

What Goes on in the HVAC Shop?

The HVAC (Heating, Ventilation, and Air Conditioning) is a small, 2-person department at the VLA, but the one most concerned with the comfort and safety of our employees and visitors.

Efficient and economical use of resources is important at the VLA. The correlator that processes the data from the antennas generates enough heat to warm the entire control building through the use of a heat exchanger in the winter. In the summer, the extra heat is dumped to the cooling tower.



Matt is inspecting two new chillers installed in the Control Building to assist with maintaining a comfortable temperature.



The correlator room with overhead sprinklers and floor racks for the air conditioning system HVAC will install



Shane tests connectors in the preactivation cabinet for the sprinkler system.

HVAC's biggest project currently is protecting the new correlator in case of fire. The correlator will be located on the second floor of the control building in a shielded room 47' x 48' by 12' high.

HVAC installed smoke detectors in the ceiling and under the floor. When one is activated, an alarm sounds in the control room and the array operator is alerted. Power to the computer racks and the air conditioners is automatically shut off, as is the fresh air intake. Water rises to the first valve in the preactivation cabinet of the sprinkler system. If a second smoke alarm goes off, the array operator has 60 seconds to investigate the problem and bypass the system if it is a false alarm or if he can extinguish the fire himself. Otherwise the FM200 system activates and dumps 700 lbs of a special fire suppression agent used for computer environments. The water rises to the second valve in the sprinkler system. If the fire continues, at 200° the sprinkler heads pop and water sprays.



Matt uses a manlift to raise him up so he can drill a hole (inset) through the wall of the control building into the preactivation cabinet that controls the correlator room sprinkler system. He will install a drain to the outside so if there is ever a problem, anyone walking in the front door will see the water running and know something is awry.

Even though it isn't a part of the HVAC acronym, HVAC at the VLA is responsible for the plumbing. They provide safe drinking water at the site. This means complying with state regulations, taking water samples, and maintaining the well.

They also maintain the wastewater and sewage systems, including the VLA's self-contained lagoon. If you get "hissed at" as you take the walking tour, it isn't a snake, it's the pressure release valve on the sewer system. You have the HVAC guys to thank for seeing that it is working correctly.



In addition to all of this, Shane and Matt are gutting the air conditioning system on each antenna and replacing it with an ultra high efficiency chilled water unit. That's 28 AC units to be revamped! There may be only two of them, but their good work makes a big difference to all of us.