

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

**Function.** Fire and Emergency Services

**Key Management Controls.** Figures E-1 through E-6 identify key management controls in this function.

**Management Control Evaluation Process.** The installation fire chief will evaluate these key management controls through the annual Operational Readiness Inspections.

**Instructions.** Answers must be based on the actual testing of key management controls (e.g., document analysis, direct observation, sampling, simulation, other). Answers that indicate deficiencies must be explained and corrective action indicated in supporting documentation. These key management controls must be formally evaluated at least once every five years. Certification that this evaluation has been conducted must be accomplished on the enclosed DA Form 11-2-R (Management Control Evaluation Certification Statement).

**Fire and Emergency Services Operational Readiness Inspection**  
**In-Briefing by Fire Chief**

Date

1. Name of Installation:
2. Location of Installation:
3. Mission of Installation:
4. New Conditions or Significant Changes Since Last Inspection:
5. Descriptions of Installation:
  - a. Structures:
    - (1) Number of buildings:   Woodframe       Noncombustible
    - (2) Total square footage of buildings subject to fire inspections (excluding) family housing:
    - (3) Improved acres:
    - (4) Unimproved acres:
    - (5) Number of major buildings:
      - (a) Warehouses:   Square feet
      - (b) Hospitals:
      - (c) Public assembly facilities:
      - (d) Dormitories:
      - (e) Hangars:
      - (f) Structures of three stories:   Over three stories:
      - (g) Family housing units:
      - (h) Major industrial facilities:

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

- b. Aircraft Rescue Fire Fighting (ARFF) Mission:
    - (1) Number of permanently assigned aircraft:
    - (2) Types of aircraft:
    - (3) Average number of aircraft movements (landings/takeoffs) months of military aircraft (include transient aircraft):
    - (4) Air Crash, Search, and Rescue (ACS&R) maps provided to each airfield:
    - (5) Quantities of extinguishing agent on hand:
      - (a) Aqueous film forming foam:
      - (b) Dry chemical:
      - (c) Halon:
      - (d) Foam Concentrate:
  - c. Total quantity of Halon 1211 and 1301 lost through discharge testing, accidental discharge, fire extinguishment, training, reservicing, R&D, and other uses. Also include amount "banked" in fire extinguishers and cylinders supplying fire extinguishing systems:
    - (1) Pounds per fiscal year:    Halon 1211            Halon 1301
      - (a) Emitted:
      - (b) Banked:
6. Fire Protection Systems:
- a. Sprinkler protection systems:
    - (1) Number of wet systems:
    - (2) Number of dry systems:
    - (3) Condition of systems:    No. good:            No. poor:
    - (4) Number of systems out of service:
    - (5) Number of systems under contract for repair:
    - (6) Number of systems being totally replaced:
  - b. Fire alarm systems:
    - (1) Number of buildings containing smoke or heat detection systems:
    - (2) Describe general condition of systems:
    - (3) Number of systems out of service:
    - (4) Number of systems under contract for repair:
    - (5) Number of systems being totally replaced:
  - c. Fire alarm receiving equipment:
    - (1) Do all fire protection alarms transmit to the fire department?
    - (2) Does the fire department have a fire alarm receiving unit?
    - (3) Condition of the fire alarm receiving unit:    Poor
    - (4) Does the existing fire alarm system transmit by the following?
      - (a) Hardwire:
      - (b) Radio:
    - (5) What type of fire alarm receiver?    Manufacturer model:
    - (6) What year was the fire alarm receiver installed?
    - (7) Comments:
  - d. Other types of fire protection systems:

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

7. Equipment:

a. Apparatus:

(1) 1000 pumper: Authorized: Assigned: Age(s):

(2) 750 pumper: Authorized: Assigned: Age(s):

(3) Mini-pumper: Authorized: Assigned: Age(s):

(4) Ladder truck: Authorized: Assigned: Age(s):

(5) 750 Commercial: Authorized: Assigned: Age(s):

(6) P-4/P-17/P-19: Authorized: Assigned: Age(s):

(7) Other type: Authorized: Assigned: Age(s):

(8) Apparatus eligible for replacement because of age, mileage, or uneconomically repairable status:

(9) Issue priority designator (IPD) for fire apparatus repair parts and maintenance:

b. Fire flow requirement based on what building:

c. Other tools and appliances:

(1) Ladders: No: Length:

(2) Rescue/Extrication tool:

(3) Breathing apparatus: No. of sets: No. of spare cylinders:

(4) Breathing air recharge capability? Yes/No

(5) Power rescue saw:

(6) Lighting equipment:

(7) Miscellaneous:

Personal equipment:

Fire protective clothing: No. of sets: Condition:

8. Number of Personnel:

a. Permanent:

b. Temporary:

c. Part-time:

9. Organization:

a. Work schedule:

b. Fire prevention workload:

(1) Are you able to meet prescribed fire prevention inspection schedules?

