EM385 Construction Safety and Health Certification Course
Section 2 - Sanitation
OSHAcademy Course 500 Study Guide

EM 385 SAFETY AND HEALTH CERTIFICATION COURSE - SECTION 2

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The source for this study guide is USACE 385-1-1, including Change 7 – July 2012. The course is designed to be studied off-line as a tool for preparation to successfully complete the OSHAcademy Course 500 final exam.

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BEFORE you read through this section, review the study questions at the end of this section. HUNT for the answers to the questions as you read through the section. Doing this will make the training a little more interesting and help assure a high score on the course final exam!

02.A GENERAL REQUIREMENTS.
Employers shall establish and maintain hygienic sanitation provisions for all employees in all places of employment as specified in the following paragraphs.

02.B HOUSEKEEPING

02.B.01
Places of employment shall be kept as clean as possible, taking into consideration the nature of the work. Regular cleaning shall be conducted in order to maintain safe and sanitary conditions in the workplace.

02.B.02
The floor of every workroom shall be kept as dry as possible. Drainage shall be maintained where wet processes are used, and false floors, platforms, mats, or other dry standing places shall be provided, when possible. Appropriate footwear shall also be provided.

02.B.03
To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, clutter, and unnecessary holes and openings.

02.C DRINKING WATER

02.C.01
An adequate supply of potable water shall be provided in all places of employment, for both drinking and personal cleansing.

02.C.02
Cool drinking water shall be provided during hot weather.

a. Drinking water shall be provided at all Continental United States (CONUS) fixed facilities according to the requirements of the Safe Drinking Water Act, as amended, and all applicable Federal, state, and local regulations. Refer to 40 Code of Federal Regulations (CFR) 141 and 40 CFR 143, for updates to the national drinking water regulations. Refer to individual state and local regulations, as applicable, for updates in those regulations. CONUS facilities classified as suppliers of water:

1) Shall comply with substantive and procedural requirements pursuant to 40 CFR 141;
2) Shall meet any state and local regulations that are more stringent than the Federal regulations; and
3) Shall ensure that the sanitary control and surveillance of water supplies and that the chlorination and fluoridation are conducted according to applicable guidelines.

b. Outside the Continental United States (OCONUS), drinking water at military fixed facilities shall be provided in compliance with country-specific Final Governing Standards (FGS) or, in the absence of FGS, the National Primary Drinking Water Regulations (NPDWR) as outlined in the Overseas Environmental Baseline Guidance Document (OEBGD), Department of Defense Instruction (DODI) 4715.5-G. In addition, the sanitary control and surveillance of water supplies and the chlorination and fluoridation shall be conducted according to applicable Department of Defense (DOD) Component guidelines, or if more stringent, the host nation requirements.

c. Drinking water for temporary field activities shall be provided according to the procedures defined in Army Regulation (AR) 700-136, Field Manual (FM) 10-52, FM 21-10/Marine Corps Reference Publication (MCRP) 4-11.1D, and Technical Bulletin, Medical, (TB MED) 577.

d. Drinking water on all Army floating vessels shall be provided according to 40 CFR 141 and chapter 6 of Navy Medical (NAVMED) P-5010-010-LP-207-1300.

02.C.03
Only approved potable water systems may be used for the distribution of drinking water. Construction trailers and other temporary or semi-permanent facilities shall be properly connected to the local municipal water supply unless the remoteness of the location makes this prohibitive. When unable to connect into the municipal supply, temporary potable water systems shall be utilized, with the services provided by a licensed potable water contractor. “Reclaimed water” (treated wastewater) use in potable systems is strictly prohibited.

02.C.04
Drinking water shall be dispensed by means that prevent contamination between the consumer and the source.

02.C.05
Portable drinking water dispensers shall be designed, constructed, and serviced to ensure sanitary conditions; shall be capable of being closed; and shall have a tap. Any container used to distribute drinking water shall be clearly marked “DRINKING WATER” and may not be used for other purposes.

02.C.06
Open containers such as barrels, pails, or tanks, or any container (whether with or without a fitted cover) from which the water is dipped or poured are prohibited for drinking water.

02.C.07
Fountain dispensers shall have a guarded orifice.

02.C.08
Use of a common cup (a cup shared by more than one worker) and other common utensils is prohibited. Employees shall use cups when drinking from portable water coolers/containers. Unused disposable cups shall be kept in sanitary containers and a waste receptacle shall be provided for used cups.
02.D NON-POTABLE WATER

02.D.01
Outlets dispensing non-potable water shall be conspicuously posted "CAUTION - WATER UNSAFE FOR DRINKING, WASHING, OR COOKING". Outlets dispensing non-potable water at Corps Dumping Stations within campgrounds may, in lieu of this requirement, be posted in accordance with USACE’s Engineering Pamphlet (EP) 310-1-6A and EP 310-1-6B.

