



management of hazardous chemicals are worth setting up.

**Key words/Phrases:** Formaldehyde, exposure, human, occupational health



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**Key Words/ Phrases:** Terrorism, VIP, Close Protection, Countermeasures



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#### 34. VIP PROTECTION FROM CBRN HAZARDS

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Protection of heads of state/government from CBRN threats requires flexibility and advanced planning. The best approach to CBRN countermeasures in a close protection context combine traditional close protection techniques, sound security practices, and a good understanding of the technical nature of the threat. Poor general security practices make for poor CBRN protection. This paper addresses a methodology for assessing the viability of threats to protected persons/VIPs and provides an overview of close protection in the CBRN environment.

It is important to define the scope of CBRN response in the close protection context. Some threat agents are more applicable to a military environment than to the type of attack consistent with assassination. By focussing the scope of CBRN close protection more specifically on the more technically viable threats, appropriate concepts of operation can be developed. Concepts of operation, developed with an understanding of the threat, determine the requirement for advanced preparation and the training and equipping of protective details. Most of the responses required in CBRN incidents are well served by tactically sound close protection procedures. The fundamental principles are: rapid identification of hazard, speed, use of protective technology, and medical interventions, including rapid decontamination and basic and advanced life support measures.

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#### 35. MDS G(N) FAST DIFFERENTIATION BETWEEN NATURAL AND ARTIFICIAL GAMMA RADIATION WITH A NEW CLASS OF MOBILE INSTRUMENTS

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A State-of-the-Art tool used for detecting and tracking artificial gamma radiation out of a helicopter or a vehicle is the MDS G(N) – Mobile Detection System. A highly sensitive scintillation detector detects a significant artificial gamma radiation on the ground even if the helicopter is travelling at high speed. The GPS-aided system visualizes the measured values on a moveable map displayed on the screen of a notebook every second. The colours of the continuously entered points do represent adjustable alarm thresholds. This way, location and intensity of an unknown radioactive source or a radioactive contamination can be determined very quickly. The NBR®-technology (Natural Background Rejection) which is used here leads to expressive measurement results differentiating between artificial and natural gamma radiation. Additional He-3 detectors allow simultaneously the detection of neutrons. The NBR® principle – developed by Thermo Scientific – stands out for its very short response times. Thus, artificial radiation can be detected reliably within seconds – even when the unit is operated by untrained staff.

Unlike traditional analytic measuring techniques, the NBR® method is able to detect artificial radiation sources hidden or strongly shielded gamma sources clearly from the natural background radiation. The measuring range from 1 nSv/h to 20 µSv/h and is