



Acacia
Mining Operations

ACACIA MINE OPERATIONS

GÖKIRMAK COPPER MINE

Fire Prevention and Fire Protection 2017

Document Number

ACACIA-2017-H&S-PLN-191

Disclosure Date

29.09.2017

Prepared By

Occupational Health and Safety Department

İÇİNDEKİLER

1. PURPOSE.....	7
2. SCOPE AND APPLICATION	7
3. DEFINITIONS AND ABBREVIATIONS	7
FIRE PROTECTION	7
FIRE DETECTION SYSTEMS.....	7
FIRE SUPPRESSION SYSTEMS.....	7
EMERGENCY INSTRUCTIONS	7
INFLAMMABLE	8
FLAMMABLE.....	8
FLASH POINT	8
FLAMMABILITY OR EXPLOSIVE LEVEL	8
WATER SOLUBILITY.....	8
INSTANT IGNITION	8
FIRE NOTIFICATION	8
PARK PROHIBITION	8
INTERVENTION IN EXTINGUISHING APPLIANCES.....	8
LIGHTING FIRE IN THE OPEN.....	9
KEEPING OPEN ENTRANCE OF THE BUILDING	9
REPORT LINE	9
FIRE EXTINGUISHER EQUIPMENT AND FACILITIES	9
OBLIGATION TO COMPLY WITH THE FIRE OFFICER’S INSTRUCTIONS.....	9
ENTER THE FIRE DEPARTMENT’S SERVICE	9
COOPERATION WITH FIRE DEPARTMENT.....	9
FIRE ROUTING FLUE	9
APARTMENT BUILDING.....	10
ATRIUM STRUCTURE.....	10
PRESSURIZING	10
BUILDING HEIGHT.....	10
BASEMENT FLOOR.....	10
SMOKE RESERVOIR	10
SMOKE CONTROL	10
SMOKE SCREEN	10
SMOKE REMOVAL.....	10

SAFETY ZONE.....	10
FIREFIGHTERS LIFT	11
WET SPRINKLER SYSTEM.....	11
STEPPED HORIZONTAL EVACUATION.....	11
ESCAPE LIGHTING	11
ESCAPE DISTANCE.....	11
ESCAPE ROUTE	11
PUBLIC USE	11
HOUSING	11
USER LOAD.....	11
PIPE SYSTEM	12
DRY SPRINKLER SYSTEM	12
CONSERVATIVE CORRIDOR/HALL	12
CONSERVATIVE LADDER	12
CURRENT STRUCTURE.....	12
COMMON STAIRS	12
CERTIFIED.....	12
LIQUEFIED PETROLEUM GASES (SPG or LPG).....	12
SITE.....	12
FINAL EXIT.....	12
SPRINKLER	13
PIPE WATERING SYSTEM.....	13
FIRE SEPARATION (BARRIER).....	13
FIRE ZONE	13
FIRE RESISTANCE CLASS	13
FIRE RESISTANCE	13
FIRE WALL	13
FIRE DOOR	13
FIRE COMPARTMENT	14
FIRE ESCAPE	14
FIRE RESISTANCE TIME.....	14
SAFETY CURTAIN	14
FIRE TYPE	14
	FIRE
LOAD	14
BUILDING OWNER	14
BUILDING SUPERVISORS	15
BUILDING HEIGHT.....	15
RUPTURE FRONT	15

HIGH-RISE BUILDING.....	15
HIGH RISK	15
4. REFERENCES	15
5. DUTIES AND RESPONSIBILITIES	15
5.4.1. FIRE SAFETY RESPONSIBILITY	18
Fire safety responsibility	18
5.4.2. PROJECT CONSTRUCTION /MANUFACTURING DIRECTORS.....	19
5.4.3. UNIT MANAGERS	19
5.4.4. STAFFS.....	19
6. METHOD	20
6.5.2. VERTICAL INNER PARTITIONS AND FIRE WALLS.....	22
6.5.3. HORIZONTAL PARTITIONS AND UPHOLSTERY.....	23
6.5.4. FACADES.....	23
6.5.5. ROOFS	24
6.7.1. ESCAPE ROUTES	25
6.7.2. EXIT CAPACITY AND NUMBER OF EXIT	26
6.7.3. ESCAPE ROUTE WIDTH	27
6.7.4. FIRE SAFETY HALL	28
6.7.5. REQUIREMENTS FOR ESCAPE ROUTES	28
ESCAPE CORRIDORS AND PASSAGEWAYS	28
OUTSIDE ESCAPE ROUTES	29
6.7.6. ESCAPE STAIRS	29
6.7.7. EXIT DOORS.....	30
6.13.1. BOILER ROOMS	32
6.13.2. BOILER ROOMS WITH NATURAL GAS AND SPG INSTALLATIONS	33
6.13.3. FUEL DEPOSITS	34
6.13.4. KITCHENS,TEA SHOPS,STOVES AND CHIMNEYS.....	34
6.13.5. PUBLIC SHELTERS.....	36
6.13.6. CAR PARKS	36
6.13.7. ROOFS.....	36
6.13.8. ELEVATOR	36
6.13.9. LIGHTNING ROD	37
6.13.10. TRANSFORMER.....	37
6.13.11. GENERATOR	37
6.14.1. ELECTRICAL INTERNAL INSTALLATIONS.....	38
6.14.2. EMERGENCY LIGHTING AND DIRECTING	40
ESCAPE ROUTES LIGHTING	40
EMERGENCY ROUTE DIRECTING	42

6.14.3. FIRE DETECTION AND AUTO WARNING SYSTEMS.....	42
DETECTION AND NOTIFICATION FACILITY	43
SPRINKLER ALARM STATIONS	45
SMOKE CONTROL AND PRESSURIZATION SYSTEMS FAULT AND POSITION CHANGE SIGNALS	46
SOUND AND LIGHT ALARM DEVICES	46
6.14.4 EMERGENCY CONTROL PROCEDURES	47
CABLES.....	48
d).....	48
6.15.1. SMOKE CONTROL	49
6.16.1. WATER EXTINGUISHING SYSTEMS RESERVOIRS AND RESOURCES.....	51
PUMPS	52
FIRE CABINETS SYSTEM	53
HYDRANT SYSTEM	54
SPRINKLER SYSTEM.....	54
FIRE BRIGADE CONNECTION.....	55
LEGISLATION.....	57
7. PREVENTION OF FIRE.....	59
7.14.1. ALL ACTIVITIES	64
7.14.2. HOT WORKING.....	64
7.15.1. AREA CLASSIFICATION	64
FACILITIES AND EQUIPMENT IN HAZARDOUS AREAS.....	64
MOTOR VEHICLES AND INTERNAL COMBUSTION ENGINES	65
HOT WORK IN DANGEROUS AREAS	65
7.16.1. USAGE.....	65
7.16.2. STORAGE.....	65
7.18.1. FIXED FIRE DETECTION SYSTEMS.....	66
LOCATION AND USAGE	67
WORKING	67
INSPECTION AND MAINTENANCE.....	67
7.18.2. MANUAL FIRE DETECTION.....	67
FIELD RELATED INSTRUCTIONS.....	67
SPECIAL TRAINING	68
PERSON WHO DETECTS THE FIRE.....	68
STAFF FIRE ALARM INTERVENTION.....	69
8. PROTECTION OF FIRE	69
8.1.1. ESTABLISHMENT OF TEAMS	69
8.1.2. DUTIES OF TEAMS	70
8.1.3. WORKING PRINCIPLES OF TEAMS	70

LOCATION AND WORK.....	71
INSPECTION AND MAINTENANCE.....	71
LOCATION	72
OPERATION AND USE - REFILL	72
INSPECTION AND MAINTENANCE.....	72
9. TRAININGS AND EXERCISES.....	73
TRAINING REGISTRATIONS.....	73
APPLIED EXERCISES.....	73
ANNEX-2 FLAMMABILITY AND RESISTANCE CLASSES OF CONSTRUCTION MATERIALS AND ORDER ELEMENTS	77

1. PURPOSE

Hereby Safe Working System presents the necessary information for the safety of personnel, buildings, institutions and facilities in respect to fire prevention, detection and protection.

2. SCOPE AND APPLICATION

Hereby the content of the Safe Working System is valid for all the sites that belong to ACACIA and are managed by ACACIA and for all personnel working in this site.

This Safe Working System does not remove the obligation of permanently compliance with local legislation and legal requirements.

In cases which are not defined, are needed to be explained in this Plan, Turkish Standards Institute (TSE) and European Norms (EN) standards are taken as basis.

In case of the violation of the conditions are specified in this Instruction, no or partially permission is granted to the construction.

