

APPENDIX 13-C

EQUIPMENT OPERATION GUIDES

1. GENERAL

Criteria provided in this section will serve as standards for building equipment operation and are to be used as guidelines for local operating requirements, checklist development, and staffing needs.

These criteria are not intended to require the establishment of, or the continuance of, a route when the need for such does not exist.

The standard frequencies and time allowances cited herein or on Form 4894 are based on the operational activities and criteria in this section. Any exception to the criteria provided herein that is made to meet local conditions must be justified, documented on Form 4896, and approved by the Field Division General Manager/Postmaster as outlined in 13-203 and 13-501.21.

2. EQUIPMENT OPERATING PERIODS

The number of days and hours that equipment operates should be based on the following:

a. HOURS OF OPERATION

In postal workrooms or other space which is occupied beyond normal hours, heating and cooling shall be provided only in those areas occupied. Package-type air-conditioning and heating units shall be installed where they will result in operating cost savings. Automatic controls shall be installed on heating and air-conditioning units and systems to assure minimum operating hours and reduce work load requirements. Generally, the heating and air-conditioning for office areas shall be turned off approximately 30 minutes

after the building occupants leave and turned on in time for the building to be at the prescribed temperature when the occupants arrive. A written procedure shall be prepared for each building specifying the hours of operation for the heating and air-conditioning equipment in accordance with the outside temperature conditions and the ability of the equipment to bring the interior space within the accepted range for occupancy. A copy of the procedure shall be submitted with Forms 4894 and 4895. During weekends and holidays, particular attention shall be given to ensure that the equipment is shut down to the maximum extent possible in accordance with HBK MS-49. Unoccupied space shall have override controls to prevent the temperature from falling below 55°F. When an exception to the above operating hours is contemplated, it shall be justified by a detailed and documented professional engineering study.

b. DAYS OF OPERATION

Where the days of operation for equipment are based on seasonal use, e.g. HVAC, the average number of operating days must be determined locally. Such information may be obtained from automatic recording devices or equipment logs, if available, or from computing the number of degree days per year when such equipment would be needed.

For other building equipment, systems, or areas not requiring full-time operation, use the following guides:

- (1) Buildings or areas occupied occasionally on weekends are to be considered operational 5 1/2 days per week, or 286 days a year.

- (2) Five-day-per-week occupancy excluding holidays equals 250 days a year.

c. CENTRAL CHILL WATER AND BOILER PLANT OPERATING INSTRUCTIONS

The operating route sheets for central chill water and/or boiler plant equipment shall include the following:

- (1) When the plant is to be placed in operation in accordance with local weather conditions.
- (2) The normal operating hours of the plant during the heating or cooling season.
- (3) The frequency of the physical inspections and checks to be made of the equipment and the time to perform same.
- (4) Information on utilities conservation in regard to billing data and guidelines to avoid peak demands.
- (5) Information to be included in the plant log.
- (6) Water-treatment procedures including the frequency of feeding, testing, and the time to perform same.
- (7) Special conditions and operations attendant to the particular installation.

3. STANDARD CRITERIA AND ALLOWANCES

a. CENTRAL CHILL WATER PLANT OPERATION

Continuous attendance of central chill water plants is not authorized. The amount of time needed for the chill water plant operating route is to be based on the actual number of refrigeration machines and accessory equipment in operation (not on the total number

of units installed) and on the functions described below. Operating functions required on other cooling system equipment remote from the central plant area will be performed on separate routes as needed. See other parts of this section to determine appropriate criteria applicable to local equipment. Calculate the time required for plant operation and enter on Form 4895 as outlined below and in part 13-502.12.

(1) Startup and Secure (Col. 11)

One-half hour will be allowed to start and put the chiller plant into operation, make a thorough inspection of the equipment within the plant area, and complete the operating log.

Fifteen minutes will be allowed to shut down equipment in the plant area.

Where 24-hour-per-day operation is justified, the startup and shut-down allowances will be eliminated from the time required to perform the plant operating route.

(2) Operating Checks (Col. 12)

Inspect operating equipment every 2 hours and record readings in the log. This includes all operating equipment in the plant operating route area. Allowable time is not to exceed 10 minutes per machine. An allowance for checking out the central control board will be in accordance with the Central Control Panel section of this appendix.

