

Far Installation Status Report – Electronics Testing Plans

September 5, 2000
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Work Done to Date

General plans have been made for many different testing needs.

There are three phases in the electronics installation and testing. During the initial phase items will be shipped to the mine in preparation for the installation and commissioning. The second phase is during the commissioning and the final phase is the routine ongoing installation and operation.

There are also three types of equipment. First are those that are thoroughly tested before shipping and are expected to be working when they arrive; this includes custom boards and crates They will be tested after they are installed, as part of the final system. The second type are generally commercially purchased and may need testing or burn-in periods. These and computers, rack monitors, Ethernet interfaces. The final group are 'used' items, mainly the LeCroy 1440 system from Fermilab, which will have undergone a checkout, but still need checking at Soudan.

	Initial Phase	Commissioning Phase	Routine Phase
Pre-checked	Minimal checkout facilities needed. Assumed good, check for shipping damage, perhaps powerup.	Extensive checkout facilities needed. Possibility of comprehensive debugging.	Minimal checkout facilities needed. Assumed good, failures sent back for repair
Commercial	Burn-in, functional checkout facilities needed. Failures sent back to manufacturer	Burn-in, functional checkout facilities needed. Failures sent back to manufacturer	Burn-in, functional checkout facilities needed. Failures sent back to manufacturer
Used	Need to test functionality and minor diagnostic capability.	Need to test functionality and minor diagnostic capability.	Need to test functionality and minor diagnostic capability.

Cables are generally shipped to the mine pre-made. Some may come from commercial vendors. We expect to test all the HV cables before installation and have the facilities to test other cables and fibers.

Work has begun to define the electronics test area. A first iteration has been made on its layout, tables, rack, power and LAN connections. There is also preliminary work to define the

requirements of the Computer and the Control Rooms, where some of the commissioning and testing of the complete system will be done.

Plans for Remaining Work

- Need more detailed space and equipment requirements for the Electronics Test Area and the Computer/Control Area.
- Determine who will supply the test equipment.
- Need more detailed plan for what the checkout and burn-in tests will involve. This should be documented so that non-experts can perform the tests.
- Need more detailed estimates of the effort and time needed for the checkout and burn-in tasks.
- Need to identify people to do the tests.
- Detailed plans are needed for what happens with components which fail their tests. Where are they sent, what documentation is needed with them...?