Safety Alert

Electrical Incident - UV Exposure Hazard

High Intensity Discharge Lamps

HID (High Intensity Discharge) lamps are typically used in gymnasiums, multi-purpose centres and indoor sports areas. The lamps in these light fittings have an inner quartz tube, enclosed by an outer glass envelope that is designed to filter out UV radiation.

The Incident
A group of people recently received UV burns to their skin and eyes (requiring hospital treatment) when damaged HID lighting was operated at a school. There is also the risk of dangerous glass shards falling on persons below if a protective grill is not present and a breakage occurs.

The Hazards
Potential hazards may exist when high bay lighting of this type is not securely covered by a protective wire grille, or is operated when the protective glass envelope is damaged:

- physical hazard - if a protective grille is not present and a lamp's outer UV protective glass envelope shatters (e.g. through a ball strike), glass shards may fall on persons/students below;
- health concern - if the lamp's outer UV protective glass envelope breaks and the inner arc chamber of the lamp continues to operate, possible sunburn and eye damage may occur.

Recommended Controls

1) Staff should visually inspect HID lighting from the ground prior to use (while turned off) to ensure that protective grilles are in place and the casings are not deformed from ball strikes etc.

2) Damaged lights should be turned off until repairs are carried out by a licensed electrical contractor. School staff are not licensed to perform work near live electrical parts on any item of electrical equipment. Signage should be erected by the light switch to advise that lights should not be operated.

3) When replacement occurs, request lamps with a Teflon coating to ensure that shattered glass will not become a potential future hazard in the event of breakage.

4) During maintenance, the licensed electrical contractor should check if grilles are secured by screws to prevent the grille from dislodging and help strengthen the light housing.

5) Activities in these type of facilities should be supervised at all times to ensure that damage to high bay light fittings is not deliberately carried out (e.g. kicking of balls where not permitted etc).

More information
Electrical Safety Guide - **http://education.qld.gov.au/health/pdfs/healthsafety/electrical-safety-guide.pdf**
Electrical Safety legislation (Qld) - **http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/E/ElectricalSA02.pdf**