(3) Water Treatment (Col. 13)

Water treatment includes activities such as feeding, testing, and blowdown (see HBK MS-24). The frequency and time for this work must be determined locally.

b. CENTRAL HIGH PRESSURE BOILER PLANT OPERATION

USPS shutdown procedures will be followed. Continuous attendance of central boiler plants is not authorized. The amount of time needed for the boiler plant operating route will be based on the actual number of boilers in operation, not on the total number of units installed, and on the functions described below. Operating functions required on other heating system equipment remote from the central plant area will be performed on separate routes as needed. Low pressure steam (below 15 psig) and hot water heating boiler operating criteria and allowances are covered in paragraph labeled 3f of this appendix. Hand-fired or stoker-fired boiler operations will be estimated on a local basis and reviewed by the divisional office. Calculate the time required for plant operation and enter on Form 4895 as outlined below and in part 13-502.12.

Workhours Per Day

(1) Startup and Secure (Col. 30)

One-half hour will be allowed to start and put the boiler plant into operation, make a thorough inspection of the equipment within the plant area, and complete the operating log. One-half hour will be allowed to shut down boiler equipment in the plant area. Where boilers are required to be in operation 24 hours per day, the startup and shutdown allowances, except for the initial starting and final shutdown, will be eliminated from the workhour requirements.

(2) Operating Checks (Col. 31)

An operational check must be made of all boilers in operation, four times per shift, not to exceed 15 minutes per inspection. For shift-

ing of equipment, i.e., placing additional equipment in service, 15 minutes per shift is allowed.

An allowance for checking out the central control board will be in accordance with paragraph 3c of this appendix.

(3) Water Treatment (Col. 32)

Water treatment includes feeding and testing activities (see HBK MS-24). The frequency and time required for this work must be determined locally. Also, time for receiving oil deliveries, adjusting of burners, and changing of oil burner tips should be included here.

c. CENTRAL CONTROL PANEL
(Including General Monitoring System)

The purpose of the panel is to simplify operations by providing necessary information to the operator as to what equipment is operating, and if the system(s) are being maintained within their prescribed predetermined conditions.

Workhour allowances to complete operational checks of the central control panel are based upon the refrigeration tonnage installed. The time allowance is as follows:

<u>Tonnage Installed</u>	<u>Workhour Allowance</u>
300 to 500 tons	7 minutes (0.12 hr.)
500 to 1000 tons	10 minutes (0.17 hr.)
1000 to 4000 tons	15 minutes (0.25 hr.)
over 4000 tons	20 minutes (0.33 hr.)

A complete operational check of the central control panel shall be made four times per 8-hour shift. These operational checks are made during the

heating and air-conditioning seasons as required. Calculate the annual time required and enter on Form 4895, line 37.

NOTE: References to line numbers cited below are to line numbers and equipment listed on Form 4894 (Part 13-502).

**d. LINE 1: A/C PACKAGE
UNITS - SPECIAL**

Special purpose package units are defined as equipment serving an area requiring critical temperature and humidity control, where malfunction of this equipment would seriously interfere with the activity being performed in the areas because equipment or material would be damaged. Special purpose areas which are occupied at all times should be checked daily rather than twice daily since occupants will place a service call when additional attention is needed. Package units normally contain all components within an enclosure; however, this item may include a refrigeration system with separate components in the near vicinity. In such cases, the components should not be listed separately. The capacity of such units is usually under 50 tons. Units above 50-ton capacity should usually be listed under line 5, rather than line 1.

e. LINE 2: AIR HANDLERS

The operation of air handlers shall conform to USPS equipment shutdown procedures. These units should not operate at night or on weekends when the area served is unoccupied. Air handlers may consist of a centrifugal fan, heating, and cooling coils with dampers, controls, and circulating pump. This allowance is only for equipment with manual start-stop devices to

be checked twice daily for startup and shutdown. Air handlers equipped with automatic or remote startup control devices will be listed under line 37, rather than line 2.

**f. LINE 3: HEATING BOILERS
(Hot Water or Low Pressure Steam)**

USPS shutdown procedures will be followed. Generally, these types of boilers need not be checked more than twice per day when operational. Operating logs, Form 4846 or 4846A, provide specific operational activities to be performed.

**g. LINE 4: COOLING TOWER
(Over 500 Tons)**

Cooling tower inspection frequency will correspond to the refrigeration units they serve. Enter here or on line 17 depending on capacity.

