

Attic Insulation Testing

Jan 2021

Schertz



Initial configuration showing vinyl on the rafters and the knee wall insulation



- 3 different approaches:

- Bay 1 3.5" of fiberglass + 3.5" of mineral wool
- Bay 2 3.5" of fiberglass
- Bay 3 3.5" of fiberglass + Tyvek (edges sealed)

- Prior to installing insulation, the OSB was sprayed with bleach solution or primed with Zinsser
- Insulation was in place for 2 to 3 weeks in mid January

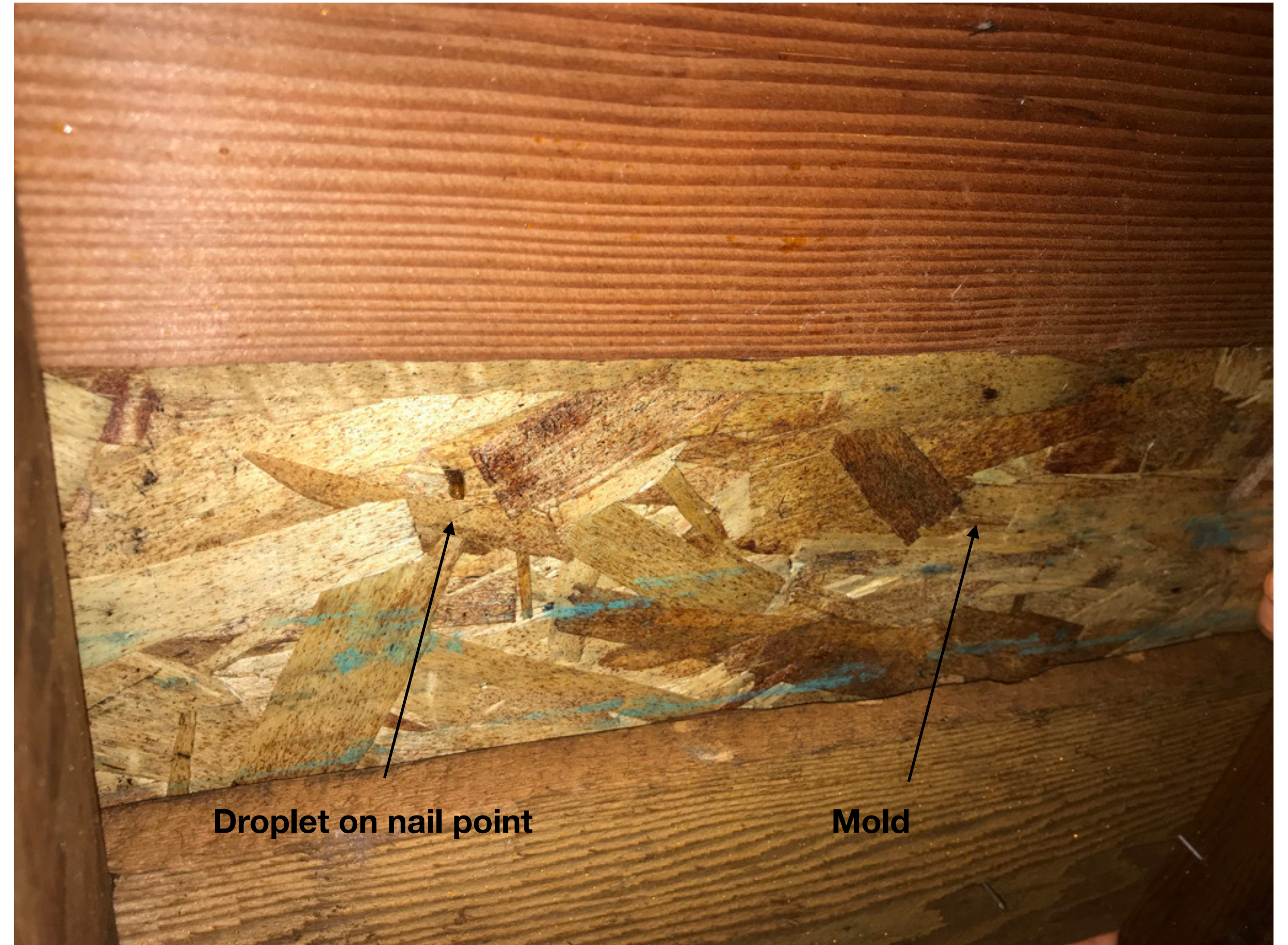
Results

Bay 2



No mold found on primed surfaces

New rust on nails



Droplet on nail point

Mold

Results

Bay 3

No mold found on primed surfaces



Results Bay 1

- No mold or moisture noted.

