

STATE OF ARKANSAS
DEPARTMENT OF LABOR

SAFETY CODE FOR
INDUSTRIAL SANITATION

INTRODUCTION

Great progress in industrial sanitation has been made since the last promulgation of the Safety Code for Industrial Sanitation was made in 1951. The present revision brings this State abreast of accepted good practices throughout the nation.

The Department of Labor of Arkansas is not only doing everything in its power to protect the safety and health of the workers in establishments within its borders but it is also cooperating with the nation-wide program whose purpose is to develop adequate safety codes in all States.

In order to increase the value of this publication to the managements who are required to comply with its mandatory requirements pertinent informational material is included. The code provisions (mandatory for the most part) are printed at the left side of each page. The informational material is printed at the right.

Every employer in the State who operates a manufacturing establishment MUST comply with all of the mandatory code provisions herein so far as they are applicable.

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SECTION 1 - DEFINITIONS

Scope. This code applies to all places of employment in which articles or materials are manufactured, repaired, cleaned, sorted, or renovated, in whole or in part, for profit, sale or compensation.

Purpose. The purpose of this code is to prescribe minimum sanitary requirements for the protection of the health of all employees in establishments covered by this code.

"Shall" and "Should". The word "shall" is to be understood as mandatory; the word "should" as advisory.

Communicable Disease is defined to mean any of those diseases listed in the rules and regulations of the State and/or local health authorities concerned as coming within the scope of State or local communicable disease laws, ordinances and regulations.

Industrial Operation is defined to mean the manipulations and labor performed in all fields of employment within the borders of this State.

Inside Room is defined to mean a room having no windows, skylight, or similar openings to the outside air.

Lavatory is defined to mean a basin or other vessel for washing.

Number of Employees, unless otherwise specified, is defined to mean the maximum number at work at any one time.

Personal Service Rooms are defined to mean rooms set apart as first-aid rooms, rest rooms, emergency rooms, dressing rooms, toilet rooms, wash rooms, lunch rooms, and rooms for similar purposes.

Place of Employment is defined to mean every place where, either temporarily or permanently, any articles are processed, in whole or in part, by any person directly or indirectly employed by another for direct or indirect gain or profit.

Privy is defined to mean a structure constructed in accordance with specifications for the Sanitary Privy of the Arkansas State Board of Health.

Process is defined to mean any method of manufacturing, erecting, demolishing, repairing, cleaning, sorting, or renovating of any article, in whole or in part, for profit, sale or compensation.

Sanitary Condition within the meaning of the code is defined to mean such a physical condition of working quarters as will tend to prevent the incidence and spread of disease.

Toilet Room is defined to mean a room maintained within or on the premises of any place of employment, containing toilet facilities for use of employees.

Toilet Facilities (closets) are defined to mean fixtures maintained within toilet rooms for the purpose of defecation.

Urinal is defined to mean a fixture connected with a sewer maintained within a toilet room for the sole purpose of urination.

Wash Room is defined to mean any space or room in any place of employment used solely for the

purpose of maintaining body cleanliness.

Water Closet is defined to mean a toilet facility which is connected to a sewer and flushed with water.

Workroom is defined to mean any place where goods or products are processed or stored, in whole or in part, for profit, sale or compensation.

Mechanical Air Supply - Mechanical air supply shall mean a system of ventilation where the air is taken from the out-of-doors and forced into the room or workplace by means of power driven fans or blowers.

Mechanically Exhausted - Mechanically exhausted shall mean a system of ventilation in which air is removed from the room or workplace by means of power operated equipment.

Natural Ventilation - Natural ventilation shall mean a system of ventilation which depends upon natural atmosphere conditions and upon the operation of windows, doors, ventilating and other openings and ventilators or other devices making use of natural air motion or temperature differences.

Net Open Area of Windows - Ventilating Openings, etc. The net open area of windows and ventilating openings shall mean the net open area that such windows and ventilating openings can be opened to the out-of-doors.

The Projected Area of Doors, Windows and Other Openings - The projected area of doors, windows and other openings shall mean the gross area of the openings provided in the out-of-doors surfaces of the buildings for such openings.

SECTION 2 - HOUSEKEEPING

RULES

RULE 5 - CONDITIONS OF FLOORS

RULE 1 - HOUSEKEEPING

Plants, factories and other work places, in order to provide reasonable protection for the health and safety of persons employed, shall be maintained in a clean and sanitary manner.

EXPLANATORY COMMENTS

In order to accomplish good housekeeping successfully it is necessary to organize a cleaning schedule and place the responsibility for the fulfillment of this schedule on supervision.

RULE 2 - STORAGE

All products, supplies, material, parts or equipment shall be stored in places provided for them consistent with good practices prevailing in similar operations and shall be piled in such a manner as not to cause an accident to any person.

Management should set up standards on housekeeping and either distribute notices to supervisors and workers or post these notices in conspicuous locations.

RULE 3 - ACCUMULATION OF REFUSE

Accumulation of refuse and byproducts of operations shall not be allowed to the extent that such accumulations would affect the safety or health of workers.

Where possible, aisle lines should be painted to guide the workers with temporary storage out of designated aisles.

RULE 4 - SAFE DISPOSAL OF REFUSE

Combustible or explosive refuse or by-products and unused materials shall be disposed of daily in a safe manner in order to eliminate exposure to fire, accident & health.

The painting of trash and scrap cans to remind workers to place rubbish and different types of scrap in different cans is a practical

means for keeping the shop clean.