**h. LINE 5: REFRIGERATION EQUIPMENT
(Small Central Chillers)**

This allowance is for small central chillers with capacities from 50 to 150 tons or larger, or those that are remote from the central plant area. The allowance includes time for checking other equipment such as pump, condenser, etc., in the same room or area.

i. LINES 6 THROUGH 9: RESERVED

**j. LINE 14: COMPRESSED AIR SYSTEMS
(For Building Systems)**

Compressed air systems (all capacities and types) may consist of one or two compressors (dual type) supplying central air and counted as one unit. Air compressors on a water supply or fire protection system should be included under line 19.

k. LINE 15: STEAM CONDENSATE
RETURN SYSTEMS
(Gravity or Vacuum)

In cases where a duplex unit is used, it is to be counted as one system.

l. LINE 16: CENTRAL DRINKING
WATER SYSTEMS

A central drinking water system (all types and capacities) may be a single refrigeration machine or two units serving the same purpose. In either case, it is one system.

m. LINE 17: COOLING TOWERS
(Up to 500 Tons)

See line 4.

n. LINE 18: HOT WATER SYSTEMS

Hot water systems are for domestic water supply. They usually contain a steam regulating valve, converter, pumps, traps, and accessories. Small domestic type hot water heaters are not to be included.

o. LINE 19: HYDRO-PNEUMATIC SYSTEMS
(Including Fire Protection Systems)

Hydro-pneumatic systems (water supply or fire protection systems) may include pumps, pneumatic tanks, air compressors, valves, etc. Air compressors included under this line are not to be entered on line 14. A separate allowance for fire pumps is given on line 38.

p. LINE 20: PUMPS
(Other)

Pumps listed here should not be those which are located in the central chill water plant or central boiler plant area(s). Do not list here any pumps which are part of other systems listed on this form. Time allowances for inspection of pumps associated with

centrally located plants and other listed systems are included in other lines. Do not include fractional horsepower circulating pumps at air handlers, air washers, hot water, or domestic water systems. This line may include oil transfer pumps, chilled water booster pumps, or others not covered in other lines.

q. LINE 21: PRESSURE REDUCING AND
REGULATING STATIONS - STEAM AND
WATER

This line covers pressure reducing valve (PRV) stations that have at least two stages reduction or serve a portion of a building.

r. LINE 22: SECONDARY WATER SYSTEM
(Heating and Cooling)

A secondary water system for heating should include a steam or high temperature water system as a primary source of heat serving a control valve, converter, pumps, traps, and accessories. This line would not include secondary chilled water systems, air washers, or humidifier systems.

s. LINE 23: SEWAGE EJECTOR

Duplex sewage ejector units are to be listed as one system. The system generally consists of closed tank ejectors in which the sewage is lifted by directed air pressure or steam on the surface of the liquids. Sewage or lift pumps should be included under line 36.

t. LINES 24 THROUGH 27: RESERVED

u. LINE 32: PACKAGE UNITS -
COMFORT COOLING

Equipment entered on this line refers to package units used for comfort cooling of building occupants. Small air handling units, especially of the ceiling-mounted type, should also be

entered on this line. Window units or under-window, fan/coil units are not to be included.

v. LINE 33: CONDENSERS

This line should include air-cooled, water-cooled, or evaporative condensers, of all capacities. When the condenser is in the immediate vicinity of the refrigeration unit, it is not to be listed as a separate item for route purposes. Also, air-cooled condensing units are not to be broken down into separate components (i.e., fan, condensing unit, etc.).

w. LINE 34: FANS

List only centrifugal fans over 15 horsepower.

x. LINE 35: FANS, PROPELLER

List only propeller-type fans having a diameter of 24" or larger.

y. LINE 36: SUMP PUMPS

Duplex sump pumps are to be listed as one unit.

z. LINE 37: AIR HANDLERS

Same as line 2 except that the air handlers are equipped with automatic or remote start-stop control devices eliminating the need for manual startup and shutdown at the equipment site. With automatic or remote start-stop control devices, equipment is turned on and off from a central board or general monitoring system and will be checked by route only once a week.

aa. LINE 38: FIRE PUMPS

Enter the number of fire pumps driven by either electric motors, gasoline, natural gas, or diesel engines.

ab. LINE 39: RESERVED

**ac. LINE 44 THROUGH 47:
ELEVATOR MACHINE ROOMS**

Enter the number of elevator machine rooms in Column c according to the number of cars served by a common machine room.

ad. LINE 48: RESERVED

ae. LINE 53 THROUGH 55: BATTERY SYSTEMS

Enter the number of banks of battery systems in Column c used as auxiliary power for the building according to the system voltage as indicated on the form.

af. LINE 56: MAIN CUBICLE ROOMS

Enter the number of main (high voltage) cubicle rooms in the building.