In the event of the implementation of this Plan, in case of any doubt related to the construction, ACACIA Project Management Office receives a written opinion from the Ministry of Public Works by the way of its knowledge, confirmation and complies with the instruction.

The written opinion is received from the Ministry of Interior about other issues.

3. DEFINITIONS AND ABBREVIATIONS

3.1. DEFINITIONS

FIRE PROTECTION

All precautions used to minimize injury and loss due to fire, including plans, design, selection, setup and maintenance

FIRE PREVENTION

Guidelines used to minimize or prevent fire.

FIRE DETECTION SYSTEMS

Equipment designed to detect fire and sound the alarm.

FIRE SUPPRESSION SYSTEMS

Systems designed to suppress or extinguish a fire by automatic or manual activation.

EMERGENCY INSTRUCTIONS

Planned precautions designed to minimize the risk of injury in an emergency.

INFLAMMABLE

An item containing a material or substance ready to be burned.

FLAMMABLE

An item contains a substance that is easily burned intensively and has a high flammability rate.

FLASH POINT

The lowest temperature that flammable or inflammable liquid is evaporated to form a flammable mixture with air.

IGNITION TEMPERATURE

The lowest temperature at which the steam and air mixture can be ignited without any sparks.

This term is also valid for the hot levels which can generate flammable vapors.

FLAMMABILITY OR EXPLOSIVE LEVEL

The interval between the smallest and the lowest amount of vapor in the amount of air that will explode or burn.

This amount is usually expressed as percentage and is based on normal atmospheric temperatures and pressures

WATER SOLUBILITY

It is the capacity of flammable or inflammable liquid to dissolve in water.

INSTANT IGNITION

It is flammable because of the rapid oxidation of a substance that generates heat in sufficient quantities for the flame to enter

FIRE NOTIFICATION

Anyone, who notices a fire out of control or smoke, has to report it with a correct definition and without taking up time to the fire department and the Emergency Situation Line reported in the ACACIA Emergency Action Plan.

PARK PROHIBITION

In the Project and Operation Area and/or on street and roads, parking vehicles that obstruct the use of fire extinguishers and the passage of fire trucks, hanging signs and banners over the sidewalk, blocking the road by holding an exhibition, parking on narrow streets are prohibited.

INTERVENTION IN EXTINGUISHING APPLIANCES

It is forbidden to tamper, break or destroy the fixed or mobile fire extinguishing systems found in the Project and Operation Area and/or all kind of buildings, open field, facilities, streets, main streets, areas and squares.

LIGHTING FIRE IN THE OPEN

It is forbidden to fire, do something with fire, burn stubble in the Project and Operation Area and / or in public places, parks, gardens and picnic places except ovens for public institutions and organizations and operators and citizens. It is forbidden to throw and pour materials that burn easily such as paper, plastic, nylon and sparkling ash and cigarette butts, into closed spaces, doorways, garbage containers, forests, highways, streets and main streets.

KEEPING OPEN ENTRANCE OF THE BUILDING

In order to facilitate the intervention in the fire, "Parking prohibition" is set up for the main entry and vicinity of the buildings, aiming at the coming near of the fire trucks easily, and this issue is indicated with traffic signs and signs.

REPORT LINE

It is compulsory to write "**FIRE 110**" in luminous yellow or white color on the red floor in public telephone booths and payphone booths, where appropriate for highways and highways outside the city, public buildings, sites and security and control systems of other institutions and organizations.

FIRE EXTINGUISHER EQUIPMENT AND FACILITIES

It is forbidden to break, damage, tamper, demount, put foreign objects such as paper, rag into the fixed or mobile fire extinguishing equipment and installation in buildings, make unavailable to use the fire hydrants no matter what happens, park vehicle obstructing the fire track to pass, draw rope, hang on sunshade, exhibition etc. in front of the buildings. Fire extinguisher installation and equipment, can not be used for other purposes.

OBLIGATION TO COMPLY WITH THE FIRE OFFICER'S INSTRUCTIONS

In the Project and Operation Area, during the firefighters in the building and the firefighters who are on duty, the decisions and instructions of the authorized fire officer to protect the safe of life and property are fulfilled in accordance with the ACACIA Company Personnel and / or other public officials and building responsible.

ENTER THE FIRE DEPARTMENT'S SERVICE

In the case of a fire in the building, responsible building officials who respond to the incident enter into the local fire department's service from the moment the local fire brigade supervisor arrives at the scene and they have to help themselves in every respect.

COOPERATION WITH FIRE DEPARTMENT

Public officials, building users, building officials, volunteer teams and anyone at the scene help fire crews, carry out their duties and can not act as make difficult their work.

FIRE ROUTING FLUE

In a fire, the flues that are used to prevent the expansion of the fire by pulling in the desired direction.

APARTMENT BUILDING

It is the building that comprises three or more residential units with independent kitchens and bathrooms.

ATRIUM STRUCTURE

The hall is wide and tall, with two or more floors opening into it. If stairwell, elevator well, escalator, or of water, electricity, ventilation, air conditioning, communication are located in installation shafts, they can't be counted as atrium.

PRESSURIZING

The method of preventing smoke leakage by keeping the air pressure in escape routes higher than in other places.

BUILDING HEIGHT

The distance from the point where the building is level to the level of the fringe or the zoning plan or the height assumed in this Plan

BASEMENT FLOOR

The floor that its upper level is lower than 1.2 m from the top level of the floor adjacent to the building exterior wall.

SMOKE RESERVOIR

It is the volume designed in the plan for the collection of smoke..

SMOKE CONTROL

In the event of a fire, measures are taken to control the movement or spread of smoke and hot gases in the structure.

SMOKE SCREEN

A fire-resistant partition which can be remotely closed or trapped by a detector in a fixed position in the ceiling to limit lateral expansion of the rising smoke.

SMOKE REMOVAL

It is to be thrown out of the smoke from the building simultaneously or forcedly by mechanical means.

SAFETY ZONE

It is the area where the evacuated people can wait safely.

FIREFIGHTERS LIFT

It is a special elevator whose use is directly under inspection of the supervision of building extinguishing and rescue teams or firefighters and which is applied an additional conservation.

WET SPRINKLER SYSTEM

The pipes of these sprinkler systems are constantly filled with water.

STEPPED HORIZONTAL EVACUATION

It is a shelter in a fire-proof compartment or lower compartment located on the same floor level away from a fire of users.

ESCAPE LIGHTING

In case of interruption of normal lighting circuits, the luminaire is illuminated by its own power.

ESCAPE DISTANCE

The actual length of the path that a user at any point in the floor has to take up to the exit of the closest floor to itself.

ESCAPE ROUTE

It is the entire road from any point of the building up to the mainstreet or street in ground level and not blocked in any way. Exits from rooms and other individual spaces, corridors and similar passages on the floors, floor exits, stairs leading to the ground floor, and roads leading to the building exit are in this scope.

PUBLIC USE

The building is to be used openly for entry and exit by anyone who already has an identity, as well as people who have anything to do in. Guesthouses, cinemas, theaters, hospitals, restaurants, schools, dormitories, local, work places, indoor and outdoor sports facilities, training and recreation facilities etc. are evaluated as public buildings.

HOUSING

The home, residence which is reserved for this purpose in the development plan, in which one or more people reside to rest, sleep out of working time without a commercial purpose.

USER LOAD FACTOR

Possible number of users for 1 m² surface in certain types of structures.

USER LOAD

It is the total number of people who are likely to be present in any part of a building or base of a building.

PIPE SYSTEM

Vertical pipe which normally does not contain water in it, but where the fire brigade can flood from the ground level in case of fire.

DRY SPRINKLER SYSTEM

The majority of the pipes of this system filled with air before the operation .

CONSERVATIVE CORRIDOR/HALL

Halls or corridors separated from adjacent spaces by fire-resistant construction elements and protected from fire effects.

CONSERVATIVE LADDER

It is a fire escape ladder which is surrounded by a material resistant to fire and opens to a safe area with a final exit on the ground level.

CURRENT STRUCTURE

It is the structure which has been completed or given the building license before the enforcement of this Regulation.

COMMON STAIRS

It is an escape ladder that serves multiple use units.

AUTOMATIC

It is a self-fulfilling system that does not require human intervention.

CERTIFIED

Equipments, materials or services that have been tested and approved by TSE or an international certification organization approved by TSE.

LIQUEFIED PETROLEUM GASES (SPG or LPG)

Liquid propane, propylene, normal-butane, iso-butane and butylene compounds or mixtures of these compounds are referred as liquefied petroleum gases.

SITE

Liquid propane, propylene, normal-butane, iso-butane and butylene compounds or mixtures of these compounds are referred as liquefied petroleum gases.