The use of light paint in the washrooms and dressing rooms tends to

All floors used by employees shall be maintained in good repair. All aisles, gangways and passageways regularly used by employees shall be maintained in good repair and shall be kept free of obstructions.

Keeping floors in good repair and free from obstructions will help prevent employees from tripping and falling.

RULE 6 - CARE OF FLOORS

The floors of all buildings in which employees work shall be maintained in a clean condition, and as far as possible, in a dry condition, consistent with the type of operations carried on. Where wet processes are regularly carried on, causing wet floor conditions, the floors shall be drained or false floors, platforms, mats or other dry standing places provided.

RULE 7 - SWEEPING AND CLEANING

The sweeping and cleaning of floors, walls, ceilings, structural parts, of the building, equipment, fixtures and other contents of work rooms shall be done in such a manner as to prevent quantities of harmful dust contaminating the breathing zone of the employees, but where it is impractical to perform such cleaning operations without hazardous air contamination, respirators shall be furnished to the employees in the affected areas and all such respirators shall meet the current minimum requirements of the United States Bureau of Mines for similar equipment for the particular hazards to be guarded against.

RULE 8 - EXPECTORATION

When cuspidors or receptacles are provided for expectoration, they shall be of such construction that they can be readily cleaned and disinfected; and they shall be cleaned at least daily, if used, to prevent them from becoming a menace to health.

RULE 9 - EATING IN CERTAIN WORKROOMS PROHIBITED

The employer shall not allow employees to lunch on their job, nor shall milk,

encourage cleanliness among workers.

coffee or soft drinks be brought to the job in workroom areas where processes produce toxic dusts or fumes that can be conveyed to the human system by way of the mouth. Employees working in such contaminated areas shall be required to wash before eating, and the employer shall be required to provide a locker room with benches, or a lunch

The basic approach should always be to prevent spillage and drippage. Very substantial expenditures are justified in the long run if they reduce cleaning and maintenance expense, increase efficiency and improve the working conditions.

Cleaning methods in wide use include:
Built-in vacuum systems. Portable vacuum cleaners.

Floor arranged to be hosed down.

Wet sweeping.

Building housing dusty operations should be so designed as to eliminate ledges, crevices and pockets which may catch dust.

Painting the out of way corners with white paint discourages expectorating and the accumulation of rubbish.

While breathing contaminated air is by far the chief source of work-connected health injuries, the additional amounts of many of the toxic substances may be taken into the system by eating and drinking on the job is likely to mean the difference between sickness and health. The system can dispose of small amounts of most toxic substances without damage but if the daily intake is only slightly above the rate of elimination health injury will soon result. This applies with particular force to such highly toxic substances as lead, arsenic, mercury and many of the widely used coal tar

derivatives.

Room or other equally suitable place for use of the employees for eating purposes.

SECTION 3 - VENTILATION

RULE 1 - CUBIC FEET OF AIR SPACE PER EMPLOYEE IN WORKING AREAS.

All work rooms in which employees regularly work, other than rooms used primarily for storage, warehouse purposes and cold storage, and rooms in which the air temperature or humidity is controlled because of an essential process, shall have not less than two thousand (2,000) cubic feet of air space per person regularly employed, based on gross cubical contents, provided the total projected area of doors and windows opening to the out-of-doors is not less than twelve-and-a-half (12 1/2) per cent of the gross floor area of the work room except that for every one (1) per cent or fraction thereof the projected area of doors and windows opening to the out-of-doors is half greater than twelve-and-a-half (12 1/2) per cent, the volume of air required per person may be reduced one hundred and thirty-five (135) cubic feet from the two thousand (2,000) cubic foot requirement, but in no event shall the volume of air space per person be less than one thousand (1,000) cubic feet because of greater door and window areas; otherwise a system of mechanical air supply shall be provided.

RULE 2 - MECHANICAL AIR SUPPLY REQUIREMENTS IN WORKING AREAS

Where there is less than two thousand (2,000) cubic feet of air space per person regularly employed in a workroom, except as provided for in Rule 1 of this section, or where the total projected area of all doors and windows opening to the out-of-doors is less than twelve-and-a-half (12 1/2) percent of the gross floor area of the workroom, there shall be mechanically supplied, an amount of the clean tempered air on the basis of one of the two following rules, whichever gives the greater amount of air supply:

- (a) When the air space per person

It is possible in many instances to secure satisfactory general ventilation by means of the natural air movement, but there are a number of disadvantages to this type of ventilation. Structural features may cause dead spots or violent drafts. Changes in wind direction will affect ventilation and location of building with respect to other buildings or natural obstacles likewise will affect the ventilation.

In cold weather these conditions become more serious. It costs money to heat cold air, and it is desirable to hold the influx of cold air to the minimum required for adequate ventilation. With so many variable conditions it is difficult to regulate the quantity of air entering the building or secure a proper distribution of it. There is also a tendency for disagreement between employees as to the temperature or air velocity that is comfortable with natural ventilation.

Where a physical condition exists which requires mechanical air supply according to the code, it is suggested that a ventilating engineer be called in to determine the size, type and construction of the system that should supply at least the amount of air required. When exhaust fans are used to discharge to the outside air, exhaust locations should be chosen that will not cause offense to the occupants of the building or create a nuisance in the neighborhood.

regularly employed in the work room is less than two thousand (2,000) cubic feet, there shall be supplied two (2) cubic feet of air per minute per person for each one hundred (100) cubic feet of air space or fraction thereof less than two thousand (2,000) cubic feet per person.