ag. LINE 57: TRANSFORMER VAULTS

Enter the number of high voltage transformer vaults in the building.

ah. LINE 58: SWITCHBOARD ROOMS

Enter the number of power switchboard rooms for low voltage switchgear.

ai. LINE 59: RESERVED

aj. LINE 64: PORTABLE FIRE EXTINGUISHERS

Enter the total number of portable fire extinguishers which require monthly inspection.

ak. LINE 65: EMERGENCY LIGHTS

Enter the total number of emergency lighting units which require monthly inspection.

al. LINE 66: RESERVED

4. SUGGESTED OPERATOR DUTIES

The suggested operator duties in this appendix, supplemented by the equipment manufacturer's operational instructions and local knowledge or history of operational needs, shall be used in preparing local checklists for operation of building equipment.

USPS depends on the operating personnel and their supervisors to keep the building manager informed of any unusual condition observed, and the need for repairs and correction of faults whether it is within their category of work or outside of it. If the need for repairs or replacements is considered important or of an emergency nature, the building manager or the supervisor should be verbally notified immediately.

a. AIR COMPRESSORS

Observe operation for one cycle. Note the pressure and functioning of controls, safety and protection devices, and relief and unloader valves. Check air inlet and cleaner. Clean, if required. Check discharge lines, storage tank, etc. Drain water from tank and lines. Look for signs of misalignment or unusual belt wear. Check belt tension. Note pulleys, belts, guards, etc. Check over motor and controls. Be alert to any unusual sound, vibration, odor, temperature, or condition.

**b. AIR-CONDITIONING MACHINES -
CENTRAL SYSTEM****(1) Compressor Room**

- (a) Before starting the compressor, check source of energy supply (prime mover). Check indicator lamps and replace any which have burned out. Note pressure-temperature relationship. Start purge recovery unit. If system uses low-pressure refrigerants, check

oil and refrigerant levels. Check to see that chilled water and condenser water valves are open. Start auxiliary oil pumps. Check the water supply to oil cooler. Check the hot-gas bypass valve. Check the capacity control dampers or vanes. Start the condenser water pumps, operate the cooling tower fan as recommended by manufacturer, and check water pressures. Place the compressor in service. If capacity controller is manually operated, open slowly.

- (b) When running, make routine inspections of pressures, temperatures, fluid levels, fluid flow, etc. Check for water leaks from pump packing, valve stems, etc. Take readings and record on log sheets. Occasionally, note superheat of suction gas. If refrigerant leaks are suspected, check with leak detector. Add refrigerant and oil as needed. Check scale traps. Occasionally remove covers from pressure switches and other controls, and check for loose screws, springs, contacts, etc. Treat chilled water and condensing water as prescribed. Be alert to any unusual sound, vibration, knocking, odor, temperature, etc.

(2) Condensing Water Circuit

Check circulation of water and temperatures. Note the amount of make-up water that is being used. Observe operation of float valve and mechanism. Leaks, even small ones, should be noted and reported to the supervisor. If required, take water samples and treat the water as prescribed in HBK MS-24. Inspect sumps, tanks, collection pans, etc., for cleanliness, slime formation, or algae growth. Check spray heads and remove obstructions. Evaporative condensers should be checked for unobstructed

passage of air and water. Check drains, overflow pipe, and continuous bleed lines.

(3) Rotating Equipment

Inspect starters and contactors for evidence of unusually high temperature of the contact points. Take suitable precautions for the voltage involved. Check condition of brushes and the presence of unusual wear or poor contact. Observe belt tension, pulley alignment, condition of guards, etc. Observe packing and check for leaks. Be alert to any unusual noise, vibration, odor, etc. Note oil level and lubricants. Make adjustments or corrections as needed. Observe condition of associated piping, valves, pipe covering, insulation, etc.

(4) Air Handlers

- (a) Openings. Check openings for entry or discharge of outside air; check screens to prevent entry of birds; check rain deflectors, flashing louvers, etc.
- (b) Filter Bank. Note pressure drop across filter bank, condition of filter frames and media, presence of places for air to escape or bypass filter, etc.
- (c) Dampers. Note operation of fresh air, return air, and relief air dampers. Look for freedom of motion, condition of damper and linkage, presence of dirt or buildup, response to control signals, etc.
- (d) Coils. (Chilled water, preheat, and reheat.) Check that proper circulation exists. Note fins; remove or report any

obstruction to the airflow. Look for rusting, corrosion, or buildup.

