

findings and the resultant AELs being proposed. The proposed values were developed in the context of applying professional judgment and did not rely exclusively on any one method. Accordingly, the proposed AELs reflect realistic risk management provisions associated with chemical demilitarization and do not necessarily apply to other purposes.

CDC believes that incorporating risk management into the risk assessment process is necessary and beneficial for the following reasons: Extensive experience has shown that any exposure would be expected to be episodic and acute; extensive air monitoring, engineering, and procedural safeguards have effectively limited exposures; and competing risks would be introduced if existing requirements were significantly changed. Consequently, this proposal is predicated on CDC's understanding of existing demilitarization safeguards and procedures.

Rather than specify an 8-hour time-weighted average, CDC proposes to designate a 5-minute ceiling level that reflects the extensive near-real-time monitoring systems associated with chemical demilitarization activities. Additionally, CDC proposes to recommend a 12-hour general population limit (GPL-12), applicable to both the general population and

workers, to confirm that low-level exposure is not occurring. The time duration of the GPL-12 is consistent with the sampling period for existing air monitoring methods and the long work shifts in many demilitarization operations.

CDC recommends a GPL value to allow facility perimeter monitoring levels to be set at a concentration that ensures that carcinogenicity protection goals are met. CDC proposes to change the definition of the GPL to reflect the probable short duration of potential exposures to the general public. Further discussion of this redefinition appears in the available support documentation.

CDC believes this proposal meets the goals of protecting workers and the public at potential airborne concentration levels below those which would result in adverse health effects or irritation for acute exposures, and further protects against risk of cancer from long-term exposure. The criteria proposed in this announcement protect at a risk level below one in one million excess cancers, which is considered to be insignificant.

**SUMMARY:** CDC's proposals are based on comments by individual scientific experts and interested participants at a public meeting convened by CDC on September 11–12, 2001, in Atlanta, GA;

the latest available scientific data and technical reviews; exposure and risk assessment approaches (e.g. CatReg and RfC methods); and CDC's understanding of current risk management practices associated with the U.S. Army's chemical agent demilitarization program. As a result of this re-evaluation of the data and the continuing evolution of AEL derivation methods, CDC proposes that the 1988 worker population limit (WPL) of 0.003 mg/m<sup>3</sup>, currently an 8-hour time-weighted average (TWA), becomes a 5-minute Ceiling limit value (CEILING-5M); and the GPL of 0.0001 mg/m<sup>3</sup>, currently a 72-hour time-weighted average (GPL-72), becomes a 12-hour TWA (GPL-12) and it is adjusted to 0.00002 mg/m<sup>3</sup> to meet carcinogenicity protection levels below thresholds of significant risk (Table 1). CDC also proposes that historical monitoring at the new GPL-12 be implemented where workers are assigned, if reasonable potential exists for mustard exposure. This is to ensure that undetected low-level exposure is not occurring. The proposed Immediately Dangerous to Life or Health (IDLH) value of 0.7 mg/m<sup>3</sup> was derived by CDC/National Institute for Occupational Safety and Health (CDC/NIOSH) in accordance with standard NIOSH protocol.

TABLE 1.—CDC PROPOSED MUSTARD AIRBORNE EXPOSURE LIMITS

[All values expressed as mg/m<sup>3</sup> in air]

Mustard (H, HD, HT) criteria	Existing worker population limit (WPL-8)	Proposed worker daily ceiling limit (CEILING-5M*)	Existing general population limit (GPL-72)	Proposed general population limit (includes workers) (GPL-12*)	Proposed immediately dangerous to life or health (IDLH)
Exposure Level .....	0.003 .....	**0.003 .....	0.0001 .....	0.00002 .....	0.7‡
Averaging Time .....	8 hours (TWA) .....	≤5 minutes .....	72 hours (TWA) .....	≤12 hours† (TWA) .....	≤30 minutes

\* Administrative or appropriate personal protective equipment is required if mustard vapor exposure exceeds criteria.

\*\* To be evaluated with a near real-time instrument with a cycle time of not more than 5 minutes.

† To be evaluated with historical air monitoring method with analysis within 72 hours of sampling (applicable to worker and general population to detect low-level excursions of agent). The action level is recommended to be set at the GPL for this criterion.

‡ The 30-minute period is not meant to imply that workers should stay in the work environment any longer than necessary; in fact, they should make every effort should be made to exit immediately. IDLH condition requires highly reliable dermal and respiratory protection providing maximum worker protection.

Although the proposed CEILING-5M is numerically identical to the existing 1988 CDC criteria, the averaging time has been changed to reflect actual operating conditions associated with ongoing demilitarization activities. The averaging time for the GPL similarly has been changed to reflect actual practice. As discussed in the supporting documentation, these changes reduce the potential dose associated with an exposure at each limit.

CDC believes that the proposed limits will protect workers and the public from potential acute and long-term (e.g.,

carcinogenic) adverse health effects from exposure to H, HD, and HT. Comments are hereby sought to help CDC refine their evaluation prior to issuing final recommended AELs.

**DATES:** Submit comments on or before October 1, 2003.

**ADDRESSES:** Comments may be submitted several ways:

1. By mail. Submit your comments to Dr. Paul Joe, Centers for Disease Control and Prevention, 4770 Buford Highway, Mail Stop F-16, Atlanta, Georgia 30341.

2. In person or by courier. Deliver your comments to the address listed above.

3. Electronically. Submit your comments by e-mail to [pbj4@cdc.gov](mailto:pbj4@cdc.gov), or submit a computer disk to the address indicated above. Electronic documents will be accepted in Corel WordPerfect® or Microsoft Word® formats.

*For a Copy of CDC's Detailed Proposal:* Dr. Paul Joe, Centers for Disease Control and Prevention, 4770 Buford Highway, Mail Stop F-16, Atlanta, GA 30341, Telephone number: