

OIL INDUSTRY SAFETY DIRECTORATE
NOIDA

SAFETY ALERT

E&P (Onland)

No. 14/01

Title: **Fire in the cellar pit while cutting off casing pipe**

Location: **Cellar Pit**

Activity Type
(Result/outcome): **Fire**

What happened:

Casing (13 3/8") was lowered in the hole and cemented in place. During cementation, the cement was displaced using oil base mud.

A hot work permit was issued by the rig safety supervisor to cut the excess casing pipe from the cellar pit. To start the job, a cutting torch was used by the welder to make a hole in the casing pipe to allow the mud above the intended cut in the casing to drain out. As the hole was being cut, the torch ignited the oil-based mud as it sprayed out of the hole in the casing. There was a fire in the cellar pit which was extinguished by using the fire extinguishers and then the job was suspended.

What caused it:

The presence of oil base mud in the casing was not taken into account, prior to commencing the hot job.

Whenever oil-base mud is in use, there is a potential for fire and an extremely efficient ignition source was provided with the cutting torch. The "Fire Hazard" of oil base mud was not identified in the Hot Work Permit. Hence, adequate measures like purging requirements were not met, while performing the hot work.

Corrective actions:

- When oil base mud is used to displace cement, pump a water blanket as after flush to displace the oil base mud to facilitate cutting the casing.
- Ensure all personnel understand the safety requirements and follow "Hot Work Permit" procedure. All possible hazards, specific to the hot job activity should be considered and recorded in the 'Hot Work Permit'.
- Review of MSDS for Oil Base Mud would be desirable to know about the hazards associated with the product to put in place the required preventive/mitigation measures.

It is provided for information purpose. This information should be evaluated to determine if it is applicable in your operations, to avoid reoccurrence of such incidents.