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SECTION C - ARS INDUSTRIAL HYGIENE FUNCTION

CHAPTER VII - ARS CONFINED SPACE PROGRAM

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ARS CONFINED SPACE PROGRAM

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CHAPTER VII - SECTION C

ARS CONFINED SPACE PROGRAM

A PURPOSE

This chapter establishes a Confined Space Entry Program in ARS to comply with the requirements of 29 CFR 1910.146, the Confined Space Entry standard promulgated by the Department of Labor, Occupational Safety and Health Administration. The overall purpose of the program is to ensure ARS employees who are required to work in areas defined as confined spaces are provided with a safe and healthful workplace.

B APPLICABILITY

The contents of this chapter are applicable to all ARS employees at all ARS facilities, ARS employees at non-ARS owned facilities must also comply with the requirements of this chapter. Contractor employees at ARS facilities must comply with the Occupational Safety and Health Administration (OSHA) standards, as well as any requirements set forth by the ARS.

C PROGRAM SUMMARY

Investigations of fatal mishaps involving workers in various types of confined space areas revealed that

several common factors combined to result in fatal injuries, in most cases due to asphyxiation. In a significant number of cases would-be rescuers also perished. The need for a program to address the causes of fatal injury in confined spaces was recognized and the OSHA standard was developed.

ARS has adopted the Confined Space program as mandated in
29 CFR 1910.146 Confined Space Entry Standard.

D DEFINITIONS

1 Confined Space - A space having a relatively small volume with inadequate ventilation, where entry is infrequent and only for the purposes of maintenance or inspection.

2 Oxygen Deficient Atmosphere - An atmosphere which does not contain sufficient oxygen to sustain life.

E AUTHORITIES

1 P.L. 91-956, "Occupational Safety and Health Act of 1970".

E AUTHORITIES (Continued)

2 Executive Order 12196, "Occupational Safety and Health Programs for Federal Employees".

3 29 CFR 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs".

4 29 CFR 1910.146, Confined Space Entry Standard. Published as final rule in Federal Register, October 1990.

F DUTIES AND RESPONSIBILITIES

1 Area Director - The AD will insure that a Confined Space Entry Program complying with the requirements of 29 CFR 1910.146 has been implemented at each ARS location in his/her area of responsibility.

2 Area Safety and Health Manager/Cluster Environmental Protection Specialist

a The ASHM/CEP will monitor the Confined Space Entry Program by checking the location's:

- (1) Identification of confined space areas.
- (2) Written procedures for confined space entry.
- (3) Procedures for testing atmosphere (where applicable).
- (4) Confined space entry training.
- (5) Rescue procedures.
- (6) Protective equipment selection and condition.

b The ASHM/CEP will provide guidance to the locations as needed to assist the locations in developing a site specific Confined Space Entry Program.

3 Center Directors/Location Coordinators and Research Leaders in conjunction with the LAO, will insure that each location has a Confined Space Entry Program that as a minimum, complies with 29 CFR 1910.146, and is specific to the location. In addition, grain elevators, barn silos and similar confined working areas will be considered confined spaces and included in the Confined Space Entry Program in ARS.

G CONFINED SPACES

Some examples of "confined space", spaces include:

- o Silos o Degreasers
- o Tanks o Tank Cars
- o Vats o Vaults
- o Reaction vessels o Shafts
- o Boilers o Utility tunnels
- o Sewers o Pipelines
- o Compartments and ships o Pits

H CONFINED SPACE HAZARDS

Hazards considered shall include toxic materials and vapors, flammable materials and vapors, asphyxiating, corrosive, or radioactive materials, and lack of oxygen.

Confined spaces shall be tested for contaminants and periodic check tests shall be made to assure an acceptable atmospheric condition. Adequate mechanical exhaust ventilation shall be provided.

I CONFINED SPACE ENTRY PROGRAM

The ARS Confined Space Entry Program is made up of the following elements:

1 Identification of each of the possible confined spaces which would require an entry permit at the location by the Center Director/Location Coordinator/Research Leader in conjunction with the Collateral Duty Safety Representative.

NOTE: For the definition of a 'Permit Required Confined Space', see para. 1910.146(b)(23) of Exhibit 1.

2 Determination of the type and severity of each of the hazards present in each of the identified permit required, confined spaces at the location.

a Hazardous atmosphere.

(1) Flammable gas or vapor. (Including methane gas or sewer gases)

(2) Asphyxiant. (Oxygen displacement)

b Engulfment hazard.

(1) Liquid

(2) Powder - flour, grain, feed, etc.

I CONFINED SPACE ENTRY PROGRAM (Continued)

(3) Semi-solid - sewage, slurry, etc.

c Physical hazards. (Including machinery or energy sources which may require lock-out/tag-out or physical blocking)

3 Control of the identified hazards and proposed methods and practices to reduce or eliminate the effects of those hazards, and allow safe entry into the confined space. Examples are purging of pipes or lines, and/or Lockout/Tagout of equipment. Atmospheric testing may also be required, both prior to, and during entry.

4 Identification and control of external hazards such as barricades or barriers to prevent interference from other sources not part of the actual confined space entry.

5 Identification of rescue services and equipment required to extract personnel from each confined space.

6 Training of those persons who will be entering the confined space, and those who will be attendant to those entering the confined space.

7 Development of a "Checklist for Entry" which shall be part of the permit. The checklist shall address ALL conditions which must be satisfied prior to and during entry into the confined space. The checklist shall be unique to each confined space. When the checklist is completed, the document should be kept as part of the entry permit, and upon completion of the work the entry permit should be

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filed as a record of the confined space entry.

8 Follow-up periodically to determine if changes are needed in identification of confined spaces procedures for entry, the checklists or permits.

9 The Proposed Rule for Confined Space Entry, 29 CFR 1910.146 "Permit Required Confined Spaces" extracted from the Federal Register, dated June 5, 1989 should be used as guidance. Issuance of a final rule could result in changes. Consult 29 CFR 1910.146 after the final rule is issued and published.

10 Additional information on Confined Space Entry may be found in American National Standards Institute, ANSI Standard Z117.1 - 1989. It is anticipated that the final rule to be published in 29 CFR 1910.146 will closely follow this standard.