(b) When the projected area of all doors and window openings to the out-of-doors is less than twelve-and-a-half (12 1/2) per cent of the gross floor area of the work room, there shall be supplied two and four-tenths (2.4) cubic feet of air per minute per person, for each one (1) per cent or fraction thereof the projected door and window openings are less than twelve-and-a-half (12 1/2) per cent.

RULE 3 - VENTILATION OF OFFICE, TOILET, LOCKER, REST AND LUNCH ROOMS

All offices, rest, toilet, locker and rest and lunchrooms shall be provided with natural or mechanical ventilation to maintain healthful conditions during periods of occupancy, as per the following requirements:

(a) Rooms with Ventilation to the Out-of-Doors. If offices, rest, locker, and lunch rooms have windows or ventilated openings opening to the out-of-doors and the net open area of such windows and ventilating openings is not less than five (5) per cent of the gross floor area, no mechanical ventilation shall be required.

(b) Rooms with Ventilation to the Out-of-Doors but with a Deficiency of Natural Ventilation. If offices, rest and lunch rooms have less than five (5) per cent and more than two-and-a-half (2 1/2) per cent of the gross floor area represented by net window and ventilating openings opening to the out-of-doors, there shall be provided a mechanical supply of clean tempered air of not less than six-tenths (.6) cubic feet of air per minute per square foot of gross floor area. However, if the net open area of the windows and ventilating openings opening to the out-of-doors is less than two-and-a-half (2 1/2) per cent of the gross floor area, there shall be mechanically supplied, six-tenths (.6) cubic feet of clean tempered air per minute per square foot of gross floor area and there shall be mechanically exhausted, three-tenths (.3) cubic feet of air per minute per square foot of gross floor area.

The great advantage of a mechanical ventilation system is that the circulating units and outlets can be so located that an even distribution of air can be maintained.

The allowances for air space per person assume buildings of reasonably tight construction such as the usual modern brick or reinforced factory building. In more open types of construction air leakage may be such as to make the requirements appear more liberal than is really necessary. However, it is emphasized that liberal air space and good ventilation promote comfort and efficiency and have a favorable effect on employee morale.

(c) Rooms without Ventilating

Openings to the Out-of-Doors. If offices, rest and lunch rooms are located in the interior of buildings and with no direct natural ventilation to the out-of-doors and which have less than five (5) percent and more than two-and-a-half (2 1/2) percent of the gross floor area of the room, represented by net window and ventilating openings opening to the building in which they are located, and if the net area of all windows and ventilating openings to the out-of-doors of that floor of the building plus the office, rest and lunch rooms is not less than five (5) per cent of the gross floor area, no mechanical ventilation shall be required.

However, if the net open area of all windows and ventilating openings to the out-of-doors on the floor of the building containing office, rest and lunch rooms is less than five (5) per cent of the gross floor area of the floor of the building including office, rest and lunch rooms, then there shall be mechanically supplied not less than one (1) cubic foot per minute of clean tempered air per square foot of gross floor area to such office, rest and lunch rooms, and there shall be mechanically exhausted one (1) cubic foot of air per minute per square foot of gross floor area.

(d) **Kitchens.** Where a room is used for a kitchen purposes only, for the preparation of food for employees, there shall be mechanically exhausted four (4) cubic feet of air per minute per square foot of gross floor space and if the net open area of windows and ventilating openings opening to the outside is less than three (3) per cent of the gross floor area of such kitchen, there shall also be mechanically supplied, one and two tenths (1.2) cubic feet per minute of clean tempered air per square foot of gross floor area.

(e) **Toilet and Locker Rooms.** If the amount of net open area of windows and ventilating openings opening to the out-of-doors is less than five (5) per cent of the gross floor area of toilet and locker rooms, there shall be mechanically exhausted one and five-tenths (1.5) cubic feet of air per minute per square foot of gross floor area.

Buildings of conventional construction will have more than five (5) per cent of the gross floor area in window and skylight openings. However, inside or basement rooms in practically any type of building may lack adequate ventilation. This provision is intended to bar their use as offices, rest or lunch rooms unless adequate ventilation is provided.

The chief problems in kitchens are getting rid of cooking odors and maintaining a comfortable working atmosphere. Poorly ventilated dark kitchens make a high standard of cleanliness difficult and dissatisfaction with the eating facilities. A low kitchen standard in these things and in the methods of food preparation and handling cannot long be canceled. Consideration should be given to the use of filters for the removal of grease from the air, as an important aid in the maintenance of mechanical ventilation. Lint and grease in ducts are a fire hazard and an insect harborage.

SECTION 4 – LIGHTING

The requirements for lighting any workplace or process shall not be less than the minimum requirements specified by the American Standard "Recommended Practice of Industrial Lighting" A-11-1952 or the latest revision thereof approved by the American Standards Association.

NOTE: This standard was first developed by the Illuminating Engineering Society and after gaining widespread acceptance was approved as "Recommended Practice."

Illumination is a factor of primary importance which affects environment in every industrial establishment. The beneficial effects of good illumination, both natural and artificial, have been established in extensive tests over many years. The advantages to industry are varied:

1. Greater safety.
2. Great accuracy of workmanship.
3. Better utilization of floor space.
4. Increased production.
5. More easily maintained cleanliness.
6. Less eyestrain.
7. Improved morale.