FINAL EXIT

An escape route is an exit point that gives passage to a safe area outside the building (road, street, etc.).

SPRINKLER

It is an automatic system that is set up to extinguish fires and to limit the growing fires until fire department arrives.

PIPE WATERING SYSTEM

Vertical pipe which is normally permanently filled with water.

FIRE SEPARATION (BARRIER)

A horizontal or vertical element within the building that stops the progression and spread of fire and smoke for a defined period of time.

FIRE ZONE

In the event of a fire, the warning and extinguishing precautions departments that are commissioned separately from the other systems.

FIRE RESISTANCE CLASS

Determines the fire durability period that a building material and / or its component is detected as a result of endurance tests to the specified European Standards for TS 1263, TS 4065 under appropriate heating and pressure conditions.

- a)** The duration of the fire resistance 30-59 minutes F30,
- b)** The duration of the fire resistance 60-89 minutes F60,
- c)** The duration of the fire resistance 90-119 minutes F90,
- d)** The duration of the fire resistance 120-179 minutes F120,
- e)** The duration of the fire resistance is indicated as 180 minutes and more F180.

FIRE RESISTANCE

A building component or element is resistant to fire by maintaining its load carrying, integrity and insulation properties for a determined period of time.

FIRE WALL

It is a vertical element that stops the progress and spread of the fire for a defined period of time, in situations which the volumes of different fire loads between two buildings or within the same building need to be separated.

FIRE SAFETY HALL

Fire safety halls to prevent the passage of fire and smoke to escape stairs.

FIRE DOOR

In a building, the door, the cover or the cap that provides circulation for air or objects, and is resistant to smoke, heat, flame passage for a certain period when closed.

FIRE COMPARTMENT

Within a building, it is a separated (volume) area that blocks passing of smoke and heat covered with fire-resistant construction elements for at least 60 minutes.

FIRE ESCAPE

In the event of a fire, it is a fire escape ladder specially constructed for safe and rapid evacuation of people on board. The fire escape is one of the part of the whole and can not be designed independently from the other escape routes.

FIRE RESISTANCE TIME

Assumed the burning speed as 0.8 mm / min, taking the wood element so reduced in cross section and equal to the safety factor 1.00, the time that can carry the actual load on it; is taken into account in fire resistance calculations of wooden elements.

SAFETY CURTAIN

They are specially equipped barriers that are used to protect the object, product or substructure that needs to be protected against fire or to spread the heat horizontally or vertically.

FIRE TYPE

The type of fire is classified according to the type of material that is burning and the four classes are separated.

- a) **Class A fires** are fires of flammable solid materials. Material fires such as wood, coal, paper, grass, documents, plastics enter this class.
- b) **Class B** fires are flammable liquid fires. Material fires such as gasoline, benzene, machine oils, lacquers, oil paints, tar, asphalt enter this class.
- c) **Class C fires** are flammable gas fires. Gas fires such as methane, propane, butane, liquefied petroleum gas (SPG), acetylene, gas, hydrogen enter this class.
- d) **Class D fires** are burning light and active metals such as lithium, sodium, potassium, aluminum, magnesium and radioactive materials.

LOAD

The magnitude obtained by dividing the sum of the products of the masses of the flammable materials and the values of the subordinate thermal values in a building section divided by the total area on the plan. (**MJ/m²**)

BUILDING OWNER

They are real and legal people who own property right on the building.

BUILDING SUPERVISORS

Building supervisors can be construction contractor, project engineer, designer, construction supervisor and building supervisor involved in construction works.

BUILDING HEIGHT

The total height of all floors built in the basement, mezzanine and roof space, including the plays.

RUPTURE FRONT

Against the risk of explosion, it is the weak surface created in the side wall of the closed section.

HIGH-RISE BUILDING

Buildings with a building height of more than 21.50 m or a building height of more than 30.50 m are considered high structures.

HIGH RISK

It is the place where high danger class materials are produced, used and stored.

3.2. ABBREVIATIONS :

ACACIA : Acacia Maden İşletmeleri A.Ş.

PMO : Project Management Office

SPG : Liquefied Petroleum Gas LPG :

Liquefied Petroleum Gas

4. REFERENCES

This Plan refers to the following documents;

- Regulation on the Protection of Buildings from Fire, RG: 26.7.2002/24822
- Regulation on Health and Safety Conditions in Underground and Above Mine Establishments
- Implementing Regulation on the Protection of Employees from the Dangers of Explosive Atmospheres
- Project HSE Plan
- ACACIA HSE Handbook

5. DUTIES AND RESPONSIBILITIES

5.1. COOPERATION PROTOCOL

(1) Fire brigade which is found in Municipalities, State institutions and organizations and private organizations and Turkish armed forces are organized protocols for mutual assistance and cooperation in the fires that may occur.

(2) The protocol includes training, information exchange, standardization of used equipment, equipment and materials, grand joint exercises, and the conditions under which the possible fires can be interfered with. Before the protocol is edited, if a fire that needs another fire brigade's help occurs in the areas of responsibility of these institution and fire bridges, the fire department that receives the request for help has to send the necessary and sufficient support to the fire brigade without creating any weakness against other fires that may occur in its territory.

Municipalities, State institutions and private firm and armed forces which have fire departments are organized protocols for mutual assistance and cooperation in the fires that may occur.

In protocol, training, information exchange, standardization of used equipment, equipment and materials, grand joint exercises, and the conditions under which the possible fires can be interfered with are included.

Before the protocol is edited, the fire brigade that receives the request for assistance should send the necessary and sufficient support to the fire brigade that requests help if it does not create any weakness against other fires that may occur in its territory.

5.2. PREPARATION, CONTROL AND APPROVAL

Preparation : ACACIA HSE Department

Control : ACACIA Administrative Affairs Department

Confirmation : ACACIA Operation Manager

5.3. EXECUTION OF INSTRUCTIONS

In order to ensure the implementation of the Regulation, Municipalities, public and private institutions and organizations and real and legal persons prepare their own "Fire Prevention and Extinguishing Instructions" according to the properties of the places, structures, buildings, facilities and businesses they are in. In the preparation of the instruction; the legislation specified in Article 102 of the Regulation on the Protection of Buildings from Fire and Other Provisions of the Regulation on the Protection Against Sabotage Concerning the Cabinet Decree, dated 28/12/1988 and the law no 88/13543, are taken into consideration.

An example of the direction is sent to the local municipal fire brigade and the Civil Defence Directorate.

The fire direction is executed by the owner, manager or supervisor of the building, premises and operation.

In this instruction; from the matters contained in the Regulation on the Protection of Buildings from Fire, the number of fire intervention teams, their names and duties, the type and amount of equipment, tools and materials needed, and plans and sketches that show the building layout, interior access roads, fire divisions, fire walls, horizontal partitions, facades, extinguishing systems, warning systems and water supply units and other facilities that can help with firefighting are added.

5.4. EXECUTION

This Instruction is administered by the HSE and Administrative Affairs Team within the ACACIA PMO.

In the case of major repair and modification projects which require new construction production or project change from the existing buildings, the conditions of the projected particulars according to the characteristics of the building are taken into consideration.

Projects, along with other legal regulations, are not allowed to use the premises if they do not comply with the requirements of this Plan in terms of fire safety.

If it is determined that no new construction or manufacturing modifications are made in accordance with the principles stipulated in this Plan for the purposes of modification of the project, no permission is given to use the building until such deficiencies are rectified.

Investor organizations, property owners, employer's representatives, design team, architects and engineers, implementing contractors, manufacturers are responsible, within the scope ACACIA PMO, from the implementation of the provisions of this Instruction. Advisors, consultants, project supervisors, building supervisors and business executives involved in building production and use are also responsible.

Fire extinguishing, detection and evacuation projects of buildings are prepared separately from installation projects. The projects shall be implemented on condition that their approval by municipalities and municipal adjacent area within the boundaries of municipalities and governorships.

The property owners, employer representatives, design team, architects and engineers, construction supervisors, contractors, manufacturers and consultants involved in building production shall be held liable at the rate of failure, that causes fire damages, to comply with the provisions of this instructions.

Insurance companies have to check whether the provisions of this instructions are implemented, in the buildings, facilities and businesses where they request to insure against fire.