02.D.02
There shall not be any cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

02.D.03
Non-potable water may be used for cleaning work areas, except food processing and preparation areas and personal service rooms, provided this non-potable water does not contain concentrations of chemicals, fecal coli form, or other substances which could create unsanitary conditions or be harmful to employees.

02.E TOILETS

02.E.01 General.
Toilets shall be present in all places of employment and shall contain the following: Exception: The requirements of this subdivision do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation readily available to nearby toilet and/or washing facilities which meet the other requirements of this paragraph):

a. Separate toilet facilities, in toilet rooms, shall be provided for each sex and shall be provided in all places of employment according to Table 2-1;
b. Each lavatory shall be equipped with hot and cold running water, or tepid running water;
c. Hand soap or similar cleansing agents shall be provided;
d. Individual hand towels or sections thereof, of cloth or paper, warm air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, shall be provided;
e. All lavatories shall be provided with an adequate supply of toilet paper and a holder for each seat;
f. Each toilet shall be contained within an individual compartment and equipped with a door and separated from other toilet fixtures by walls or partitions sufficiently high to ensure privacy;
g. Toilet facilities shall be constructed so that the interior is lighted;
h. Separate toilet rooms for each sex need not be provided if toilet rooms can only be occupied by one person at a time, can be locked from the inside, and contain at least one toilet seat;
i. Where such single-occupancy rooms have more than one commode, only one commode in each toilet room may be counted;
j. Washing and toilet facilities shall be cleaned regularly and maintained in good order;
k. Each commode shall be equipped with a toilet seat and toilet seat cover. Each toilet facility - except those specifically designed and designated for females - shall be equipped with a metal, plastic or porcelain urinal trough; and

l. Adequate ventilation shall be provided and all windows and vents shall be screened; seat boxes shall be vented to the outside (minimum vent size 4 in (10.1 cm)) with vent intake located 1 in (2.5 cm) below the seat.

MINIMUM TOILET FACILITIES (OTHER THAN CONSTRUCTION SITES)

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Minimum number of Toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 15</td>
<td>One (1)</td>
</tr>
<tr>
<td>16 to 35</td>
<td>Two (2)</td>
</tr>
<tr>
<td>36 to 55</td>
<td>Three (3)</td>
</tr>
<tr>
<td>56 to 80</td>
<td>Four (4)</td>
</tr>
<tr>
<td>81 to 110</td>
<td>Five (5)</td>
</tr>
<tr>
<td>111 to 150</td>
<td>Six (6)</td>
</tr>
<tr>
<td>Over 150</td>
<td>Refer to Note ²</td>
</tr>
</tbody>
</table>

NOTE: ¹Where toilet facilities will not be used by women, urinals may be provided instead of commodes, except that the number of commodes in such cases shall not be reduced to fewer than 2/3 of the minimum number specified.

² One additional toilet fixture for each additional 40 employees.

02.E.02

Construction Sites. Toilet facilities on construction sites shall be provided as follows (the requirements of this subsection do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation immediately available to nearby toilet facilities):

a. Where sanitary sewers are not available, job sites shall be provided with chemical toilets, recirculating toilets, or combustion toilets unless prohibited by state/local codes;

b. Each toilet facility shall be equipped with a toilet seat and toilet seat cover. Each toilet facility - except those specifically designed and designated for females - shall be equipped with a metal, plastic, or porcelain urinal trough. All shall be provided with an adequate supply of toilet paper and a holder for each seat;

c. Toilets shall be provided for each sex according to Table 2-2. Separate toilet rooms for each sex need not be provided if toilet rooms can only be occupied by one person at a time, can be locked from the inside, and contain at least one toilet seat;

d. Where it is not practical to provide running water, hand sanitizers may be used as a substitute for running water. (Many hand sanitizers contain flammable liquids and personnel shall be trained regarding their use, storage and safety precautions.).
e. Toilet facilities shall be constructed so that the occupants are protected against weather and falling objects; all cracks shall be sealed, and the door shall be tight-fitting, self-closing, and capable of being latched;

f. Adequate ventilation shall be provided and all windows and vents shall be screened; seat boxes shall be vented to the outside (minimum vent size 4 in (10.1 cm)) with vent intake located 1 in (2.5 cm) below the seat;

g. Toilet facilities shall be constructed so that the interior is lighted; and

h. Provisions for routinely servicing and cleaning all toilets and disposing of the sewage shall be established before placing toilet facilities into operation. The method of sewage disposal and the placement location selected shall be in accordance with Federal, state, and local health regulations.

### TABLE 2-2

#### MINIMUM TOILET FACILITIES (CONSTRUCTION SITES)

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Minimum number of Toilets¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 or fewer</td>
<td>One (1)</td>
</tr>
<tr>
<td>20 or greater</td>
<td>One (1) toilet seat and</td>
</tr>
<tr>
<td></td>
<td>One (1) urinal per 40 workers.</td>
</tr>
<tr>
<td>200 or greater</td>
<td>One (1) toilet seat and</td>
</tr>
<tr>
<td></td>
<td>One (1) urinal per 50 workers.</td>
</tr>
</tbody>
</table>

**NOTE:** ¹Where toilet facilities will not be used by women, urinals may be provided instead of commodes, except that the number of commodes in such cases shall not be reduced to fewer than 2/3 of the minimum number specified.