(2) Have fire prevention inspectors received specialized training?

(3) Is maintenance and testing of fire protection systems performed by in-house personnel or by contract?

(4) What are significant problem areas?

10. Training Program:

a. What training facilities are available?

b. Who is the assigned training officer?

c. What are the significant problem areas?

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

11. Budgetary Data:

- a. Does the fire chief participate in preparation of the budget?
- b. What amount of funds was programmed in the current fiscal year?
- c. What amount of funds was expended during previous fiscal year?

**Figure E-1. Format for fire and emergency services operational readiness inspection in-briefing by fire chief**

**Department of the Army**  
**Fire and Emergency Services Operational Readiness**  
**Inspection (F&ES ORI)**

**Function:** Administration and Management. (The fire chief is responsible for the administration and management of the Fire Protection Program.)

**Subject/Activity: Facilities, Equipment, Records, Reports, and Supplies.**

- a. Critical element: Fire Station(s).

Measurement method:

(1) Is (are) the fire station(s) properly located and does (do) it (they) meet the facility requirements per AR 420-90?

(2) Is adequate housing provided for fire protection vehicles, fire department ambulances, equipment, and personnel per TM 5-315?

(3) Is there a dining facility or other suitable means of messing to feed on-duty firefighters?

(4) Is there a suitably equipped classroom available to conduct fire protection training?

- b. Critical element: Personnel.

Measurement method:

(1) Is the fire department manned by qualified civilian and/or military firefighters per AR 420-90?

(2) Are personnel assigned duties that are outside the fire protection function or assigned details that conflict with their primary duties in violation of AR 420-90?

(3) Are sufficient fire protection personnel recognized, authorized and assigned according to Army Manpower Staffing Standards System (MS-3)?

(4) Is data used for applying the Army Manpower Staffing Standards System (MS-3) accurate and up-to-date?

(5) Are SOPs established and properly implemented per AR 420-90?

(6) Is the fire alarm emergency communication center operated in the most effective and efficient manner?

(7) Can the full time, paid fire department be restricted to part day or part paid status without adversely affecting support?

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

c. Critical element: Management Procedures and Policies

Measurement method:

- (1) Is the fire department part of the Installation's Spill Prevention Control and Countermeasure Plan (SPCCP) and Installation Spill Contingency Plan (ISCP) per AR 200-1?
- (2) Are written or verbal mutual aid agreements properly established per AR 420-90?
- (3) Is a publication reference operational library properly established and maintained with appropriate standard and special publications on hand per AR 420-90?
- (4) Are fire department records properly maintained per TM 5-315? For example:
  - (a) Daily log or journal.
  - (b) Hose records.
  - (c) Annual pumper tests per NFPA 1901.
  - (d) Annual aerial ladder certification per NFPA 1904.
- (5) Are vehicles authorized per AR 420-90?
- (6) Is the Fire Information Resource Management System (FIRMS) being used by the fire department per TN 420-90-02.
- (7) Is an annual FPORI self-inspection performed and documented per AR 5-3, paragraph 4-21, 1(1)(a).

**Figure E-2. Format for fire and emergency services operational readiness inspection (F&ES ORI) of administration and management**

**Department of the Army**  
**Fire and Emergency Services Operational Readiness**  
**Inspection (F&ES ORI)**

Function: Training

Subject/Activity: Training Records, Facilities, and Reports

Critical element: Training Program

Measurement method:

- a. Has an individual been assigned as a training officer?
- b. Is a continuous training program established and in effect for all assigned personnel per AR 420-90?
- c. Are monthly training schedules posted in each station and approved by the chief?
- d. Is a training facility available per AR 420-90?
- e. Are training records maintained that reflect current and accumulative training for each firefighter?
- f. Is fuel (no more than 10 percent by volume of oils or lubricants) made available for live training fires?
- g. Are current lesson plans established per AR 420-90?
- h. Is training conducted using prefire plans per AR 420-90?
- i. Are training exercises being conducted per AR 420-90 (chap 3)?
- j. Are all firefighters at least first responder or equivalent certified?

