

APPENDIX 3-4

PUEBLO CHEMICAL AGENT-DESTRUCTION PILOT PLANT

EXPLOSIVE DESTRUCTION SYSTEM AT PUEBLO CHEMICAL DEPOT

CHEMICAL AGENT WORKER POPULATION LIMIT EXCEEDANCE PLAN

**U.S. Army
Chemical Materials Activity**

Recovered Chemical Materiel Directorate

**Pueblo Chemical Agent-Destruction Pilot
Plant Explosive Destruction System at
Pueblo Chemical Depot**

**Chemical Agent Worker Population Limit
Exceedance Plan**

Final

**U.S. Army
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Final

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1. PURPOSE

The purpose of this plan is to provide information that will be used to investigate, identify, and control sources of identified chemical agent exceedances above the worker population limit (WPL) in areas where exceedances are not expected during Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) Explosive Destruction System (EDS) operations at Pueblo Chemical Depot (PCD), Colorado.

2. TERMS

WPL. The WPL is the maximum allowable 8-hour time-weighted average concentration of chemical agent that an unmasked worker could be exposed to for an 8-hour workday and 40-hour week for 30 years without adverse effect. **Table Appendix 3-4-1** contains the applicable WPLs for chemical agents of concern during PCAPP EDS operations.

WPL Exceedance. A WPL exceedance is defined as WPL readings above 1.0 WPL.

WPL Exceedance Response. This WPL exceedance response is defined primarily as a medical response when an airborne concentration of chemical agent is greater than the established WPL. It does not necessitate emergency response or an immediate threat to life, but will result in direction given by a competent medical authority (PCD Occupation Health Clinic) to determine any health risks or potential adverse effects.

Table Appendix 3-4-1. Applicable WPLs for Chemical Agents

Chemical Agent	8-Hour Worker Population Limit (mg/m ³)
HD/HT	0.0004 ^a

Notes:

^a DA Pam 385-61.

HD/HT = mustard agent
mg/m³ = milligram per cubic meter

3. OPERATING PROCEDURES

3.1 Notice of WPL Exceedance/Emergency Response

If air monitoring results indicate an exceedance of chemical agent above the WPL in a location where an exceedance was not expected, the following steps will be followed:

- a. The monitoring team lead will immediately notify the Site Safety and Health Officer (SSHO) of the WPL exceedance.
- b. The SSHO will ensure the area(s) involved in the exceedance will be promptly restricted, transients will be limited, and personal protective equipment (PPE) levels will be increased until the cause is evaluated and corrected. See **Appendix Attachment 3-4-1** for an example of a Notice of Restricted Area.
- c. The SSHO will notify the ECBC Operations Manager and provide the following information to the PCD Operations Center who will notify a competent medical authority:
 - Location of the exceedance
 - Period of time during which exceedance occurred
 - Name of chemical agent observed
 - WPL for chemical agent monitored in milligrams per cubic meter (mg/m^3)
 - Amount of exceedance in mg/m^3
 - Statement of proposed action to limit future exceedances
 - Safety point of contact (POC) with phone number.

d. The notice of exceedance will be posted as soon as possible, after the determination of the exceedance, in a manner that informs all possible affected personnel of the exceedance. The notice will be posted for at least 3 days or until the cause of the exceedance has been corrected, whichever is later. The following information will be posted:

- Location of the exceedance
- Period of time during which exceedance occurred
- Name of chemical agent observed
- WPL for chemical agent monitored in mg/m^3
- Amount of exceedance in mg/m^3
- Statement of proposed action to limit future exceedances
- Safety POC with phone number
- Medical POC (Physician or Clinic Director, PCD Occupational Health Clinic) with phone number
- Statement concerning the health significance of the exceedance, with concurrence of the competent medical authority.

Appendix Attachment 3-4-1 contains an example of a Notice of Exceedance.

3.2 Investigation of WPL Exceedances

Investigations of all WPL exceedances will be performed to determine the cause, control the source of the exceedance, and prevent future occurrences. Techniques for controlling exceedances might include conducting additional monitoring, reviewing operational procedures, evaluating engineering controls, and/or other procedures as determined by the SSHO and Recovered Chemical Materiel Directorate

(RCMD) Site Manager. All information relevant to the investigation will be provided to the PCD Occupational Health Clinic.

Instances of exceedances will be reviewed or analyzed at least annually to determine any trends.

**APPENDIX ATTACHMENT 3-4-1
NOTICE OF EXCEEDANCE AND
NOTIFICATION OF RESTRICTED AREA**

NOTICE OF EXCEEDANCE

Location: _____ **Period of time exceedance occurred:** _____

Chemical agent observed: _____

WPL for chemical agent (mg/m³): _____

Amount Detected (mg/m³): _____

Amount of exceedance (mg/m³): _____

Statement of proposed action to limit future exceedances:

Medical POC: _____ **Phone number:** _____

and statement of health significance of exceedance:

Safety POC: _____ **Phone number:** _____

RESTRICTED AREA

Entrance Requirements:

APPENDIX ATTACHMENT 3-4-2
REFERENCE

APPENDIX ATTACHMENT 3-4-2
REFERENCE

Department of Army, Pamphlet 385-61, *Toxic Chemical Agent Safety Standards*, 13 November 2012.

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