

Guidelines for Preparing Fire Protection Consultancy Reports

This section must be submitted separately as a technical report certified by an engineering consultant (fire protection consultant) in accordance with the Egyptian Fire Code.

(1) Project Data:

- Facility name.
- Owner's name.
- Facility address.
- Occupancy classification.
- Adjoining Properties: East, West, South, and North boundaries.
- Fire apparatus access roads to the factory.
- Plant setback distances.
- Health and safety officer's name and cellphone number.

(2) Report Data:

- Consultant Information: Provide the name and mobile number of the consultant who prepared the report.
- Specialization: The consultant should be specialized in electrical and mechanical engineering to be authorized for report approval.
- Accreditation: Attach the consultant's accreditation certificate from the Engineers' Syndicate or a copy of the consultant's syndicate membership card.
- Accepted Specialties: Fire Protection, Mechanical Engineering, or Electrical Engineering.

(3) Land Data:

- Total area.
- Building footprint/occupied area.
- Building Descriptions: Provide a description for each building:
 - Area.
 - Number of floors.
 - Type of occupancy on each floor.
 - Floor height of the topmost floor.
 - Number and width of each staircase.

- **Means of Egress:**
 - Dead-end corridors, if any.
 - Exit travel distances.
 - Illustration of egress routes (stairs, elevators, doors) with a detailed description of each according to the occupancy classification.

(4) Data on Products, Raw Materials, and Hazard Locations:

- Raw material storage.
- Finished product storage.
- Nature of stored materials.
- Chemicals: A Material Safety Data Sheet (MSDS) must be provided for chemicals.
- Generators and main electrical rooms.

(5) Water Network:

- Water source designated for firefighting purposes.
- Fire water storage capacity according to the hazard classification.
- Hydraulic design calculations.
- A set of three fire pumps must be provided in either an (Electric, Diesel, and Jockey) or (Duty Electric, Standby Electric, and Jockey) configuration.
- Electric generator.
- Determine (Flow rate, pressure) according to hydraulic calculations.
- Diameter of fire network.
- Fire Department Connection (FDC/Siamese).
- Landing Valves/Hose Stations: Number and distribution (2.5, 1.5, or 1 inch).
- Assessment of main isolation valves.
- Automatic Fire Sprinklers: (If existing) Consider hydraulic calculations and standard engineering practices.

(6) Alarm Systems:

- Securing an automatic alarm system according to initial fire phenomena and adhering to standard engineering practices.
- Detector distribution on-site according to hazard zones.
- Fire alarm control panel (FACP) and connecting detectors, taking into account standard engineering practices.
- Manual call points (MCP).
- Audio-Visual (AV) notification appliances.
- Directional signage and emergency lighting for egress routes.

(7) Manual Fire Extinguishing Equipment:

- Provide the number and type of fire extinguishers according to the level of risk.
- Show their distribution and adherence to installation principles.

(8) Automatic Fire Suppression Systems Using Gaseous Agents:

- Electrical rooms, main transformers, and control rooms must be secured with an appropriate clean agent suppression system.
- Required Calculations: Hydraulic design calculations must be provided for FM200, CO₂, and Inergen systems.
- Connection of the system to the main fire alarm panel.
- Installation of cylinder weighing scales in the case of a CO₂ system.

(9) Ventilation and Smoke Management Systems:

- Specify the type of ventilation (natural or mechanical).
- Ensure the availability of central air conditioning systems, if any.
- The connection of ventilation and smoke exhaust systems to the main alarm panel.

(10) Electrical Systems:

- Adherence to standard engineering practices regarding electrical loads.

(11) General Conditions:

- All fire extinguishing equipment must conform to Egyptian Standard Specifications, if applicable, or equivalent international standards.
- A suitable emergency evacuation plan (EEP) must be prepared.
- An adequate number of employees must be trained.

(12) Implementation Percentage:

- State the percentage of completion for all Civil Defense works as specified in the report.

(13) Attachments:

- General site plan (A3) showing the occupancy classification for each space.
- Architectural floor plan for each building.
- In case of multi-story buildings, the plan must be provided for each floor.
- Plans must show means of egress and exit travel distances.