SECTION 5 - WATER SUPPLY FOR HUMAN CONSUMPTION

RULES

RULE 1 - POTABLE WATER

A source of potable water shall be supplied for all purposes for human consumption, such as for drinking, cooking, washing and bathing purposes.

RULE 2 - WATER FOR WASHING AND BATHING

A supply of cold and hot water shall be provided for all lavatories in every washroom. The temperature of the hot water shall be controlled to prevent scalding the employees, or hot and cold water shall be provided through double faucets or valves having a single discharge.

RULE 3 - PROVISIONS OF DRINKING WATER

A supply of potable and cool drinking water shall be provided and made accessible to employees in working areas; also a supply of drinking water shall be provided in all rooms assigned for lunch purposes. No drinking water facilities shall be provided in toilet

EXPLANATORY COMMENTS

Potable water is safe drinking water and should be from a source approved by health authorities. When such is not available, the State authorities should furnish directions for rendering the water safe for human consumption.

From the standpoint of personal hygiene there should always be adequate washing facilities. It is essential that employees handling any type of contaminating materials, carefully wash their hands before eating. It is therefore necessary that an adequate supply of hot and cold water, soap and towels be available for use by the employees.

Failure to provide an adequate number of conveniently located drinking facilities can result in time wastes and inefficiency far exceeding the cost of a fully adequate installation.

rooms and privies.

clearly

RULE 4 - METHOD OF DISPENSING DRINKING WATER

(a) **Drinking Cups.** The use of common drinking cups is prohibited. However, individual paper drinking cups may be used, and a container shall be provided for the discarded cups. A container shall be provided for unused individual cups to protect them from dirt and soil before use.

In all instances where water is cooled by ice, the construction of the container shall be such that the ice does not come in direct contact with the water.

(b) **Drinking Fountains.** Where a drinking fountain is provided it shall be constructed of impervious material with the water jet set at an angle, protected with a guard so that the water cannot fall back into the point of discharge. The nozzle of water jet shall be located at least three-quarters (3/4) of an inch above the edge of the bowl or receptor, and the discharge nozzle shall be guarded so that the mouth or nose of the drinker shall be prevented from coming in contact with the discharge nozzle. The bowl or receptor shall be so proportioned as to catch all water issuing from the nozzle, and there shall be provided a waste pipe sufficiently large to carry off water promptly from the bowl and adequately trapped. The height of the drinking level of the fountain shall be convenient to the average person.

Salt Tablets should be provided in closed containers adjacent to drinking water facilities in plants where excessive heat is encountered by employees to help prevent heat prostrations. Drinking facilities should be properly maintained with frequent cleaning, repairing and adjusting. It is important that drinking fountains meet these provisions fully, otherwise they are likely to contribute to the spread of contagious disease among all who use them.

(c) **Other Methods of Supplying Drinking Water.** Open containers such as barrels, pails or tanks for drinking water must be dipped or poured, whether fitted with cover or not, shall not be used, except that drinking water for mobile labor gangs such as labor construction crews, building crews and the like, may be supplied with portable pressure drinking fountains equipped with approved water jet as described in Rule 4 (b) of this section, and thermos bottles may be used for drinking water for individual use by employees in remote and isolated places such as crane cabs and the like.

Portable fountains to meet a variety of needs are commercially available. Only types which keep the ice used for cooling entirely separate from the drinking water should be used.

RULE 5 - POSTING OF NOTICES OF UNSAFE WATER

Where water is not potable or fit for human consumption and is used for industrial processes, fire protection and the like, notices shall be posted at all water outlets where the water might be used for human consumption and such notices shall be not less than twelve (12) inches by twelve(12) inches in size stating

The value of pure water for industrial uses and the per gallon cost of potable water is in most cases such as to justify the use of potable water for all purposes. Where this is not the case the piping carrying the unsafe water should not have outlets that can be mistaken for those from the drinking water supply.

that such water is unsafe, and not to be used for drinking purposes.

RULE 6 - CROSS CONNECTIONS

There shall be no physical cross connections of contaminated water systems with potable water system within the plant property. Valves and check valves shall not be considered a means of separating a contaminated water supply from a potable water supply.

RULE 7 - BACK SIPHONAGE

No potable water supply system shall be connected to any tank, plumbing or other fixture or device where back siphonage may occur to contaminate the water system except in the following manner:

(a) Lavatories and Sinks. Where potable water supply systems are used for washing and bathing purposes the outlet of the faucets or the water supply to such lavatories and sinks shall not be less than one (1) inch above the rim.

(b) Toilets and Urinals. No potable water system shall be connected to a toilet or urinal except by means of a back flow preventer provided with a flush valve, or by means of a gravity flush tank where the outlet of the potable water system to such tank or the critical level of a backflow preventer is at least one (1) inch above the overflow and such overflow shall be capable of handling the maximum flow of water without the water level in the tanks reaching the supply outlet or critical level.

(c) Other Equipment. No potable water supply shall be directly connected to a water system used for the purposes that might contaminate the potable water system due to back siphonage, such as aspirators, syphons, ejectors, washers, processing tanks and the like. When water is required for other than potable use and the water supply is obtained from a potable water supply system, such requirements shall be taken from a surge tank which is supplied by the potable water system with the potable water supply pipe discharging not less than the equivalent of two (2) nominal supply pipe diameters and never less than six (6) inches above the rim of such surge tank.

