Safety Alert

From the International Association of Drilling Contractors

ALERT 09 – 16

EXTENSION CORD SAFETY

WHAT HAPPENED:

During a routine inspection of a 110 volt coiled extension cord, an Electrician found that one of the leads was damaged.

WHAT CAUSED IT:

Extension cords are rated for the current they can carry in free air. If you use an extension cord to full capacity when it is coiled up, the heat trapped in the center of the coil can cause the insulation to break down and melt.

Heat is a natural product of current flowing through a conductor because there will always be some energy wasted through resistance. The amount of heat produced can be minimized by increasing the conductor size, but large conductor extension cords are hard to handle and are not very flexible. As long as the cord is lying straight, the heat can be dissipated into the surrounding air. But if the cord is coiled, the heat becomes trapped within the coil and overheating can occur, even if the current is within the load carrying capacity of the extension cord.

CORRECTIVE ACTIONS: To address this incident, this company instructed operations personnel to:

- Reminded all crew members that when using coiled extension cords, the cord MUST be fully extended.
- Instructed personnel that when they are using extension cords, they are to ensure that the cord is not caught under equipment that could restrict the flow of free air around the cord.
- Personnel were instructed to take care to ensure that extension cords are not kinked or tied in tight knots.
- Coiled extension cords are also widely used in many household applications, such as gardening, do-it-yourself projects, home shops, etc. Please take this information home and be safe.

IADC Note: Refer to IADC Alerts: 09 – 09 and 09 – 10;
Also refer to the following links for additional information:
http://www.gurnee.il.us/fire/fire_prevention/home_safety/ext_cords.html
http://www.cpsc.gov/cpscpub/pubs/16.html

The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.

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