- (e) Fans. Observe condition of housing, coverings, supports, shaft, bearings, belts, guard, etc. Observe operation. Be alert to any unusual noise, vibration, odor, or temperature in either fan or motor.
- (f) Controls. Check control units, valves, relays, piping, gauges, etc. Note if there is freedom of motion in all moving parts; check responsiveness of control units and those being controlled. Be sure the controls that protect against freezeups work properly.
- (g) Plenums and Ducts. Observe condition of material, covering, tightness of doors, closing devices, access openings, supports, canvas connections, gauges, test connections, valves, dampers, splitters, etc.

c. AIR-CONDITIONING MACHINES - PACKAGED UNITS

These units are sealed so very little attention is required other than to make a general observation of the unit and associated equipment when the operating schedules are maintained. Occasionally it is well to check the discharge air and to observe airflow to and from the machine. Operation of cooling water equipment should be checked over and chemical treatment given as prescribed.

d. BATTERIES

Check specific gravity, voltage, temperature, and solution level of pilot cell(s). The pilot cell is considered one cell of a bank electrically connected as one unit and should be the weakest cell of the bank. Inspect for leaks and add water as needed. Maintain the charging voltage

at the minimum rate that will keep battery charged. Clean tops of batteries and corroded terminals as necessary. Observe support for deterioration.

e. BOILERS, HEATING

Complete boiler log (PS Form 4846 or 4846A) for each boiler, performing checks, inspections, and test indicated on the log form.

f. RESERVED

g. ELEVATORS

Establishment of elevator equipment/machine room operating checklists and routes is applicable only to locations in which USPS personnel are assigned to the servicing and maintenance of elevators. Such routes are not to be established where the maintenance is performed by contract except to periodically visit the areas and observe the equipment in operation. The building manager or maintenance contractor should be notified if unusual or unsafe conditions are observed. Inspection of elevator maintenance work performed by contract is to be made by the building manager or a supervisor familiar with the contract's maintenance requirements.

(1) Inspection

Make a general inspection of all items in the machine room. Use the senses of sight, hearing, touch, and smell in observing the functioning of the equipment. Include in the general inspection of the machine room such items as:

- (a) Motor-Generator Unit. Look for arcing, feel the bearings for temperature and for machine vibrations, and listen to it briefly.

Note oil level or need for lubrication.

- (b) Hoist Machine, Motor and Brake Unit. Observe operation, feel for temperature or vibration, and note lubrication condition. Observe brake action. Note amount of slide, freedom in clevis pins, leverage, etc. Note condition of lining. Inspect electrical connections, solenoid and dashpot (if applicable).
- (c) Control Panels and Devices. Inspect all equipment, paying particular attention to contactors, connectors, reverse phase relays, switch pins, timers, etc. Look for arcing, poor contacts, excessive temperature, sluggish action, chattering, unusual or hard slamming, or other deficiencies. Examine and clean the tape and chain selector drives when necessary. Note presence of or need for lubrication.
- (d) Governor. Observe action of the governor. Look for freedom of action of moving parts and cable. Observe electrical connections and note the presence of or need for lubrication.

(2) Operation

It is not necessary for a USPS mechanic to ride each elevator for the sole purpose of observing the operation. During the course of a day's activities the elevators are ridden several times by various USPS employees who should observe and report any faults in the operation. If all employees are properly instructed in this regard, it will result in quicker correction of faulty elevator operations. However, if the preventive maintenance standards are properly followed,

the callbacks will be sharply reduced.

h. ESCALATORS

A general check of escalators can be made by the craftsman who starts and stops them. Included in the items to be checked are: functioning of the start and stop switch; smoothness of operation; presence of unusual noise or vibration; condition of handrail, side panels, lights, treads, comb, etc. Look for and correct loose trim, protruding screws or bolts, or any other feature that could damage clothing or injure personnel.

i. FIRE PUMPS

(1) Electric Motor Drive

Operate the pump long enough to observe general performance, pressure delivered, etc. Note any unusual sound, vibration, odor, or temperature. Feel the bearings for vibration and for temperature. Note packing gland and operation of relief valve, etc. If the pump has automatic equipment to start it when a flow occurs or when the pressure drops, start it by activating the mechanism so the automatic devices are tested at the same time as the pump. Leave pump in ready-to-run condition.

(2) Internal Combustion Engine Drive

Check the fuel supply, oil level, radiator, and battery. Operate long enough to bring engine to normal operating temperature. Make a general observation of the engine, clutch, pump, etc. Note pressures, functioning of gauges, and relief or safety valves. Check pump packing. If pump has automatic starting equipment, start it on automatic to test the integrity of the devices.