The general responsibilities and prohibitions for the implementation of this instruction are as follows:

- a) Fire Notification:** Anyone, who notices a fire out of control or smoke, has to report it with a correct definition and without taking up time to the fire department and the Emergency Situation Line reported in the ACACIA Emergency Action Plan.
- b) Park Prohibition:** Including all roads within the Mine and Plant Site and Project License Borders, on street and road vehicles and parkings in such a way as to make the passage of fire trucks difficult and roads, signs and banners hanging over the sidewalk, blocking the road by holding an exhibition and parking on narrow streets are prohibited.
- c) Intervention to Extinguishing Materials:** It is forbidden to tamper, disassemble, break or make unusable fixed and mobile fire extinguishing systems and devices in all areas, buildings, open spaces, facilities, streets, streets, areas and squares.
- d) Lighting Fire in the Open:** It is forbidden to fire, do something with fire, burn stubble in the all working areas within the Project License Borders, parks, gardens and picnic places except ovens for public institutions and organizations and operators and citizens. It is forbidden to throw and pour materials that burn easily such as

paper, plastic, nylon and sparkling ash and cigarette butts, into closed spaces, doorways, garbage containers, forests, highways, mainstreets and streets.

- e) **Keeping Open the Entrance of Building:** In order to facilitate the intervention in the fire, "Parking prohibition" is set up for the main entry and vicinity of the buildings, aiming at the approach of the fire trucks easily, and this issue is indicated with traffic signs and signals.
- f) **Report Line:** It is mandatory to write "110 FIRE" in phosphorous yellow or white color on the red floor where the security and control systems of the buildings, sites and other affiliates in the ACACIA Project License area are located.
- g) **Building Supervisors:** The application of matters relating to firefighting assistance and prohibitions mentioned in this section of the instruction, is the responsibility of the administration of the super intendent of the building, directors who were established the property ownership of the building and building owner of the other buildings.
- h) **Fire Extinguisher Equipment and Facilities:**It is forbidden to break, damage, tamper, demount, put foreign objects such as paper, rag into the fixed or mobile fire extinguishing equipment and installation in buildings, make unavailable to use the fire hydranths no matter what happens, park vehicle obstructing the fire track to pass, draw rope, hang on sunshade, exhibition etc. in front of the buildings. Fire extinguisher installation and equipment, can not be used for other purposes.
- i) **Obligation to Comply with Fire Officer's Instructions:** In the Project and Operation Area, during the firefighters in the building and the firefighters who are on duty, the decisions and instructions of the authorized fire officer to protect the safe of life and property are fulfilled in accordance with the ACACIA Company Personnel and / or other public officials and building responsables.
- j) **Enter into Fire Department's Service:** In the case of a fire in the building, responsible building officials who respond to the incident enter into the local fire department's service from the moment the local fire brigade supervisor arrives at the scene and they have to help themselves in every respect.
- k) **Cooperation with the Fire Department:** Public officials, building users, building officials, volunteer teams and anyone at the scene help fire crews, carry out their duties and can not act as make difficult their work.

5.4.1. FIRE SAFETY RESPONSIBILITY

Owners or managers are responsible for the biggest supervisor, other buildings, facilities and businesses in private enterprises in fire safety in buildings, facilities and businesses.

Fire safety responsibility

- a) During office hours, the fire safety officer is selected among the officers for each floor, section or all of the building according to the number of officers and at the discretion of the greatest superintendent in that building
- b) The responsible person is responsible for checking and taking measures to protect against fire in the section where he is responsible from the beginning to the end of the working hours.
- c) The building manager undertakes this responsibility in buildings subject to property ownership.

5.4.2. PROJECT CONSTRUCTION /MANUFACTURING DIRECTORS

Project and / or Construction Managers, hereby will develop appropriate instructions for fire protection, fire prevention and related emergency guidelines, using the contents of the document as a guide and, where appropriate, consulting relevant experts.

Administrators specially will be responsible for:

- The field is also adapted to this safe working system,
- Fire protection, fire prevention and emergency formulations in the field or its installations, formulation, application and continuous inspection of the Instructions,
- The development of the contingency plan for combating fire in the absence of fire protection or firefighting personnel,
- Ensure that all personnel are involved in regular fire protection trainings and exercises and all personnel on the field have relevant and up-to-date fire fighting certificates
- Ensure that a review and maintenance program is available for:
 - o Fixed and portable fire fighting systems and equipment
 - o Fire detection systems

5.4.3. UNIT MANAGERS

Unit Managers will provide the followings in their areas of responsibility:

- Adapting to this safe working system,
- Regular monitoring of fire fighting and cleaning / maintenance standards,
- Providing all of the fire fighting equipment has the valid date and is in working condition,
- Ensure that all activities are carried out safely and responsibly in terms of fire risks, and that Risk Assessments are carried out where necessary.

5.4.4. STAFFS

All staff including the contractors shall be responsible for the prevention and detection of the fire. The staff will be specifically responsible for:

- They should immediately notify their supervisors of any situation in which they think they are carrying a potential fire risk,

- They should carry out their work in such a way as to provide fire safety,
- If a fire alarm is given, they must be sure that they know and understand the actions they need to take,
- They should be sure that they know and understand all the necessary procedures for fire detection.

6. METHOD

6.1. HAZARD CLASSIFICATION OF BUILDINGS

The hazardousness of a building or part of it, covered by this instruction, means that the danger ratings relative to the factors that constitute a potential danger for the live and safety of people live in buildings or constructions because of such as the onset and spread of fire, smoke and gasses generated during a fire, danger of explosion.etc.

The hazard class of a building or a section of it is determined by the characteristics of the building and the nature of the processes and operations carried out in the building. If there are substances with different hazard classes in different parts of a building, the classification is made according to the highest hazard classification.

Table 1. Hazard classification of buildings

BUILDINGS	BUILDING CLASS	YANGIN TEHLİKE SINIFI
Administrative Buildings, Sub-employer Office Buildings, Security Buildings	Office Buildings	Low
Dining Hall Buildings	Buildings for assembly	Middle
Health Unit	Buildings for assembly	Low
Crushers, ADR Plant, BTS, Laboratory, Workshops, Power Stations, Strengthening Stations	Industrial buildings	Middle
Warehouses, Cyanide Warehouses, Ulubey Warehouse	Buildings for Storage	Low
Explosive Storage	Buildings for Storage	High (due to risk of explosion)

The hazard classification of a building or a section is made as low, medium and high:

- A light hazard group** consists of materials that have a low sense of wisdom that will not allow a self-sustaining fire to occur. This includes residences, places of worship, hospitals, schools, libraries, museums, bureaus, restaurant seating areas, theaters, auditoriums and similar places.
- Ordinary hazard group** consists of materials that have a potential to burn at medium speed and release significant amount of smoke. This includes the parking lot, bakery, laundry, restaurant service areas, dry cleaner, leather production, commercial, paper production, post office, publishing house, printing house, automobile repair shops, textile production, tire production, carpenter shop and so on.
- Extra hazard group** consists of materials that are likely to burn very quickly or have explosion hazard. This includes Aircraft hangars, places where flammable liquids and gases are produced, stored and distributed, combustible materials with a flash point lower than 38 °
C, plastic, plastic foam and similar materials

The general provisions described in this chapter shall also be applied to buildings and wooden buildings which are specially designated and privileged, unless otherwise stated.

6.2. BUILDING SETTLEMENT

During the fire safety development plans are being made, care will be taken to separate green zones by allowing the construction of fire pools and water supply points between functional areas such as housing, trade and industry and to separate these green zones from each other by separating each of the functional areas in terms of fire safety.

The fire precautions in the building classification will be taken into consideration when determining the reinforcement areas and settlement functions in the design of the development plans.

The length of zoning islands to be formed next to the newly planned area will not exceed 75 meters. Regulations for fire safety and access control are made in contiguous ordinal structures with a length greater than 75 metric, and measures are specified by the plan author in the plan note.

In the construction and revision of the plan, fire brigades will be allocated over 0.05 m² / person, considering the planning area and population.

6.3. BUILDING TRANSPORTATION WAYS

Providing of the fire department vehicles to reach all the buildings of ACACIA Mining Project, care is taken to ensure that the roads are open to traffic without any obstacles in the way of the fire trucks. Especially in order to prevent the obstruction of roads due to parked vehicles, the municipal traffic units and the Police Traffic Division are obligated to keep the roads open at ordinary times according to the Highway Traffic Law numbered 2918 and the regulations issued based on this Law. Those have authorization to clear the way for providing transportation in the event of a fire by taking measures for saving the personal properties and the vehicles that are parked in.

Inland roads, are roads that provide an access to any building from the main road. The usual width of inner roads will be at least 4 m and in case of dead-end streets at least 8 m wide. In the curve, the apothem must be at least 11 m, the outside radius must be at least 15 m slope at most 6%, and the vertical curve at least R = 100 m radius. The free height shall be at least 4 m and the carrying load shall be at least 15 tonnes (10 ton rear axle load shall be considered).

