sr