Unless the maintenance department is fully aware of the hazard of cross connections and unless the plant management is strict in prohibiting them, they are likely to develop through the rearrangements and process changes that are made from time to time in most plants.

Back siphonage has been responsible for much spread of disease including such disasters as the amoebic dysentery epidemic which was caused by back siphonage in two Chicago hotels in 1933. If the plumbing in these hotels had been in compliance with these rules the epidemic would not have occurred.

SECTION 6 - TOILET ROOMS

RULE 1 - TOILET ROOMS

Every employer shall provide toilet room facilities for employees. In every establishment employing more than 25 persons, the use of privies is prohibited. Where privies are permitted, they shall be constructed and maintained in accordance with the "Specifications for the Sanitary Privy" of the Arkansas State Board of Health.

RULE 2 - TOILET ROOMS FOR EACH SEX

Separate toilet rooms shall be provided for each sex when there are more than six (6) persons of either sex employed per working shift. There shall be no doors or openings of any kind connecting toilet rooms used by males and females. Toilet rooms shall be plainly marked "MEN" or "WOMEN". In toilet rooms used exclusively for females, covered receptacles shall be provided for the discarded personal hygiene requirements of the females, and the contents of such receptacles shall be disposed of daily.

RULE 3 - TOILET ROOM CONSTRUCTION

All new toilet rooms and any expansion or addition of toilet room facilities shall be constructed and arranged in accordance with the following requirements of this rule except as provided for in the rule entitled "Installation of Urinals."

(a) Walls. The walls of toilet rooms shall extend to the ceiling of the building in which they are located, except that toilet rooms located in high vaulted areas shall have walls not less than eight (8) feet high and a complete ceiling built over the entire area of the toilet room and with the further exception that toilet rooms located on mezzanine floors or built in the roof trusses of buildings where there is no view from above into the toilet room from another elevation or crane and the like, shall have walls not less than eight (8) feet high, and no ceiling will be required.

(b) Wall Materials. The interior walls shall be built of solid construction to at least eight (8) feet above the floor line. Above the six (6) foot line, materials may be used that are translucent but not transparent. Windows glazed with non-transparent glass shall be used in exterior walls.

(c) Floors. Toilet rooms containing

Toilet rooms should be accessible to employees using them. Under ordinary conditions this means they should not be more than one floor above or below the regular workplace of the persons using them.

When persons other than employees are permitted the use of toilet facilities on the premises, a reasonable allowance should be made for such other persons in estimating the minimum number of toilet facilities required by this code. Toilet facilities are an essential part of the worker's everyday life. They are as important to him or her during working hours as they are at home. It is management's responsibility to supply toilet facilities in sufficient number for the size of the employee group and in locations convenient for those using them.

To develop the correct attitude among employees in respecting the management's investment in sanitation facilities, responsibility again rests with the employer. Not only should he seek actively and constantly the worker's cooperation in maintaining the facilities in a sanitary condition, he must also demonstrate regular and thorough upkeep in the toilets, washrooms and lunchrooms. When the employer does this then a share of the responsibility for adequate sanitation also belongs to the employee. It should be his obligation to use rather than abuse toilet and wash facilities. Adequate toilets and lavatories are provided for his use because they are essential to his well being and health while at work as they are at home. By the same token, the facilities should be used by him and left usable for the person who follows him just as he would wish it done in his home.

Wall and ceiling should be of a finish that can be easily cleaned.

more than a total of two closets or urinals shall have the floors and cover base constructed of materials which are watertight and impervious to moisture. The cove base shall be integral with the floor and not less than six (6) inches high.

(d) Location of Doors. All doors for means of ingress and egress shall be provided with an automatic closing device. The doors of toilet rooms for males and females shall not be located closer than six (6) feet. The doors shall be so located that the toilet fixtures are not visible through the doors except that partitions may be located and built within at least one (1) foot of the floor and not less than six (6) feet high to screen the interior of the toilet room from beyond the door view. Doors may be provided with glass that is not transparent.

(e) Lavatories. There shall be provided at least one lavatory in, or adjacent to, each toilet room.

(f) Facilities Not Permitted. No toilet room shall be used for locker space for lunching. No drinking facilities shall be provided in toilet rooms.

RULE 4 - NUMBER OF WATER CLOSETS

The number of water closets for each sex provided in existing or new toilet rooms shall not be less than indicated in the following table:

Number of Persons working in any Single Shift	Number of Water Closets
1 to 9 inclusive	1
10 to 24 inclusive	2
25 to 49 inclusive	3
50 to 74 inclusive	4
75 to 99 inclusive	5
Over 99	1 for ea. additional 30 persons

Floors of toilet rooms should be free from cracks, smooth and constructed of a substance that is impervious to moisture, to prevent the rotting of joists and other floor supporting members and the breeding of vermin. To facilitate cleaning floor drains should be incorporated

Every workplace where one or more males and one or more females are employed together should be provided with a sufficient number of separate water closets, for the use of each sex, and plainly so designated; no person should be allowed to use a closet which is provided for persons of other sex. Such water closets should be kept clean and free from disagreeable odors.

Men or boys should not be permitted to be in charge of toilet rooms that are designated for the use of women, or vice versa, but cleaning or work may be performed by either sex before and after the usual hours of employment.

RULE 5 - INSTALLATIONS OF WATER CLOSETS

All water closets installed in new toilet rooms, and any additional water closets installed in existing toilet rooms shall be installed according to this rule:

(a) **Spacing of Water Closets.** Every water closet shall be within a compartment separated from the toilet room proper by means of partitions. The partitions shall be spaced not less than two feet eight inches (2 ft. 8 in.) apart and not less than three feet six inches (3 ft. 6 in.) front to back.