If the angular distance required for the access from the internal road to the building is longer than the accessibility of the means of the fireman's service, the surrounding or garden walls, which may interfere with the approach of the fire brigade to the building, shall be made weak, easily breakable by the fire brigade. In this way, the poorly constructed wall section will be at least 8 meters wide, will be visible with a red cross mark, and no vehicle will be parked in front of it.

6.4. BUILDING BEARING SYSTEM STABILIZATION

It is imperative that the building bearing system and its components, both as a whole, and with each element, be sized and calculated to ensure that they remain stable for a sufficient period of time in order to protect people in the event of a fire or extinguishing in a fire. These calculations are made in such a way as to provide the desired fire resistant or fire retardant duration. Additional calculations are required for special structures. Relevance given in TS 1263 will be used in the time-dependent development of the temperature increase in the fire duration.

For the safety of fire, it is not permissible for the use of structural elements, which do not provide at least the class of fire protection F30-B2, in the conveyor parts of the buildings, except in special cases in steel industry structures.

All steel structures which are not dangerous to the environment and which do not cause a temperature increase above 540 °C in the flammable steel elements during fire are considered to be resistant to fire without any measures against fire in the steel. Apart from this, steel structures must be properly insulated from the steel ceiling. Insulation can be made by spraying with fireresistant spray plaster, painting with fire-resistant paint, wrapping with fire-resistant materials, boxing and massive insulation

In the structural elements of reinforced concrete and pre-stressed concrete, TS 4065 standard is applied. In multi storey and especially horizontal fire brigade buildings, the system is examined as a whole, additional constraints arise in situations where element expansion is constrained. In order that reinforced concrete or reinforced concrete-steel composite elements can withstand 2 hours against fire, the steel profile or the outermost parts of the fitting (rust share) must be at least 4 cm. It must be covered with concrete in its thickness.

The fire resistance calculations of wooden elements are based on the burning rate. The burning speed is assumed as 0.6 to 0.8 mm / min; the duration of fire resistance is assumed to be such that the wooden element is capable of carrying the actual load on it, with the decreasing cross-section and the safety factor 1.00 being equal.

If at least 19 cm. of the masonry carrier wall, arches, vaults and domes are constructed in accordance with other standards and regulations, no separate control is required for short duration fires from 4 hour.

6.5. PARTITIONS,FACADES,ROOFS

6.5.1 FIRE PARTITIONS

The buildings should be equipped with vertical and horizontal fire partitions when necessary. If only loss of life is considered, there may not be fire divisions in single-storey office buildings, single-storey and open-air factories and warehouses in single storey detached houses with single or secondary exit.

In case of the absence of the sprinkler system and the smoke removal system, in buildings except the buildings mentioned above and industrial facilities, fire compartments will be organized that will not exceed floor area 2000 m² and 1250 m² in buildings that are important for the safety of life such as rest homes, hospitals, kindergartens, primary and primary schools.

6.5.2. VERTICAL INNER PARTITIONS AND FIRE WALLS

The fire walls of vertical interiors and adjacent structures should be designed to last at least 90 minutes in the fire. The partition ratios should not exceed 60 meters. The properties of these partitions and walls have been indicated in the related articles.

There will be no holes and spaces in the partitions. If it is not possible to avoid spaces such as doors and fixed light windows in the divisions, they will be fire resistant and fire retardant at least half the fire resistance of the partition. It is imperative that the doors are selfclosing with an automatic equipment and are smoke-tight. The

circumference of such semi-rigid cavities shall be free from all kinds of flammable substances. In case of water, electricity, heating, ventilation and

the similar installation passes through the fire partition, appropriate and approved details which do not reduce the fire resistance will be used.

The flammability classes of the building materials that can be used in fire walls and their behavior observed in the fire are given collectively in Appendix -1 under the Regulation on the Protection of Buildings and in the fire resistance conditions Appendix -4 on the normal building walls. The two storey houses, the supporting walls, the toes and the columns should be at least F30-B2 class.

High-rise buildings with public buildings can be used with sliding sections or corridor dampers that are automatically closed during fire or are closed outside the hours of use.

The flammability classes of building materials and the behavior observed in the fire have been shown in Appendix-1 under the Regulation on Protection from Fire of Buildings.

The required at least F30-B2 class for carrier walls, jambs and columns in the buildings that consist of maximum 2 floor, is also allowed for the non-supporting walls of 2 floor high buildings. The fire resistance requirements on the walls of normal buildings have been shown collectively in Appendix-4 within the scope of Regulation on the Protection of Buildings.

6.5.3. HORIZONTAL PARTITIONS AND UPHOLSTERY

Except for the maximum 2-storey detached houses with fire class F30-B2, all floors will be fire resistant and fire-resistant for at least 60 minutes. In any case, the basement ceiling will be resistant to fire for at least 90 minutes.

Any floor that has resistance to the fire for at least 120 minutes and does not have gaps for the flames to pass through can be used as a horizontal fire compartment.

It is forbidden to use suspended ceilings from class B2 and B3 materials except in detached houses.

The fire resistance requirements of the building upholstery are shown in Appendix-4 within the scope of the Regulation on the Protection of Buildings from Fire.

6.5.4. FACADES

The facades are in the form of vertical external fire partitions. The exterior of the facade is a fireproof material. The facade elements and the places where the flats do not have gaps where the flames can cross are to be insulated so that the flames do not jump on neighboring floors.

There should be at least 100 cm horizontally filled surface between doors, windows and similar facade cavities if they do not belong to the same interior volume. If these filled surfaces are a vertical fire partition or wall,

they should be reinforced with vertical non-burning ribs that protrude at least 40 cm out of the building. Buildings used as housing are outside of this practice.

If no special windows are used for at least 30 minutes in the fire, at least 50 cm of projecting horizontal flame repellent ribs will be arranged on the facade.

6.5.5. ROOFS

The floors where the roofs are located should be in the form of a horizontal fire partition. In adjacent structures, it is forbidden to use B2 and B3 class materials as roof overlays (Top insulation).

Vertical fire divisions and fire walls shall be made in dimensions and qualities and at least 60 cm above the roof plane. Properties of the materials to be used in the roof are shown in Appendix-4 within the scope of the Regulation on the Protection of Buildings from Fire.

6.6. BUILDING MATERIALS TO BE USED

For fire safety reasons, it is not allowed to use easily extinguished class B3 building materials on construction. They can only be used in a composite or after conversion to normal extinguished B2 class by taking special precautions.

The supporting walls, toes and columns in the two-quadrant buildings are constructed at least in F90-A class. Inner coverings and thermal insulation in the walls are at least normal extinguished B2, and at least in the high buildings the least difficult extinguishing B1; outer coverings are made from at least B2 in buildings with maximum 2 floor and A1 materials in nonfire in higher buildings.

Heat insulation from the easily extinguished B3-class material on the floor is permitted provided that it is covered with a screed layer at least 2 cm thick. The floor coverings are made from at least B2, and at least the non-burning class A1 materials in high buildings

The fire resistance requirements for normal building walls, upholstery, beams, stair halls, corridors and building materials have been shown in Appendix 2 - 6 within the scope of the Regulation on Fire Protection of Buildings.

Fire resistance requirements for building materials and components in private buildings, such as store buildings, meeting halls, garages and multi-storey industrial structures, have been shown in Appendix 7-10 under Regulation on the Protection of Buildings.

Roof elements that can be accepted without any necessity and without depending on the inclination of the roof are those that are resistant to volatile burning and heat radiation. Roof coverings made of natural or artificial stones, concrete platters, roof coverings made of asbestos cement platelets, roofs, roofs made of steel or other metals and not containing insulation and covering layers of at least grade B1.

6.7. ESCAPE ROUTES, ESCAPE STAIRS AND SPECIAL SITUATIONS

This section specifies the design, construction, maintenance and maintenance requirements for safe escape routes for users.

Any structure designed for use by humans, will have been equipped with sufficient emergency exits to provide quick escape of the user during a fire or other emergency. Exits and other measures will be designed so

that in case of fire or other emergency, safety of life will not be based solely on a single prevention. Measures will be taken to ensure the safety of individual precautions against personal failures, mechanical failures or the possibility that they will be lost due to the present danger.

Each structure shall be made, maintained, and operated in such a way as to protect users from excessive risk of heat, smoke or panic for escape from fire or other emergency situations.

Each structure will be equipped with emergency exit doors that are appropriate for the type, number, position and capacity in accordance with the class of use, user load, level of fire protection, structure and height, in order to provide suitable escape possibilities for all users.