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

k. Is an adequate number of self-contained breathing apparatus (SCBA) positive pressure (three for each company) and spare air cylinders (one per each SCBA) on hand and properly maintained with maintenance and inspections records? Are one hour bottles being used for HAZMAT and rescue in extra large facilities?

l. Is a training program in-place to certify those firefighters not first responder or equivalent or to re-certify those already certified when required?

m. Does each firefighter receive a minimum of 3 hours proficiency training a week?

**Figure E-3. Format for fire and emergency services operational readiness inspection (F&ES ORI) of training**

**Department of the Army**  
**Fire and Emergency Services Operational Readiness**  
**Inspection (F&ES ORI)**

Function: Operations

Subject/Activity: Fire Suppression, Vehicle Maintenance, and Pre-Fire Planning

Critical element: Operational Proficiency

Measurement method:

a. Does the appearance of assigned vehicles (including compartments, engines and undercarriages) reflect satisfactory cleaning per TM 38-600?

b. Are first echelon maintenance and daily apparatus checkouts being accomplished and documented per TM 38-750?

c. Are grid maps carried in ARFF vehicles, and are they compatible with those in the air traffic control tower, police, ambulance, and rescue aircraft per AR 420-90?

d. Are current prefire plans prepared on major facilities and aircraft per AR 420-90?

e. Are current post utility maps available at the fire alarm communication center or main fire station?

f. Is the appropriate force activity designator (FAD) and urgency of need designator used to procure parts for fire vehicles?

g. Are sufficient portable radios available for communication between fire vehicles and foot party elements per AR 420-90?

h. Is the fire station public address system audible throughout the facility and exterior work areas?

i. Is an automatic start emergency generator source provided for the fire station to include alarm room, communications center, overhead doors and lights?

j. Is a refractometer on hand to insure accurate test of foam meter settings on all Crash Fire Rescue vehicles?

k. Is an adequate number of self-contained breathing apparatus (one per vehicle position) and spare air cylinders (one per SCBA carried on apparatus) on hand and properly maintained?

l. Are current maintenance and operation manuals available for all assigned fire trucks?

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

- m. Are firefighters furnished appropriate protective clothing and is it properly inspected and maintained per NFPA 1971?
- n. Is a job-related physical fitness program established per AR 420-90?
- o. Are breathing air samples tested per AR 420-90?
- p. Is a voice recorder interconnected to all emergency communication equipment?

**Figure E-4. Format for fire and emergency services operational readiness inspection (F&ES ORI) of operations**

**Department of the Army**  
**Fire and Emergency Services Operational Readiness**  
**Inspection (F&ES ORI)**

Function: Fire Prevention Program

Subject/Activity: Deficiency Correction Program, Population Training, Facility Inspection, and Installed Fire Protection Systems

Critical element: Program Effectiveness

Measurement method:

- a. Has a comprehensive fire prevention program been incorporated in an installation fire prevention regulation?
- b. Is an effective organization or activity fire marshal program established per AR 420-90?
- c. Are the installation FE/DEH and fire chief actively involved in, and fully supporting, the fire prevention function per AR 420-90?
- d. Does the fire chief or designated representative review all project plans and specifications (including nonappropriated funds (NAF) for technical adequacy of fire protection features? Are comments maintained until project is satisfactorily completed per AR 420-90?
- e. Are fire protection deficiencies correctable through facility engineering methods and included in an appropriate work plan?
- f. Are employees in places of public assembly receiving fire prevention and emergency evacuation training?
- g. Does each facility have a file folder containing pertinent data on fire prevention affecting that particular facility?
- h. Is a procedure established that identifies the date of the last inspection, date next inspection is due, and if any hazard/deficiency inspections (DA Form 5382-R) are outstanding?
- i. Do facility folders contain building inspection, DA Form 5381-R for the last inspection performed and for any other inspections during the past 18 months?
- j. Are records available to indicate family housing occupants are receiving a fire prevention orientation within 30 days after arrival?

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

- k. Are facility inspection frequencies conducted per AR 420-90?
- l. Are fire deficiencies being identified, monitored, and corrected on a timely basis?
- m. Is the FE/DEH informed of significant problems and kept abreast of the status of deficiencies?
- n. Are fire deficiencies that fall under the OSHA Program coordinated through the local safety office for funding?
- o. Are all burning and welding operations being inspected per AR 420-90? Is DA Form 5383-R (Hot-Work Permit) on file for these burning operations?

**Figure E-5. Format for fire and emergency services operational readiness inspection (F&ES ORI) of fire prevention program**

**Department of the Army**  
**Fire and Emergency Services Operational Readiness**  
**Inspection (F&ES ORI)**

Function: Fire Fighting Exercises

Subject/Activity: Performance Standards for Fire Fighting Exercises

a. Critical element: Aircraft Rescue Fire Fighting (ARFF) Egress Training Drill. (Set up a simulated ARFF egress training drill scenario.)