(b) **Construction of Water Closet Partitions.** Partitions shall be made of solid construction which can be readily cleaned and kept in a sanitary condition and shall be within twelve (12) inches of the floor and not less than six (6) feet high. A single or double door shall be located at the entrance of the water closet compartment and such door shall be provided with a lock or fastener on the inside.

(c) **Construction of Water Closets.** Water closets shall be constructed of vitreous china or other impervious material. The surfaces left exposed after installation shall have a glazed, smooth finish. The trap shall be made an integral part of the bowl and shall be so formed as to maintain a water seal two-and-a-half (2 1/2) inches when filled to the overflow. Bowls shall embody an integral flushing rim constructed so as to wash the interior of the bowl at each flushing. The outlet of the bowl shall be constructed to afford a gas-tight connection between the bowl and waste pipe. The water supply shall enter the bowl through the flushing rim in sufficient quantities to thoroughly remove all waste material at each single flushing, with sufficient clear water left within the bowl to form the necessary trap seal and water surface. The installation or continued use of pan, plumber, washout, trough, range, and long hopper water closets shall not be permitted. Water closets, except those of the integral seat type shall be provided with an open front seat. The seat shall be constructed of or surfaced with non-absorbent material or finish.

RULE 6 - NUMBER OF URINALS

Whenever urinals are provided, one facility less than the above specified number of facilities may be provided, for males, for each urinal, except that the number of facilities in such cases may not be reduced to less than two-thirds of the number specified above.

RULE 7 - INSTALLATION OF URINALS

Urinals shall be located in the toilet rooms, except if accessibility to the men working in certain areas is necessary they may be installed in an area not frequented by women. In such cases, a partition extending to within one (1) foot of the floor and at least seven (7) feet high shall be built around the urinal. A self-closing entrance door shall be provided if the urinal is visible from outside the entrance to compartment. Not more than one (1) water closet may be installed with such urinal installation provided partitions are installed as required by Rule 5 (a) and (b) of this section. Ventilation, heating and lavatory facilities shall not be required in such installations. No ceiling is required on such urinal and/or water closet compartment installations.

RULE 8 - CONSTRUCTION OF URINALS

Urinals may be of the single-fixture type or trough type. Where the trough type is used, twenty-four (24) inches of trough shall be considered equivalent to one (1) urinal. Urinals installed after the approval of this code revision shall be constructed of vitreous china or other impervious material; and the surfaces left exposed after installation shall have a glazed smooth finish. The water supply for flushing purposes shall be of sufficient quantity to remove all waste material at each single flushing. Every urinal shall be provided with the necessary trap seal.

RULE 9 - TOILET FACILITIES WHERE THERE ARE NOT SEWER CONNECTIONS

Toilet facilities may be installed where there are no sewer connections or septic tank facilities and it is impractical to install any sewer system, under the following conditions:

(a) Privies for Each Sex. Privies shall be provided for each sex. Privies for each sex shall be plainly indicated.

(b) All privies, septic tanks and chemical closets shall be constructed and maintained in conformity with Rules and Regulations of the State Board of Health.

RULE 10 - TOILET PAPER

Toilet paper shall be provided for each water closet, privy and chemical closet. A holder or retainer shall be provided for toilet paper at each facility.

RULE 11 - TOILET ROOM TEMPERATURES

The temperature of toilet rooms other than privies during period of occupancy shall not be less than 60° F.

SECTION 7 - WASH AND LOCKER ROOMS

RULES

RULE 1 - WASH AND LOCKER ROOM REQUIREMENT

Wash and locker room facilities shall be provided for each sex when the number of either sex exceeds ten (10) regularly employed on any single work shift.

RULE 2 - PLACE TO BE PROVIDED FOR EMPLOYEES' BELONGINGS

The employer shall furnish clothes racks, locker, locker baskets, or suspended devices, for every employee regardless of whether a wash and locker room is required. If lockers, locker baskets or other suspended devices are provided they shall be of a type that can be locked.

RULE 3 - CONSTRUCTION OF WASH AND LOCKER ROOMS

All new wash and locker rooms, and any new expansion of or addition to wash and locker room facilities after the approval of this code revision shall be constructed in accordance with the requirements of this rule.

(a) Construction of Wash Rooms. If washrooms are constructed as separate units they shall be constructed in accordance with Section VI, Rule 3, except that no ceiling shall be required.

(b) Construction of Combined Wash

EXPLANATORY COMMENTS

In the prevention of dermatitis, personal hygiene is most important. Frequent washing reduces the period that the irritating agent is in contact with the skin.

Locker rooms and washrooms should be well supervised and regular inspections of washrooms and the inside of lockers should be a definite part of the sanitation program. Fire and disease may breed in poorly ventilated and filthy lockers. The lockers should preferably be constructed of perforated material to allow ventilation.

