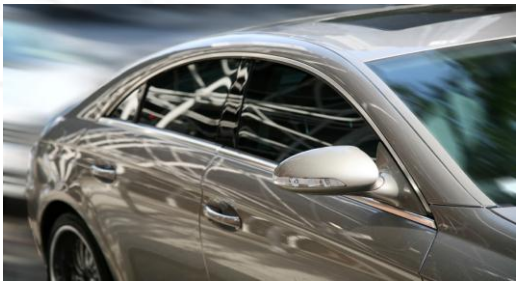

Mobile Phone Usage at Petrol Stations

As far as the GSM Association (GSMA) is aware none of the media stories of mobile phones causing petrol station fires has ever been traced to a real event. However, there may be hazards associated with the distraction of using a mobile phone while operating a petrol pump. Therefore, we recommend that mobile phone users respect safety advice.

Background

There is periodic media coverage claiming that mobile phones have been involved in explosions at petrol stations, but none of these stories has ever been traced to a real event. In some countries, warning notices on petrol pumps and in handouts have also encouraged speculation. In fact, as a 2005 report for the Australian Transport Safety Bureau[1] concludes:

'A review of the literature revealed that, between 1993 and 2004, there were 243 reported incidents of fires breaking out at petrol stations around the world. Although the fires were claimed to be caused by exploding mobile phones, experts have subsequently revealed that not one of the incidents was associated with telecommunication equipment. Instead, many of the fires were ignited by the discharge of static electricity from the human body.'

This information brief addresses only issues related to petrol (gasoline) stations, expert advice should be sought in regard to possible risks in other flammable atmospheres.

Risk Assessment for Mobile Phones

In March 2003 the UK Institute of Petroleum hosted a technical seminar entitled Can mobile phone communications ignite petroleum vapour' The seminar summary reported:

'The seminar showed the findings of research undertaken to date demonstrating that although the majority of mobile phones are not specifically designed and constructed to prevent them igniting a flammable atmosphere (in accordance with standards for 'protected equipment'), the risk they present as a source of ignition is negligible. The Institute of Petroleum is not aware of any fire incident that has been substantiated as having been caused by a mobile phone anywhere in the world. Presenters indicated that all of the reported incidents are either hoaxes or have been incorrectly attributed to having been caused by a mobile phone.'

Studies by the University of Oklahoma[2] and Exponent Failure Analysis Associates[3] support this conclusion. The manuals of some mobile phone manufacturers still contain warnings, related to the remote possibility of sparks from a dislodged battery but others have removed the cautionary language from their manuals.

Siting of Base Stations Near Petrol Stations

Mobile phone base stations antennas are sometimes located on or near to petrol stations forecourts. In publicly accessible areas, the radio frequency signal levels are only small fractions of human safety guidelines. At the same 2003 Institute of Petroleum seminar, Mr Tony Maddocks of ERA Technology Limited concluded:

'Base stations have highly directional radiation patterns and the assessment indicates no hazard at ground level.'

GSMA Position

We are unaware of any established link between radio signals from mobile phones or base stations and petrol station fires. There may be more tangible hazards associated with the distraction of using a mobile phone while operating a petrol pump.

Therefore, the GSMA recommends that mobile phone users respect the prohibitions of the fuel companies, and follow any relevant advice given in their mobile phone user guides.

References

[1]Australian Transport Safety Bureau, Static Fires at Retail Petrol Stations: An examination of the myths and facts about fires caused by static electricity and exploding mobile phones, Research Paper B2005/0028, June 2005.

[2]University of Oklahoma Wireless EMC Center, Investigation of the Potential for Wireless Phones to Cause Explosions at Gas Stations, 2001.

[3]Exponent Failure Analysis Associates, Cell Phone Usage At Gasoline Stations, December 1999.

Where to go for more information

GSMA: **http://www.gsma.com/health**

GSMA Head Office 7th Floor, 5 New Street Square, London EC4A 3BF, UK Tel: +44 (0) 207 356 0601