Leave unit in ready-to-run condition.

j. HEATING SYSTEM

Observe the operation of all units in the heating system. Note flow of steam and return of condensate. If returning condensate is hotter than your hand can stand, some traps (radiator or steam line) are probably blowing through. If this condition exists, report it to your supervisor. If the system is vacuum return, observe vacuum maintained and check the operation of the pumps. In systems using hot water, check heating elements or coils, operation of circulating pumps, etc. If the system is controlled by outside temperature, check to determine if the controls are functioning properly.

k. HOT WATER GENERATORS AND STORAGE TANKS

Make a visual inspection; note water temperature, steam supply pressure, operation of controls, gauges, and thermometers. Is insulation in good condition? Check steam traps, strainers, piping, etc. Look for leaks and be alert to any unusual noise, vibration, etc.

1. MOTOR AND GENERATORS

Feel the bearing housing for evidence of heat or vibration. Look for creepage of oil or grease along the shaft. Observe brushes and commutators. Look for sparking, discoloration, poor surface condition, black spots, etc. If required, clean commutator with a cleaning stick. Check brush holders, brush spring pressure, pigtail connections, etc. Check starter controls, push button, etc. Note the presence of or need for lubrication. Observe pulleys, belts, coupling, guard, etc. Any misalignment or abnormal belt wear should be investigated and corrected.

Be alert to any unusual noise, vibration, odor, temperature, etc.

m. PUMPS, GENERAL PURPOSE

Make a general inspection; be alert to any unusual noise, vibration, odor, temperature, etc. Feel the bearings and check packing gland. For pumps operating on automatic, observe at least one cycle to see that controls are functioning and that all components work properly. Observe piping, valves, etc. Report any observed leaks to supervisor. Particular attention should be given to the following pumps:

- Condensate return to boiler or central plant
- Chilled water
- Condenser water
- Booster pumps from city line to house tanks
- Circulating, hot water, drinking water, and similar applications.

n. STEAM PRESSURE REDUCING STATION

Observe the operation, noting pressures and the functioning of external pilots (the operation of internal pilots cannot be observed). Check the operation of traps on both the high and the reduced pressure lines, and observe the condition of the insulation. Make general inspection of the station, noting anything of an unusual nature. Relief valves are tested periodically on a scheduled basis, so unless they are malfunctioning, no action other than visual observation is needed.

o. SUMP PUMPS

Observe the operation noting the functioning of float mechanism or other controls as well as the pumping action. Check the strainer and inspect pit for silt, mud, obstructions, etc. Does the check valve hold and seat properly? Look for vibration or malfunctioning in the pump unit or the connected piping.

p. CUBICLE ROOMS, TRANSFORMER VAULTS, AND SWITCHBOARD ROOMS

Check each area for ventilation, lighting, and general condition of equipment. Observe the watt-hour and demand meters. Observe all indicating lights and replace burned-out ones. Observe relays for proper functioning and target position. Check oil circuit breakers and transformers for proper oil levels. Check the network protectors for proper operation and record the counter reading where applicable. Check the emergency lights for proper operation and any other instruments as directed. Report any malfunctioning or needed repairs to the supervisor.

q. FIRE EXTINGUISHERS

All fire extinguishers shall be inspected monthly on an operating route. This inspection is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. If any deficiencies are revealed, the deficiency must be corrected or the extinguisher replaced as soon as possible. Ensure that access to, or visibility of, the extinguisher is not obstructed. Verify that the operating instructions on the extinguisher nameplate are legible and face outward. Ensure that seals or tamper indicators are not broken or missing. Inspect for obvious physical damage, corrosion, leakage, clogged nozzle, or cut hose. Ensure that the pressure gauge indicates that the pressure is within the operable range. For extinguishers without gauges, and with unbroken seals or tamper indicators, determine their fullness by lifting and comparing estimated weight to weight stamped on shell. Verify that it is the correct extinguisher for that location by comparing the location markings on the shell and mounting. Complete the

applicable portions of Form 4705, Fire Inspection Tag.

r. EMERGENCY LIGHTS

All emergency lights shall be inspected monthly on an operating route. This inspection is a "quick check" to ensure that the light is in place and will

operate. This is done by seeing that it is in its designated place and that there is no obvious physical damage or condition which would prevent operation. In addition, the test button should be depressed (or light unplugged) for at least 30 seconds to ensure that the light turns on and stays bright.