

Safety Alert

Notice No. 15
January 25, 2000

ELECTRICAL CABLE TESTING

Recently, a fire occurred on a platform in the Pacific OCS Region following insulation testing of an electrical submersible pump power cable on the drilling rig floor. At the end of the test, the platform contract employee grounded the power cable with the test instrument leads, causing a spark. The spark ignited a small amount of gas escaping from the well annulus. The nearby driller immediately closed the annular preventer, thereby extinguishing the fire.

In the interest of safety, operators are advised to take the following precautions when testing electrical submersible pump power cables:

1. Electrical testing should be avoided on the rig floor or well bay.
2. Where feasible, testing should be conducted from a purged electrical room. (Use of a pigtail assembly to test the mandrel away from the rig floor prior to landing the mandrel assembly may be suitable; after landing the mandrel assembly, any further testing should be conducted from a purged electrical room.)
3. Any electrical testing done in a non-purged environment should require a traditional hot work permit and include continuous air monitoring for flammable gases.
4. Best Available and Safest Technology should be used for the electrical test instruments, such as a self-discharging megohmmeter, to reduce the possibility of sparking. (Capacitance should be discharged for a period at least 4 times as long as the period during which test voltage had been applied. Additionally, high-capacitive apparatus should be left short-circuited until ready to re-energize.)

This Safety Alert can be found on our Website at:
<http://www.mms.gov>