Not only does adequate space for storing clothes contribute to the comfort of employees and good housekeeping in the plant but in case where industrial disease hazards are present the proper storage of clothing reduces the possibility of contamination. Certain processes require employees to wear special work clothing during their hours of work. The materials they handle may be of the type that produce industrial disease. Again, there are instances where the contact of work clothes with street clothes will communicate to the latter the harmful substances that are accumulated on the work clothes during the hours of employment. These locker rooms and especially the lockers themselves should be maintained in a high degree of cleanliness. Where work clothes become wet, provision should be made to dry them adequately before the next shift.

and Locker Rooms and Separate Locker Rooms. When wash and locker rooms are combined in a single unit or locker rooms are built as separate units, they shall be so constructed that the walls shall extend to the ceiling of the building in which they are located except that when located in high vaulted areas the walls may be less than (8) feet high, and the wash and locker room combination, or the locker room, completely sealed over to keep dust and dirt off the employees' belongings unless lockers are provided for the employees' clothing; then no ceiling shall be required unless a ceiling is essential to cut off view from above.

The laboratories may consist of individual units or wash sinks or circular

(c) Floors. The floors of combined wash and locker rooms and separate locker rooms shall be constructed of or covered with materials impervious to moisture so that they may be kept in a clean and sanitary condition.

(d) Location of Doors. All doors of combined wash and locker rooms separate wash and locker rooms for means of ingress and egress shall be provided with automatic closing devices. The doors of wash and locker rooms for males and females shall not be located closer than six (6) feet apart. The doors shall be so located that the interior of the rooms is not visible from the outside through the doors except that partitions may be located and built within at least one (1) foot of the floor and not less than six (6) feet high to screen the interior of the room from beyond the door view. Doors may be provided with glass that is not transparent.

Wash and locker rooms shall be plainly marked "MEN" or "WOMEN."

If wash and locker rooms are built as separate units or in combination, and adjoin toilet rooms, there shall be a connecting door between the facilities.

RULE 4 - WASHROOM FACILITIES

Every washroom shall be provided with laboratories and/or shower baths as per the following:

(a) Laboratories. Laboratories shall be provided for employees per shift on the following basis: At least one laboratory for each ten employees, up to 100 persons. One laboratory for each additional 15 persons, or portion thereof.

Experience has shown that wash basins or bowls for common use may become very unsanitary. The wash basin with a stopper when filled with water for washing becomes dirty, and may transmit disease from one employee to another. Flowing water is the more sanitary method to use.

The arrangement of washing facilities is important in relation to convenience of use and ease of cleansing. Conveniently arranged washing facilities encourage their use. If properly arranged, wash basins will be in a light, airy room that permits orderly arrangement and can be kept in a clean condition with proper lighting to assure that there is good housekeeping.

Certain types of processes require shower baths for the protection of the health of the workers. The shower baths and such accessories as false floors and mats should be maintained in a sanitary condition.

It is a good practice to supply soap dispensers in washrooms to encourage a more sanitary and healthful environment for the employees.

fountains. Where wash sinks or circular fountains are used, twenty-four (24) inches of outside rim of a wash sink and seventeen (17) inches of outside rim of a circular fountain shall be the equivalent of one (1) lavatory.

or

(b) Construction of Laboratories. All laboratories installed in new wash rooms, any additional laboratories installed in existing wash rooms after the approval of this code shall comply with the provisions of the State Plumbing Code and shall be constructed as follows:

Laboratories, wash sinks or circular fountains shall be constructed of vitreous china or other impervious material. The surfaces left exposed after installation shall have a glazed, smooth finish.

Individual lavatories may not be equipped with a drain plug or stopper. Wash sinks and circular fountains shall not be equipped with a drain plug or stopper. All laboratory facilities shall be equipped with hot and cold water faucets and wash sinks and circular fountains may be equipped with spray pipes provided with valves for controlling the hot and cold water supply.

RULE 5 - FLOOR SPACE REQUIRED FOR WASHROOM FACILITIES

All new washrooms and any expansion or addition of laboratories in washrooms after the approval of this code shall have not less than thirteen (13) square feet of floor space provided per laboratory or its equivalent, including aisle space where only used for washing purposes exclusive of shower baths. If the washroom is consolidated with the locker room the figure of thirteen (13) square feet may be reduced, depending on the amount of adjacent aisle space common to both the locker room and the washroom.

RULE 6 - HAND TOWELS

Individual hand towels or sections thereof, of cloth or paper, shall be provided and proper receptacles or other sanitary means maintained for the disposal of used towels. Other approved type apparatus may be substituted for towels. The provision of a towel for general or common use shall be prohibited.

RULE 7 - SHOWER BATHS

Shower baths shall be provided for employees regularly engaged in operations where injurious

and toxic liquids, chemicals and dusts are produced and come in contact with the bodies of the employees, or where the operations cause the bodies, except faces, hands and arms of the employees to become so covered with grime, dirt, and grease that the street clothes of the employees become soiled when they change into them after the working shift. In such cases, shower baths shall be provided on the basis of one shower to each fifteen (15) employees or fractional part thereof, and such showers shall be installed in accordance with the following:

(a) Shower Bath Stalls. Individual shower bath stalls installed after the approval of this code shall not be less than thirty-two (32) inches wide and thirty-two (32) inches deep. Where batteries of showers are installed in a line, the showerheads shall be located on at least three (3) foot centers and no partitions need be provided separating the shower spaces.

(b) Shower Bath Floor Construction. The floors of all shower bath installations shall be constructed of materials impervious to water, and the floors shall be pitched to readily drain off into a floor drain. Where the floor connects with a wall, forming a part of the shower installation, a cove shall be made integral with the floor not less than six (6) inches high. Means shall be provided in the surface finish of the floors, or coverings provided on the soapy floors in and around shower bath installations, such as mats, sheets of roofing paper and the like, to prevent employees from slipping and falling. Such anti-slip coverings shall be removed and cleaned at frequent intervals or new material laid on the floors.