**02.E.03**

Employees working in temporary field conditions, in mobile crews or in normally unattended work locations shall be provided at least one toilet facility unless transportation to nearby toilet facilities is readily available.

**02.F  WASHING FACILITIES**

**02.F.01**

Washing facilities shall be provided at toilet facilities and as needed to maintain healthful and sanitary conditions.
02.F.02
Each washing facility shall be maintained in a sanitary condition and provided with water (either hot and cold running water or tepid running water), soap, and individual means of drying. If it is not practical to provide running water, hand sanitizers may be used as a substitute.

02.F.03
Washing facilities shall be in close proximity to the worksite.

02.G Showers

02.G.01
Washing facilities for persons engaged in the application of paints, coatings, herbicides, insecticides, or other operations where contaminants may be harmful shall be at or near the work site and shall be equipped in order to enable employees to remove such substances.

02.G.02
Whenever showers are required by a particular standard, the showers shall be provided in accordance with the following:

a. One shower shall be provided for every ten employees (or fraction thereof) of each sex, who are required to shower during the same shift;
b. Body soap or other appropriate cleansing agents convenient to the showers shall be provided;
c. Showers shall be equipped with hot and cold water feeding a common discharge line; and
d. Employees who use showers shall be provided with individual clean towels.

02.H Changing Rooms.
Whenever employees are required by a particular standard to wear protective clothing, changing rooms shall be equipped with separate storage facilities for both street clothes and protective clothing.

02.I Clothes Drying Facilities.
If working clothes are provided by the employer and become contaminated, wet or are washed between shifts, provision shall be made to ensure that such clothing is decontaminated, clean, and dry before reuse.

02.J Food Service

02.J.01
All cafeterias, restaurants, mess facilities, and related facilities on areas, projects, or installations shall be established, operated, and maintained in compliance with the health and sanitation recommendations of the United States Public Health Service and applicable state and local regulations.
02.J.02
All employee food service facilities and operations shall be conducted in accordance with sound hygienic principles.

02.J.03
In all places of employment where all or part of the food service is provided, the food dispensed shall be wholesome, free from spoilage, and shall be processed, prepared, handled, and stored in such a manner as to be protected against contamination.

02.J.04
No employee may be allowed to consume food or beverages in a toilet room or in any area exposed to a toxic material.

02.J.05
No food or beverages may be stored in toilet rooms or in an area exposed to a toxic material.

02.K  WASTE DISPOSAL

02.K.01
An adequate number of waste receptacles shall be provided in a food service area and used for the disposal of waste food. Receptacles shall be constructed of smooth, corrosion-resistant, easily cleanable, or disposable materials, provided with solid tight-fitting covers, emptied at least daily and maintained in a sanitary condition.

02.K.02
Receptacles used for putrescible solid or liquid waste or refuse shall be constructed in order to prevent leakage and to allow thorough cleaning and sanitary maintenance. Such receptacles shall be equipped with solid tight-fitting covers, unless they can be maintained in sanitary conditions without covers.

02.K.03
All sweepings, solid or liquid wastes, refuse, and garbage shall be removed in a manner which avoids creating a menace to health and should be discarded as often as necessary or appropriate to maintain sanitary conditions in the place of employment.

02.L  VERMIN CONTROL

02.L.01
Every enclosed workplace shall be constructed, equipped, and maintained, as practicable as possible, in order to prevent the entrance or harborage of rodents, insects, or other vermin.

02.L.02
A continuing and effective extermination program shall be instituted when the presence of vermin is detected. The use of licensed exterminators/pest control personnel is required.

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SECTION STUDY QUESTIONS

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1. Outlets dispensing non-potable water shall: _____

2. Open containers such as barrels, pails, or tanks, may be used for drinking water if properly sterilized. _____

3. The floor of every workroom shall be kept as dry as possible. Drainage shall be maintained where wet processes are used. All of the following are listed as methods for proper water drainage, EXCEPT: _____

4. Reclaimed water (treated wastewater) used in potable systems is _____.

5. Open containers such as barrels, pails, or tanks, or any container from which the water is dipped or poured may be permitted for drinking water when tested. _____

6. Non-potable water may be used for cleaning when the following criteria are met, EXCEPT: _____

7. Separate toilet rooms for each sex need not be provided if all of the following criteria are met, EXCEPT: _____

8. If the washing facility cannot provide running water, hand sanitizers may be used as a substitute. _____

9. One shower shall be provided for every _____ employees (or fraction thereof) of each sex, who are required to shower during the same shift.

10. Receptacles used for putrescible solid or liquid waste or refuse shall be constructed in order meet all of the following criteria, EXCEPT: _____