

ACCIDENT PREVENTION SIGNS, TAGS, LABELS, AND SIGNALS AND PIPING SYSTEM IDENTIFICATION

08.A SIGNS, TAGS, LABELS, AND PIPING SYSTEMS

08.A.01 Signs, tags, and labels shall be provided to give adequate warning and caution of hazards and instruction and directions to workers and the public.

08.A.02 Signs, tags, and labels shall be visible at all times when the hazard or problem exists and shall be removed or covered when the hazard or problem no longer exists.

08.A.03 All employees shall be informed as to the meaning of the various signs, tags, and labels used throughout the workplace and what special precautions are required: all employees shall be instructed that danger signs and tags indicate immediate danger and shall be informed of any special precautions that may be required.

08.A.04 The type of sign or tag used in a particular situation shall be appropriate for the degree of hazard or intent of message.

> **See Table 8-1**

- a. Signs for contractor operations shall be in accordance with Table 8-1; for USACE operations, design shall be in accordance with Table 8-1 or the USACE Sign manual.
- b. Color coding shall be in accordance with Table 8-2.
- c. Piping systems shall be identified: it is recommended that the identification of piping systems (including pipes, fittings, valves, and pipe coverings) be in accordance with Table 8-3 and Figure 8-3.
- d. The radio frequency radiation hazard warning symbol specified in Figure 8-4 shall be used in the identification of radio frequency radiation hazards.
- e. Laser caution and danger signs shall be in accordance with Figure 8-5.
- f. Ionizing radiation warning signs, labels, and signals shall contain the symbol show in Figure 8-6.
- g. Vehicles or equipment that, by design, move at 1.1 m/s (25 mph) or less on public roads shall display the slow-moving vehicle emblem specified in Figure 8-7.

08.A.05 Each container of hazardous material shall be labeled, tagged, or marked with the identity of the material(s), appropriate hazard warnings, potential health effects, and the name and address of the manufacturer, importer, or other responsible party. > **See 06.B.01**

- a. Signs, placards, process sheets, batch tickets, operating procedures, or other

written means may be used in lieu of affixing labels to stationary process containers if the alternative method identifies the containers to which it is applicable and conveys the information required above. The written information shall be readily available to employees in their work area throughout each work shift.

b. Portable containers into which hazardous material(s) are transferred from labeled containers and which are intended only for the immediate use by the employee who performs the transfer are not required to be labeled; however, there shall be a means of indicating that the hazardous material has been used in the container.

08.A.06 Signs, tags, and labels shall be located as close as safely possible to their respective hazards; tags will be affixed by a positive means (such as wire, string, or adhesive) that prevents their loss or unintentional removal.

08.A.07 Signs, tags, and labels shall be legible and in English; when there are employees who speak a language other than English and to whom the information is to be conveyed, the information may also be presented in their language if it is presented in English as well. > **See 01.A.04**

08.A.08 Signs shall be furnished with rounded or blunt corners and shall be free from sharp edges, burrs, splinters, or other sharp projections; the ends or heads of bolts or other fastening devices shall be located so that they are not a hazard. Wording shall be easily read, concise, and accurate; the sign should contain sufficient information to be understood.

08.A.09 Construction areas shall be posted with legible traffic signs at points of hazard.

08.A.10 Signs required to be seen at night shall be lighted or reflectorized.

08.A.11 Accident prevention tags shall be used only as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, and lockout. > **See Section 12 for tagout requirements.**

08.A.12 Tags shall contain a signal word (either "danger" or "caution") and a major message (presented in either pictographs, written text, or both) to indicate the specific hazardous condition or the instruction to be communicated to the employee. The signal word shall be readable at a minimum distance of five feet or such greater distance as warranted by the hazard. The signal word and major message shall be understandable to all employees who may be exposed to the hazard. > **See Figure 8-2**

08.A.13 Kerosene lamps and open flame pots shall not be used for or with warning signs or devices.

08.A.14 Warning signs shall be placed on unattended Government-owned floating plant and land based heavy equipment accessible to the public and shall read **DANGER NO TRESPASSING US GOVERNMENT PROPERTY.**

08.B SIGNAL SYSTEMS, PERSONNEL, AND PROCEDURES

08.B.01 A standard signal system shall be used on all operations.

- a. Hand signals for crane operations shall conform to those given in Figures 8-8 and 8-9.
- b. Traffic flagging procedures shall be in accordance with the Federal Highway Administration's "*Manual on Uniform Traffic Control Devices for Streets and Highways.*"
- c. For Marine signals, see Section 19.

08.B.02 Signal standards shall be posted at the operator's position, signal control points, and other points as necessary to inform those concerned.

08.B.03 Manual (hand) signals may be used when the distance between the operator and signal person is not more than 30 m (100 ft); radio, telephone, or a visual and audible electrically-operated system shall be used when the distance between operator and signal person is more than 30 m (100 ft) or when they cannot see each other.

08.B.04 A signal person shall be provided when the point of operation (includes area of load travel and area immediately surrounding the load placement) is not in full view of the vehicle, machine, or equipment operator; when vehicles are backed more than 30 m (100 ft); when terrain is hazardous; or when two or more vehicles are backing in the same area.

08.B.05 A flag person or other controls shall be provided when operations or equipment on or next to a highway create a traffic hazard; an exception shall be made only when an adequate mechanical signaling or control device is provided for safe direction of the operation.

08.B.06 Where manual (hand) signals are used, only one person shall be designated to give signals to the operator; this signal person shall be located to see the load and be clearly visible to the operator at all times.

08.B.07 Flag signaling shall be accomplished by use of red flags at least 45 cm (18 in) square or sign paddles; in periods of darkness, red lights shall be used.

08.B.08 An orange or red warning garment shall be worn by flag and signal persons; warning garments worn at night shall be of reflectorized material.

08.B.09 Signal systems shall be protected against unauthorized use, breakage, weather, or interference: any malfunction shall be cause to stop all work.

08.B.10 Only persons who are competent and qualified by experience with the operations being directed shall be used as signal persons.

08.B.11 Signal persons shall back one vehicle at a time; while under control of a signal person, the driver shall not back or maneuver until directed and the driver shall stop when visual contact with the signal person is lost.

08.B.12 The signal person shall have a warning device of clear range and penetrating sound to warn persons when the load is coming in so they have time to get in the clear.

[Table 8-1: Accident Prevention Sign Requirements](#)

[Figure 8-1: Accident Prevention Signs](#)

[Figure 8-2: Accident Prevention Tags](#)

[Table 8-2: Accident Prevention Color Coding](#)

[Table 8-3: Identification of Piping Systems](#)

[Figure 8-4: Radio Frequency Warning Symbol](#)

[Figure 8-5: Radiological Warning Symbol](#)

[Figure 8-6: Laser Danger and Caution Signs](#)

[Figure 8-7: Slow Moving Vehicle Emblem](#)

[Figure 8-8: Crane Signals](#)

[Figure 8-8, \(cont.\), p.2](#)

[Figure 8-8, \(cont.\), p. 3](#)

[Figure 8-8, \(cont.\), p. 4](#)

[Figure 8-8, \(cont.\), p. 5](#)

[Figure 8-8, \(cont.\), p. 6](#)

[Figure 8-9: Helicopter Signals](#)

SECTION 9