Each structure will be regulated and maintained in such a way as to provide the free and unobstructed dangerous outflows from all sections of the structure. To prevent free escapes from being blocked by any structure, components such as door lock, will not be installed. Authorized personnel will be allowed to use locks in places where mentally defective, detained people live, authorized personnel are on duty under all conditions and have adequate facilities to transport the user during a fire or other emergency.

Each exit will be clear-cut, and the path leading to the exit will be clearly visible so that any person physically and mentally healthy in any structure will easily understand the direction from any point. Any door that does not carry the exit character, or the road leading to an exit, shall be arranged or marked so as not to be confused with the actual exit. In the event of a fire, users will not be allowed to accidentally enter dead zones, and will be provided with direct access to an exit or exit from the used rooms without having to pass through the rooms.

Where artificial lighting is required in a building, the regulations relating to the exit shall be placed in an appropriate and reliable manner in the lighting design and the escape routes shall be lighted and directed in accordance with the principles set out in Part 3 of Chapter Five.

In the event of a fire, a fire warning system will be installed in accordance with the legal legislation requirements to warn users, where it is needed depending on the size of the building and the purpose of use.

Each vertical escape route and other vertical spaces between the floors of the structure will be closed or protected in a suitable manner to prevent heat, smoke and other combustion products from escaping into the floors by escaping from these spaces before and during escape.

Compliance with this Plan will not be interpreted as a reduction of other responsibilities related to the safety of users who use it under normal conditions, or to be removed from practice.

In addition, none of the provisions of this Plan will be construed as permissible in any circumstances which could endanger normal use.

6.7.1. ESCAPE ROUTES

A real escape route is the complete continuous and unobstructed escape route from any point of a structure to the safe area (Mainstreet, street, front of building etc.) at ground level. As a whole within the scope of escape routes;

- a) Exits from rooms and other independent spaces,
- b) Corridors and similar passageways on every floor,
- c) Floor outlets,
- d) The stairs leading to the floor
- e) The paths leading to the final exit of the same floor structure from the stairs' s opening on the ground floor
- f) Final Exit are included.

Elevators can not be considered as escape routes. The window and parapet height is up to 120 cm above the floor and open to the security zone outside the building, windows with a maximum width of 3 m above the outer surface, a minimum width of 90 cm and a height of 90 cm may be considered escape routes unless otherwise specified.

Determination of the escape routes shall be based on the class of use, the user load, the floor area, the distance to the exit and the capacity of the exits. Each floor will be provided with output facilities according to the user's load and the longest escape distance.

Escape ladders arranged on any floor above the ground floor can serve all normal floors at the same time. Escape stairs arranged on any floor under the ground can also serve all basement floors.

Different parts or floors are intended for use in different types of use, or in the same way, the requirements for the building structure or floor construction will be determined on the basis of the type of use with the most stringent escape requirements, or the requirements for each building site will be determined separately.

Laying areas of places that are not used at the same time, such as toilets, changing rooms, warehouses, personnel canteens, halls, corridors, and other similar spaces, the floors they occupy may not be taken into account in user load calculations

6.7.2. EXIT CAPACITY AND NUMBER OF EXIT

1.0 m² / person in conference hall, restaurant, waiting rooms, concert halls, open studio, wedding hall and similar places according to gross area for user load, necessary escape and panic calculations; 1.0 m² / person for living parts of dance halls, bars, play rooms and similar places; 0.50 m² / person in standing areas; in office buildings, in association centers, in hospital bedrooms 10 m² / person; super markets 2 m² / person, 7 m² / person in shopping centers, 30 m² / person will be taken in the parking lots.

For outlet width, the capacities of exit doors, escape ladders, corridors and other escape routes shall be calculated by taking a width of 50 cm. Unless otherwise stated, unit width, release time, 3 minutes in masonry structures and 2 minutes in wooden structures. It will be accepted that 40 people can pass in a minute from the width of 50 cm.

The number of exit will be found by adding the value 1 to be obtained by dividing the output width by two and when a value of more than 0.50 is obtained an upper value will be approved .

For example, the user load of a supermarket of 1000 m² is 2000 people, the output width is $2000 / (3 \times 40) \times 0.5 = 8.34\text{m}$, the number of outputs is $8.34 / 2 + 1 = 5$.

Unless indicated otherwise, there will be at least 2 gates in every place where 50 people have been crossed, in Social Facilities where 25 people have been exceeded, and in high-risk places, to access the exits. If the number of people exceeds 500 people, there will be at least 3 outings. The doors will be as far away from each other as possible, and the two doors will not appear at any angle less than 45 from a point.

The escape distance can not be greater than the values given in Table 2 according to the use class.

- a) The distance to the nearest exit from the farthest point in a floor that is designed with at least two outputs will not exceed the limits defined in Table 2.

A large floor area separated by rooms, corridors and similar subdivisions shall be admitted if the escape distance of direct (as crow flies) does not exceed 2/3 of the maximum escape distance allowed in Table 2

- b) The farthest point to measure the distance of escape will be 40 cm ahead of the walls surrounding the space within the space.
- c) Where escape areas are provided instead of forced exits (such as hospitals), escape distance is the measure from the corridor leading to the asylum area to the exit gate.

Table 2. Longest escape distances leading to exits

Usage Class	Mostly in one direction	Distance (m)	Maximum distance in both directions (m)	
	Sprinklersiz	Sprinklerli	Sprinklersiz	Sprinklerli
Extra hazard	10	20	20	35
Industrial	15	25	30	60
Dormitories, Accommodations	15	25	30	60
Stores, shops	15	25	45	60
Offices	15	30	45	75
Car parks	15	25	45	60
Education	15	25	45	60
Assembly Area	15	25	45	60
Hospitals	15	25	30	45
Guesthouses, Boarding houses	15	20	30	45
Apartments	15	30	30	60

6.7.3. ESCAPE ROUTE WIDTH

Any exit route, escape stairs or other escape routes will not be less than two unit widths ie less than 100 cm, with narrower widths than the values calculated above and with a total number of more than 50 users.

The maximum width of the Escape Stairs shall not be exceed 200 cm. Stairs with a width exceeding 200 cm will be separated from the parapets not less than 100 cm and not more than 200 cm. While the exit capacity of the escape ladders is calculated, the excesses of 200 cm will not be counted.

In places with two exits, each exit will be wide enough to cover at least half of the total user load.

Widths will be measured as clean width.

- a) In Escape Stairs; if the staircase is surrounded by walls, clean width is the measure between the finished surfaces of both walls. If there is a guardrail on one side of the wall and one side of the stairs arm, the clean width is the measure between the finished surface of the wall and the inner surface of the guardrail. If there are balustrades on either side of the stair strand, clean width is the measure between the inner surfaces of the balustrades, and the stalls on both sides will not protrude more than 80 mm.
- b) At the exit door; clear width at the single-winged door, the width of the door frame or the surface of the wing that has been opened 90 degrees by the projection of the lamp. The clean width of a single winged exit door will not be much less than 80 cm and more than 120 cm. The clear width at the two-winged door is the measurement between the wing surfaces when both wings are 90 degrees open.

The following requirements shall be observed for all exits and access routes.

- a) Exits and access routes can be seen clearly or the locations will be highlighted and will be kept free from obstructions so that they can be used at any time.
- b) For each user / tenant in a building or floors, direct access to an exit or outlets will be provided without having to pass through the rooms or spaces used by other users / tenants

6.7.4. FIRE SAFETY HALL

Fire safety halls to prevent smoke from escaping the escape ladders will be designed so that they do not interfere with the movement of the user in the escape route and it will not be less than 3 m². The floor will be inclined towards the exit door in the elevator hall, not exceeding 1/200.

Corridors and halls which do not contain flammable materials and which are separated by a door from their use area are considered as fire safety volume.

6.7.5. REQUIREMENTS FOR ESCAPE ROUTES

For all structures, escape routes will be provided using one or more of the following possibilities. The mandatory exits will be easily accessible as long as the bell is in use, the doors will open and there will be no obstacles in front of them.

ESCAPE CORRIDORS AND PASSAGEWAYS

The following conditions are required for escape corridors and passageways.

- 1)** In a building or a floor, the conservative corridors or halls which serves as an escape route will be resistant to fire for 60 minutes in buildings have maximum 3 storey and 120 minutes in the buildings with height of more than 15.50 m.
- 2)** Internal escape corridors and passageways shall have the following characteristics.
 - a)** An escape corridor / gate opening doors shall be equivalent to fire escape doors opening to the escape ladders and shall be equipped with automatic self-closing arrangements.
 - b)** The minimum width and capacity of the internal escape corridor shall comply with the values set out in Article 6.7.2 of this Plan.
 - c)** Code differences of up to three steps along the escape corridor will be connected with ramps up to 10% inclined. The ramps will be equipped with equal security measures and the incline will be kept constant. The floor will be covered with non-slip material.
 - d)** If the escalator is connected to the escalator corridor, the corridor will be pressurized mechanically as appropriate.

