



Following are examples of actual narratives that have been used to accompany submittals in situations where the modeling software is incapable of simulating the design.

1. **Situation:** Underfloor air distribution with air towers is not handled by eQUEST.

**Narrative:** I have done calculations that maintain psychrometric balances, and actual fan power, by decreasing airflow and increasing fan power per unit air flow. Stratification is handled by assigning some internal heat gains to the return plenum.

2. **Situation:** The radiant heating/cooling floor with ground coupled water-to-water heat pump is not handled by eQUEST.

**Narrative:** This is handled by using fan coils with no fan power, and a type of ground coupled water-to-water heat pump that allows only open wells. To simulate the closed loop wells, I have created a monthly groundwater temperature file that is consistent with actual expected ground temperatures, ranging from a low of 36°F to a high of 82°F.

3. **Situation:** There is a conflict between the thermal zoning of the exterior and the daylight zoning.

**Narrative:** Because of the floor to ceiling glass and high ceilings, we expect a daylight contribution as far back as 20' into the space. The exterior zones are quite narrow in order to adequately capture the actual heating load at the perimeter (arguably offset of perimeter heat loss with interior gains is limited to the outer 5 to 8 ft of space). To overcome this conflict, some of the lighting power density is concentrated into these narrow perimeter zones from the interior zones. Lighting sensor locations are at the rear of the zones.