Paper Cards

Paper cards were placed against the OSB.
None showed evidence of being wet although each one felt damp (all 3 bays)



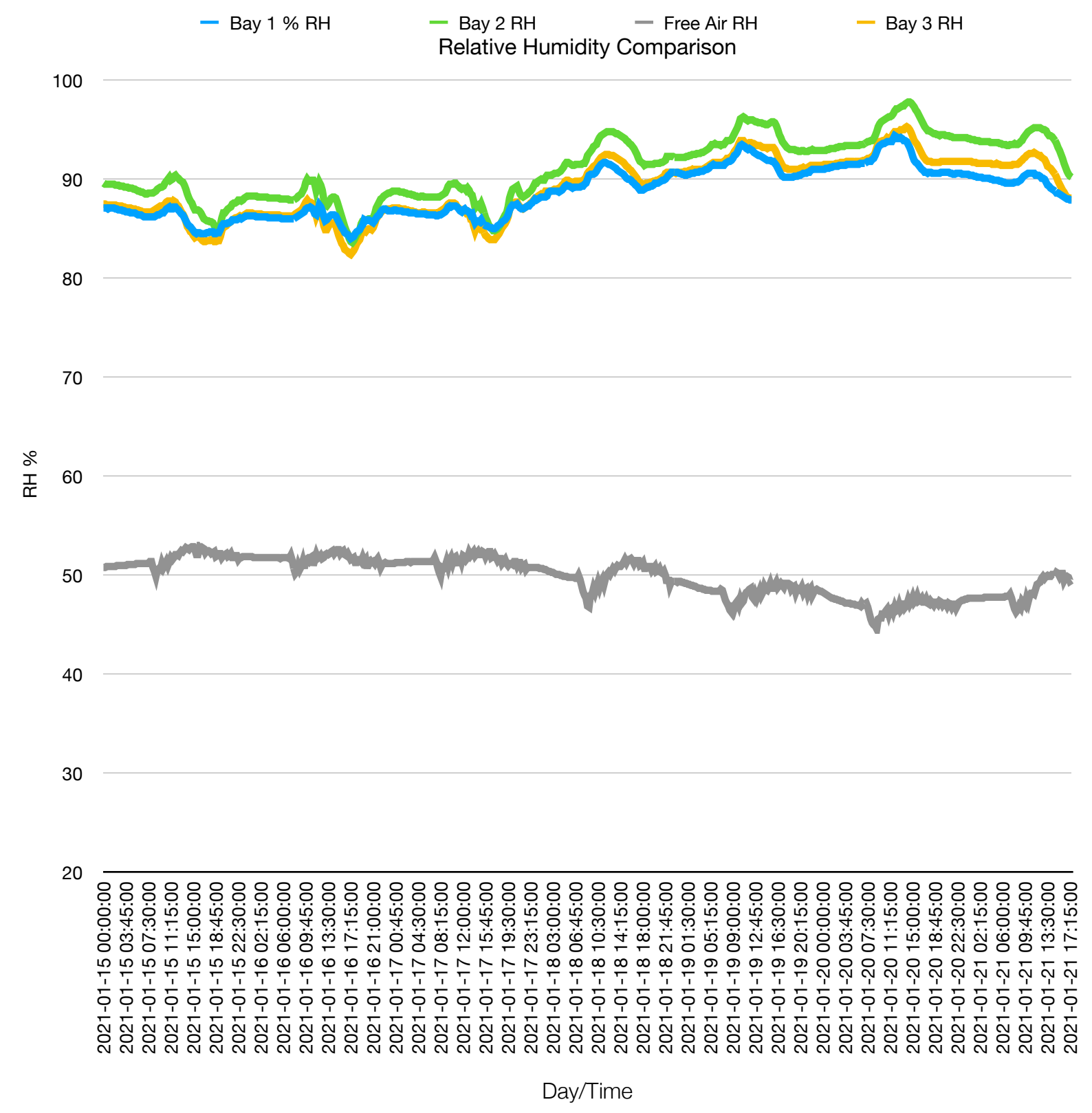
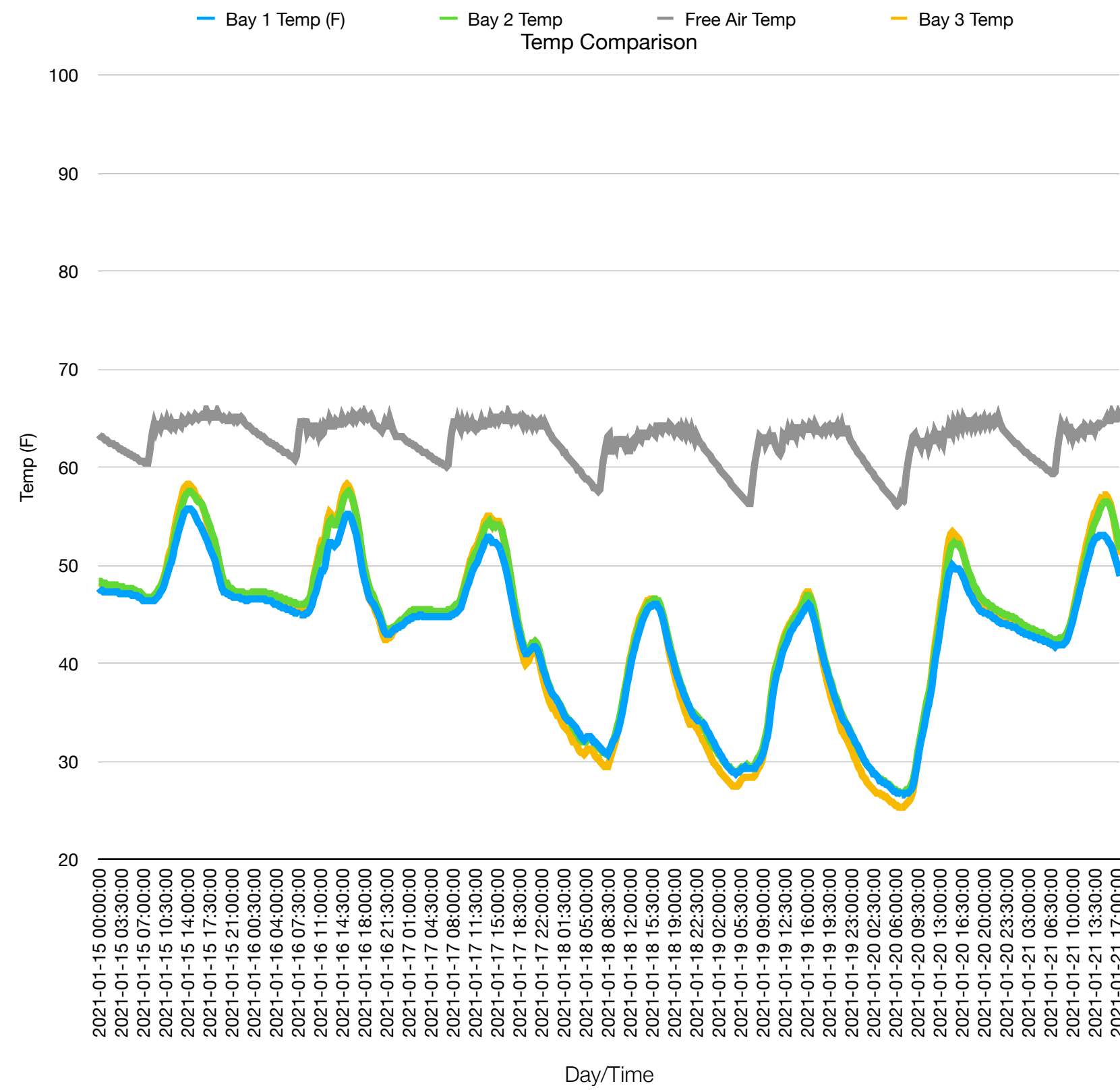
Temp/RH Sensors



Sensor assemblies were placed between insulation and OSB.
The sensing elements were roughly 1/8" from the OSB

Temp/RH data

High RH in all 3 bays, particularly on clear/cold nights.
No dramatic difference between the bays in terms of temp or RH.



Outdoor RH avg 86% in Jan.
Outdoor temp typically in 30's and 40's.
Jan 18, 19, 20 had clear nighttime sky. Other nights were overcast.
Bay 1 had slightly less exposure to night sky radiation.