OUTSIDE ESCAPE ROUTES

As an escape route, an outer passage can be used instead of an inner passage. However, the crown to be placed in the wall cavities to be arranged on the outer wall of the building adjacent to the outer gate is nonflammable; the gap between the parapet top and floor finished jeans is 1.8 m or more in height and that such venting cavities shall be no closer than 3.0 m to any wall space of an escape ladder.

An exit gate opening to the outside will be resistant to fire for 30 minutes and will be equipped with self closing mechanisms.

6.7.6. ESCAPE STAIRS

In the event of a fire, these stairs are specially designed to be used aiming the evacuation of people fast and safely. Those of ordinary stairs that can be used in the fire are also considered as fire escapes.

Fire escapes, escape routes used in fire related evacuations are part of the whole, and other escape routes can not be designed independently from their items.

No flammable material should be used in the fire escape wall, ceiling and floor, these elements should be resistant to fire for 120 minutes.

It is the responsibility of the owners and managers of the building or workplace to ensure that fire stairs are used in accordance with their use

6.7.7. EXIT DOORS

The minimum clear width of the exit doors shall not be less than 80 cm. There will be no threshold on the doors. Rotary doors and turnstiles will not be used as exit doors.

Escape ladders, the wings of the exit doors to the escape gates will not interfere with the movement of the users, the exit gates in the spaces exceeding the user load 50 person will be opened towards the escape direction and will be equipped with self-closing arrangements.

The escape ladder and fire safety gate pass doors will be opened manually and will not be locked. Firemen or officers will be allowed to enter outside when necessary.

Doors shall be leakproof and resistant to fire for at least 90 minutes.

If the number of people on one floor exceeds 50, the fire escape stair and fire safety hall doors will be opened (panic-bar or similar) without using door handle in the escape direction

6.8. HOUSING

Escapes can be provided with normal staircases at the special structures such as single houses, twin houses, row houses, and a separate building that serves a single use, or a separated part of the structure and no separate conditions are required.

There will be at least 2 independent escape stairways or other exits on each floor in buildings that are used as residential buildings and whose building height exceeds 30.50 m.

In residential units other than apartment type residential units, exit points will be arranged so that the distance from any point in the house to the exit gate will not exceed 20 m. Besides, if there are only one door in the apartment which does not contain more than 2 intermediate floors; this door will not be arranged on the upper floor. The floor covering at the upper floor will not exceed 70 m² unless a separate exit is provided for this floor. All exits from the residential units will provide direct access to escape stairways or open air.

The distance of escape will be measured starting from the door of the apartment. If an apartment house requires two doors at the same floor level, if only one escape route or a single escape route is provided, the escape distance will be measured starting from the farthest door. If escape is possible in two different directions, the escape distance will be measured starting from each door.

6.9. HEALTH FACILITIES

Within the scope of the health facilities, the following requirements shall be applied to the Health Clinics and infarmacy which are located in the project area, the special areas for the elderly and visitors, rest places for the sick, physical and mental handicap.

- a)** Any patient room or suite room which exceeds 15 users will be provided with 2 doors spaced apart from each other. For spaces exceeding 50 users, the requirements of the structures for meeting purposes shall be complied with.

- b) Health Clinics and Infarmaries, resting places for elderlies and visitors, special areas created for the physical and mental disabled, protected horizontal shelter areas shall be established. Where the shelter area is used as a mandatory exit, the user load will be 2.8 m² / person in the calculation of the shelter area

6.10. ACCOMMODATIONS

Buildings and structures that are build as Dormitories and Guesthouses, or the sections of the newly constructed buildings that are used as dormitories or guesthouses, the existing buildings that have been converted from a different class of use into guest-house and dormitoryuse classrooms, or an inland corridor for these converted portions, will comply with the following requirements.

- a) Bedrooms will be separated from the internal corridor by a wallwhich is resistant to fire at least 60 minutes
- b) The doors opening to the inner corridor shall be resistant to fire for at least 30 minutes and equipped with self-closing automatic devices.
- c) The inner corridors shall be ventilated with spaces in an outer wall, which shall not be less than 15% of the inner corridor floor area. Inner corridors that are not naturally ventilated will be pressurized in accordance with the 89th item.
- d) It is necessary to provide a compartment at the same level as the bedrooms for other rooms that open up the bedroom corridor or for other spaces where the escape can be dangerous by forming a part of the corridor.

Guest house bedrooms accessed by an outside corridor will comply with the following requirements.

- a) Bedrooms will be separated from the exterior corridor by a wall that will resist fire for at least 60 minutes. However, this requirement is not necessary for non-combustible ventilation spaces deployed at 1.1 m or more above the parapet upper level corridor finished floor level.
- b) The doors opening to the outer corridor will not be required to be fire resistant.
- c) At outer corridors, minimum widths for exterior escape routes, level changes in the outdoors, roof guarding along the outer edge of the corridor and similar requirements shall be observed.

The single exit gate in the bedrooms or suite rooms of the guest house will only be subject to the condition that the measured distance from the farthest point to the exit gate in the bedroom or suite room does not exceed 15 m. But,

- a) In the guest bedroom bed room or suite room, at least 2 exit gates spaced apart from each other will be found if the distance measured from the farthest point to the exit gate exceeds 15 m.
- b) In accordance with the requirements of Part 6, the distance measured to the farthest point in the bedrooms or suite rooms of guesthouses equipped with a total sprinkler system shall not exceed 20 m.
- c) Escape distance will be measured from the exit door of the bedroom or suite to an escape ladder, escape gateway or exit door to the outdoor open area.

If there is only one escape route along the corridor, the escape distance will be measured from the exit door of the most remote bedroom. If escape is available in two directions, the escape distance will be measured from the exit doors of each bedroom.

Interior corridors that are not naturally ventilated will be partitioned with smoke barriers at intervals of 45 m in the structures with sprinklers, 30 m in the structures without sprinklers, and the following requirements will be followed.

- a) Smoke barriers will be provided with fire-resistant divisions and the doors in the division will be smoke-tight. The smoke divisions, including the wall surrounding the corridor, will continue all the way up to the level of the ceiling or to the bottom of the roof covering and the intersection will be closed tightly.
- b) Each of the sections created with smoke barrier will have direct access to an exit, an escape ladder, an escape gateway or an escape ramp.
- c) Smoke-proof doors shall be provided with glass panes providing clear vision at least 25% of the surface area of each flap, except for glazed doors.
- d) Smoke-proof doors can be single or double-winged. However, it will be equipped with selfclosing devices and will cover all the space in the wings. The frame shall be placed firmly in the wall space and the gap between the wing and the floor shall not exceed 4 mm.
- e) The smoke-tight doors shall be kept closed normally. However, these doors may be kept in the open state if it can be automatically closed by electro-magnetic or electro-mechanical devices operating via the sensing system

6.11. BUILDINGS FOR ASSEMBLY

Buildings for assembly includes all buildings or parts used for this purpose, where 50 or more people can come together for reasons such as ceremony, worship, entertainment, eating, drinking, transportation, vehicle waiting.

There will be at least 2 exits in each place in the buildings for assembly where there are 50 or more. If the number of people exceeds 500 persons, at least 3 exits and at least 4 exits per 1000 people will be designed. The doors will be opened to escape route, they will be as far away from each other as possible, and 2 doors will not be seen at a point less than 45 degrees from any point.

6.12. OFFICE, FACTORY, WORKSHOP AND WAREHOUSE BUILDINGS

At least 2 independent escape routes or other exits shall be provided for each office, factory, workshop and warehouse buildings.

6.13. ISSUES RELATED TO BUILDING PARTS AND FACILITIES

Measures to be taken in boiler rooms, fuel depots, stoves and chimneys, shelters, car parks, kitchens and roofs, lifts, lightning arresters, transformers, generators, etc., which are critical for the fire of buildings, are shown in this Part. Disposal or storage of flammable materials in these places is prohibited and must be cleaned at regular intervals and the building owner and / or manager is obliged to provide this.

6.13.1. BOILER ROOMS

The boiler room must conform to TS 1257, TS 2192 and TS 2736 standards.

The boiler room is located centrally and in its entirety, separated from other parts of the building, separated with divisions which are resistant to fire for at least 120 minutes. Building dilatation does not pass through the boiler room. The place where boilers and ovens are located in the boiler room, is separated with a door which are resistant to fire for at least 90 minutes.

