

# *FIELD REPORT-Mechanical*

**TO:** Frank John di Stefano, ADG  
**CC:** Cecilia Vaniman, MSU  
Don Platisha, CMS

**Date of Visit:** 3/7/12  
**Project:** MSU Cooley Lab Renovation  
**GDP Job No.:** 100104  
**Location:** Bozeman, MT  
**Contractor:** Dick Anderson Construction, Tri-County  
Mechanical, Williams P&H, Electro Controls  
**Present at Site:** Cecilia Vaniman (MSU), Don Platisha (CMS), Tim Tholt (DAC), Greg Schermele (DAC), Kirk Scheel (DAC), Ray Wagner (Williams), Larry (TCME), Dave Broquist (GPD)



## **Purpose of Visit:**

The purpose of the visit was to check on construction progress, meet the contractors, conduct a brief walkthrough, and see if there were any new mechanical issues. Additionally, I led a tour of the construction site for an MSU HVAC class from 8 a.m. until 10 a.m. and then attended the weekly construction meeting from 10 a.m. until 12 noon.

## **Project Status:**

- The basement level slab is mostly complete. New waste and vent piping has been installed and backfilled. The three isolation slabs for the laser lab tables have been placed. The pad for the centrifugal chiller has been placed and includes a 4" raised pad. The thickened slab for the heat pump is not yet placed but rebar is being tied. Most lock walls have erected. Framing for partition walls is mostly complete.
- Limited MEP work has begun in the basement. Some ductwork has been installed in the laser labs. The centrifugal chiller is in place but not mounted on isolators yet. Inertia bases for the pumps and heat pump unit are on site but not situated, anchored or filled yet.
- The piping mains have been assembled down the hallway on all floors including, now, the basement and most branch piping appears to be in place as well. Most or all walls have been framed throughout the building. Most ductwork is complete on floors one through four although none of the hydronic booster coils were noted to have been installed yet.
- The air handling units, heat recovery coils and exhaust fans have been placed in the penthouse but are not yet permanently mounted. The overhead clean steam, chilled water and heating water piping mains are being assembled. Ductwork sections are lying about but have not been placed yet. Temperature control rough-in is in progress. The penthouse is now almost 100% enclosed, except for the NE corner and the roof is being assembled. The topping slab has not been poured on the floor yet.
- The fresh air intake plenum at the south side of the penthouse has been constructed and the intake louvers installed.

### **Items of Discussion:**

- A significant amount of time was spent in the construction meeting discussing the fire/smoke damper installations and the need or desire to have select functions addressable from the main fire alarm panel. It was decided that GPD would gather a little more background information and then organize a conference call.
- During the construction meeting we discussed the general appearance of the ductwork in the occupied spaces and how it was planned to make it presentable/acceptable. The PVC coated exhaust ductwork will be painted and the galvanized supply air ductwork joint sealant will be cleaned up either by limited removal or by adding more sealant to widen the lines, so to speak, and make the lines more uniform.
- It was discussed during the construction meeting that it would be desirable to get the ductwork hung in one of the laser labs and then have the researches look at it to be sure the layout works for their purposes since they hang a lot of equipment from the ceilings in their current lab.
- The fresh air intake plenum in the penthouse has been framed and is lined with DensGlass. Larry and I discussed that it is not intended to line the underside of the roof with sheet metal as the roof deck suffices for this purpose. However, it is important that the sheet rock joints be sealed and that the edges are sealed to the structure. The sheet metal not be relied upon to form an air barrier. That is not the intent. The sheet metal liner will move considerably as it expands and contracts with changes in the outside air temperature.

### **Deficiencies:**

- The finished appearance of ductwork is still a primary concern. This is common knowledge and will be addressed prior to project completion in the manner described above.
- Piping is generally not being protected nor ends being kept covered to the extent they once were. New personnel added on site should be briefed on the requirement for this and efforts renewed to keep all duct and pipe clean, products protected and open ends covered. This applies to both erected pipe and duct and also to pipe and duct stored on site awaiting installation. PVC piping for the reverse osmosis system is laying about on the floor unprotected where mortar and concrete dust are abundant. Deposits of this type in the pipe, should they occur, will not easily be removed by flushing.
- Some construction equipment was noted to be stored inside one of the air handling units already. This practice must not be allowed to persist. Also, things were being stacked on top of new equipment and this, also, must be not continue (one of the wall fans was being used as a table).
- Care should be taken to utilize the proper products for piping systems. This includes using only the specified types of gaskets and insuring that only seamless pipe is being used on steam and condensate systems. Also, only chloride free insulation is allowed to be installed on stainless steel piping for the clean steam system. This includes the rigid insulation used at pipe supports. This needs to be verified for all future insulation products and for the rigid insulation already installed at supports.

**END REPORT**