Measurement method:

- (1) Alarm dissemination from control tower to airfield crash station.
- (2) Proper transmission of simulated incident to responding crews by alarm room operator.
- (3) Response and positioning of personnel and equipment in accordance with prefire plan.
- (4) Establishment of an Incident Command System at the best possible location from which to observe and direct fire suppression and rescue efforts. Communications between the senior fire officer and subordinate supervisors must be maintained by using vehicle public address (PA) systems, portable radios, voice hailers, or hand signals.
- (5) All personnel working in the fire environment are to wear protective clothing. On cargo type aircraft, at least one firefighter will don and fully use breathing apparatus.
- (6) Availability of required equipment (cutting tools, hurst tool, and so on).
- (7) Development of standard and systematic predesignated duties to designated rescue men to insure--
  - (a) Quick and proper entry into aircraft.
  - (b) Correctly shutting down engine(s).
  - (c) Proper safetying of ejection systems.
  - (d) Sequential release of crew member restraints (life support, survival kit, harness, belts, and so on).
- (8) Proper emergency first aid procedures involving heart massage, smoke inhalation, shock, and burns.

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

(9) Meaningful drill critique by senior fire officer highlighting any operational deficiencies.

b. Critical element: Structural Training Drill. (Set up a simulated structural training drill scenario.)

Measurement method:

(1) Alarm dissemination from alarm room operator to senior fire officer and crews responding to the simulated incident.

(2) Response and positioning of personnel and equipment per the prefire plan. NFPA 1410, Initial Fire Attack, suggests minimum acceptable performance standards during initial fire attack. Initial sizeup by senior fire officer would determine positioning of equipment in most cases.

(3) Establishment of an Incident Command System (ICS) by the senior fire officer at the best possible location from which to observe and direct fire suppression and rescue efforts. Communications between the senior fire officer and subordinate supervisors must be maintained by using vehicle PA systems, portable radios, voice hailers, or hand signals.

(4) Removal of sufficient fire hose to reach the farthest point of the expected or probable fire area and endangered exposures.

(5) Proper forcible entry, ventilation, and laddering procedures.

(6) Logical and systematic building search procedures by properly attired firefighter using breathing apparatus and lifelines if appropriate.

(7) All personnel working in the fire environment are completely attired in protective clothing, including SCBA.

(8) Simulated shutoff of utilities by designated fire department or Facilities Engineering utilities equipment personnel.

(9) Demonstration of pump operating procedures and knowledge of the calculation of friction loss, nozzle pressure, and engine pressure.

(10) Provision of adequate water supply lines to pumper (2½-inch, 3-inch, 4½-inch, large diameter hose, hard or soft suction hose).

(11) Application of emergency first aid procedures.

(12) When appropriate, use of pumper to augment water supply to sprinkler systems and a designated person to respond to booster pump station for starting, stopping pump engine(s).

(13) Meaningful drill critique by senior fire officer highlighting any operational deficiencies.

c. Critical element: Live ARFF training drill. (Set up a simulated live training fire scenario.)

Measurement method:

(1) A thorough predrill briefing by the senior fire officer using a lesson plan containing as a minimum, the following items: type aircraft, situation, dissemination of alarm, vehicle response, approach and positioning, simulated rescue, proper aqueous film forming foam (AFFF) application technique from vehicle turrets and handlines, overhaul, wind direction, fuel spillage, emergency withdrawal signals, use of protective clothing, and safety procedures.

**Management Control Evaluation Process**  
**AR 420-90, Facilities Engineering - Fire and Emergency Services, 10 Oct 97**

- (2) Use of training aids, IFSTA, and Air Force TO 00-105E-9, chalk board for supplementing the lesson plan.
- (3) Establishment of an Incident Command System by the senior fire officer at the best possible location from which to observe and direct fire suppression and rescue efforts. Communications between the senior fire officer and subordinate supervisors must be maintained by using vehicle PA systems, portable radios, voice hailers, or hand signals.
- (4) Effective use of vehicle turrets when within range of the fire.
- (5) Proper AFFF application techniques from turrets and handlines.
- (6) Simulated rescue by firefighters, protected by handline personnel and turrets.
- (7) Meaningful drill critique by senior fire officer highlighting any operational deficiencies.

**Figure E-6. Format for fire and emergency services operational readiness inspection (F&ES ORI) of firefighting exercises**