(c) Soap. The employer shall provide soap for lavatories and shower baths. Where powdered or liquid soaps are used, suitable dispensers shall be provided for the kind of soap used. The soap shall be of such composition and free from excessive amounts of abrasives that it shall not harm the skin of employees.

RULE 8 - LOCKER ROOM EQUIPMENT

The equipment provided in locker rooms for employees, belongings shall be of a type that will permit good housekeeping and maintaining in a sanitary condition. The general types of equipment shall conform to the following rules:

(a) Clothes Racks. If clothes racks are provided there shall be a shelf at least twelve (12) inches by twelve (12) inches above the racks for lunches, hats, and the like. Clothes shall not be spaced so close that there is no chance for circulation of air, and clothes hangers shall not be spaced closer than six (6) inches apart.

(b) Lockers. Where lockers are provided, no double height lockers shall be installed, and any lockers installed thereafter shall not be less than one hundred and forty-four (144) square inches in cross-sectional area, and not less than sixty (60) inches high outside measurement as measured from the lower edge of the locker base to the lowest edge of the sloping top. The tops of the lockers shall be sloped to prevent the tops of them from being used for shelf purposes, unless recessed into the wall.

Louvers shall be provided in the top and bottom of the locker door to permit circulation of air through the interior of the locker except that the lower louver may be omitted if air is mechanically forced through the lockers. The employer shall make periodic inspection of all lockers to maintain them in a sanitary condition.

(c) Locker Baskets and Other Suspended Devices. Where locker baskets or other suspended devices are provided for the employees' belongings, they shall be installed at sufficient ceiling heights so that the clothes hanging in a suspended manner shall not be less than seven (7) feet above the floor. Such locker baskets and other suspended devices shall be installed in staggered arrangement with spacing of not less than fifteen (15) inches apart on line and eleven (11) inches apart in parallel lines.

RULE 9 - LOCKER ROOM BENCHES

Benches or stools shall be provided for not less than fifty (50) per cent of the number of employees using the locker room per shift, except that benches or stools shall not be required if the employees do not have to change clothes before going home.

RULE 10 - FLOOR SPACE REQUIRED FOR EMPLOYEES' BELONGINGS

The floor space of any new locker room or any addition to locker rooms provided for clothes racks, lockers or locker baskets and other suspended devices plus the stools or benches provided, plus whatever aisle space is necessary for employees to reach the facilities shall not be less than four and five tenths (4.5) square feet per facility.

RULE 11 - WASH AND LOCKER ROOM TEMPERATURES

The temperature of wash and locker rooms during periods of occupancy shall not be less than 65° F.

SECTION 8 - RETIRING ROOMS FOR WOMEN

RULE 1 - REST ROOM REQUIREMENTS

Every establishment employing more than ten (10) women shall provide a retiring room. Establishments that have a plant or factory hospital or medical dispensary on the premises equipped with cots or beds, may substitute such space in estimating requirements for retiring rooms.

RULE 2 - FLOOR SPACE REQUIRED

No retiring room shall contain less than sixty (60) square feet gross floor area and an additional two (2) square feet of floor area shall be added for each female over ten (10). When there are more than one hundred (100) females regularly employed on any one shift, the area of such rest room shall be increased one (1) square foot for each additional female.

RULE 3 - FURNITURE REQUIRED

At least one (1) cot, couch or bed, shall be provided when ten (10) females are regularly employed per shift. When over one hundred (100) females are regularly employed per shift, cots, couches, or beds shall be provided on the basis of one (1) for the first additional 150 and (1) cot for each additional 150 females or fraction thereof.

RULE 4 - CONSTRUCTION OF RETIRING ROOMS

All new retiring rooms shall be separate from all other rooms. They shall be constructed in the same manner as provided for in Section VI, Rule 3, (a) and (b). The floors shall be constructed of or covered with materials impervious to moisture so that they may be kept in a clean and sanitary condition.

RULE 5 - DOORS

All doors for means of ingress or egress shall be provided with an automatic closing device. The doors shall be plainly marked "WOMEN" and such doors shall not be located closer than six (6) feet to wash, locker and toilet room doors used by males.

RULE 6 - REST ROOM TEMPERATURES

The temperature of rest room during periods of occupancy shall not be less than 65° F.

SECTION 9 - LUNCH ROOMS

RULE 1 - PROVISIONS FOR LUNCHING

Either lunchrooms shall be provided for or the locker rooms made available for employees to lunch in when employees are not permitted to lunch at their job as specified in Section II, Rule 9.

RULE 2 - CONSTRUCTION OF LUNCH

substances that might be present. Receptacles equipped with covers should be available for use by employees to discard the residue of their lunches.

If the workers bring their lunches, it is obvious that there should be a proper place for storage, where food will not be harmfully contaminated either by bacteria or by any toxic

ROOMS

Where lunchrooms are provided the walls shall be built not less than eight (8) feet high and they need not be ceiled only if built within high vaulted areas.

The walls may be provided with glass.

RULE 3 - EQUIPMENT

Lunch rooms shall be equipped with sufficient chairs or tables and/or benches to accommodate the number of employees regularly required to lunch at one time.

RULE 4 - TEMPERATURE OF LUNCH ROOMS

The temperature of lunchrooms during periods of occupancy shall not be less than 65° F.