Boiler room door to the fire escape stairway or general use stairs, but opens to a safety platform.

In boiler rooms over 100 m² of floor area, there will be 2 exit gates which are resistant to fire for at least 120 minutes and exit gates will be installed in opposite directions, smoke proof and self-closing.

The necessary precautions are taken so that no fuel is poured into the bottom of the boiler room, and a duct system (drainage) is made so that the spilled fuel can be discharged easily.

In the boiling room, concrete dirty water pit which should have at least 0.25 m³ volume will be installed, the ground waters should be collected by the basement drains from the appropriate points and connected to the sewage pipe (if pump is low). Liquid fuel streams should not be poured into the dirty water pit.

There should be at least 1 6 kg multi-purpose dry chemical powder fire extinguisher in the boiler room and at least 1 fire cabin in large boiler rooms.

In boiler rooms that use liquid fuel, the fuel tanks will be in an independent section protected from fire.

In case of liquefied petroleum gas (SPG) or natural gas being used in the boiler room, gas detectors will be used to detect these gases.

6.13.2. BOILER ROOMS WITH NATURAL GAS AND SPG INSTALLATIONS

Boiler room natural gas and SPG installation, project, material selection and installation should be done in accordance with the relevant standards and technical specifications of the gas companies.

The meters must be placed outside the boiler room.

The main shut-off valve which will cut off the gas at any danger and the main switch to disconnect the electric current and the main electric panel must be placed outside the boiler room at a place easily accessible. The plate showing the position of the gas main valve should be hung at a place easily visible at the entrance of the building.

In closed sections where gas is used, it is necessary to build a tear surface in case of explosion which may be caused by gas escape. This surface may be on the side walls of the enclosed part. The size of 0.2 m² / m³ space is enough.

Boiler room earthing should be done in accordance with the standards. For each boiler room it is necessary to make a special earthing system under the limit of 20 W.

Depending on the nature of the gas used, the panel and lighting and opening / closing switches must be installed in an appropriate place with the closed type.

The boiler chamber should be as flat as possible, it is important to ensure that there are no pockets where gas will escape in the case of gas leaks.

Personnel who will operate the natural gas boiler room must be certified for completing the natural gas boiler house operation course given by a competent authority. The building manager is responsible for implementing.

6.13.3. FUEL DEPOSITS

Fuel tanks are calculated and placed according to TS 2192 and TS 712. Fuel deposits should be placed in a protected volume with fire resistant sections. The fuel tank and the boiler should be separated with a section which is fire resistant for 120 minutes. Sufficient ventilation should be provided at the depot. The pooling should be able to take at least one third of the tank capacity.

Fuel storage can not be deployed at places such as staircase, stairwell, kitchen, bathroom, bedroom, terrace and balcony.

Heating oil can be stored in the following figures and quantities.

- a) Up to 1,000 liters, in the basement and barrel,
- b) Up to 3,000 liters, in the basement, in leathery steel cups,
- c) Up to 12,000 liters, in the mattress room which is fire resistant for 120 minutes, leak-free sheet metal deposits;
- d) Up to 50,000 liters, in underground and surface tanks,
- e) Stok ihtiyacının 50.000 litreden fazla olması halinde, yakıt tankları, meskûn mahalden ayrı bağımsız bir binaya yerleştirilir ve bu Yönetmeliğin Sekizinci Kısımında gösterilen emniyet tedbirleri alınır.
- f) Fuel tanks larger than 10.000 liters are grounded against static electricity.

Fuel deposits of fuel-fired floor heating can not be placed to places such as stairwells, kitchens, bathrooms, bedrooms and balconies in the flat. These tanks may be made in the basement at a maximum volume of 2000 liters, subject to TS 2192 and subject to the relevant provisions of this Instruction. The daily fuel storage can be done in a closed volume within a circle of maximum 100 liters. The daily fuel storage should only be opened by air and atmospheric, the overflow should be to the main fuel storage.

At least one 6 kg dry A, B, C dust hand fire extinguishing device shall be kept in buildings with floor heating or kerosene.

The coal bunker is installed adjacent to the boiler room, and with the base elevation is suitable for loading or unloading manually or with stoker. Coal should be able to move easily and slag should be easily disposable. The coal area is calculated on the basis of 1.5 m coal height according to TS 1257.

6.13.4. KITCHENS,TEA SHOPS,STOVES AND CHIMNEYS

Kitchens and tea shops; automatic extinguishing systems should be installed to the hoods at the kitchens in all offices, guesthouses and high buildings, and kitchens serving more than 100 persons within ACACIA Project and Operation Zone and gas detection system should be installed according to the specifications of the gas used in the ovens.

In case of the kitchens are in the basement and gas is used, ventilation systems should be made. The use of gas without a second outlet is prohibited.

The kitchen and tea shops are separated from the rest of the building by compartments which are fire-resistant for at least 120 minutes. Wood and other easily combustible materials can not be used as partitions.

Stoves and chimneys should comply with the principles in chimney installation, TS 2165 and TS 1481. For each boiler, preferably a separate chimney will be used, stove and geyser pipes will not be connected to the boiler chimneys.

The boiler room will also have a ventilation chimney. The chimneys shall be located at least 6 m from these buildings and shall be at least 0.8 m above the building crest, if possible, in order to prevent of diminishing the chimney draw because of the influence of the neighboring high building.

Boiler chimney walls will be made of materials resistant to 500 ° C temperature, perforated bricks and briquettes will not be used.

If the inside surfaces of the chimneys liquefied by hot flue gases are not plastered, precautions such as the selection of the most appropriate method of blending will be taken. The outer surfaces of the chimney walls will be suitably plastered.

Under the chimneys of liquid and solid fuel boilers, there will be a soot cleaning vent, which will be cleaned at least twice a year by authorized persons. The building owner and manager are responsible for the cleanliness of the chimneys.

Where the stove is used as a heating medium, it is installed with metal covered table, marble or similar material so as not to damage the stove wood and painted parts. If the floor is concrete, this precaution is not essential.

If a pipe should pass through the plaster board wall, tile or cement pipe is inserted into the quick burner part of the wall, such as oil paint or wood, and the pipe is passed through this hole.

If there is no chimney in the room, the stove pipe is removed from the window with the sheet metal, 25 cm open from the hair and 50 cm high, using a hat at the end. The places where the pipes are joined are closed with a circle and connected to the wall and ceiling from this circle to prevent separation and overturning of each other.

During use, the stove covers shall not be left open, there shall be no fire, burning, coal, match, gasoline, gas and similar flammable and combustible material on the bottom and sides. The fire is removed to charcoal burner when necessary. The stove must be removed in the season when it is not being used. Where the stove is not lifted, the lids are tethered so that they do not open.

If fuel such as wood and coal is used at high level, the pipes will be used once a month, once every two months; When other fuels are used, the pipes are cleaned every 2 months, every 3 months.

Chimney cleaning is done by local fire brigade. However, cleaning can also be done to them if there are private companies operating on the pricing basis determined by the municipal council with permission from the fire brigade.

6.13.5. PUBLIC SHELTERS

It is compulsory to make a smoke evacuation system in accordance with the relevant legislation and to provide at least 2 outputs in shelters built in accordance with the legislation on shelters and more than 50 people will be accommodated.

According to this plan, it is necessary to make these systems also in the shelters of the buildings where detection, warning and extinguishing systems are obligatory.

6.13.6. CAR PARKS

The provisions of this Plan shall apply in the event of the presence of any underground car parks that may be created throughout the ACACIA Mining Operations area. If the total outdoor area of car parks used for parking motor vehicles is more than 1/20 of the floor area and this outdoor area is located on two opposite sides, at least every half of which is 1/40 each, this is accepted as open car park, otherwise as closed car park. In closed type parking lots with more than 20 car capacity, automatic sprinkler system, fire cabinet system and siamese connection is required. In closed type parking lots, the smoke traps must be suitable for the air conditioning and ventilation installations that are created in accordance with the Legal Legislation.

A mechanical smoke evacuation system is required for closed parking lots in basements with a total area of over 1900 m². The smoke evacuation system should be independent from the systems serving to the other parts of the building and should provide at least 9 air changes per hour.

6.13.7. ROOFS

No explosive, flammable or explosive material may be contained in the detonation other than fire protection equipment. It is necessary to protect the roof with a sprinkler system in order to use it as a warehouse and archive.

No electrical system can be installed to the roof. In cases of heating, cooling, communication and transmission receiver, transmitter devices should be installed to the roof, electricity wiring can be installed by authorized persons by taking additional measures against fire if it is necessary.

The roof entry door is kept closed and locked. The roof can be accessed with the permission of the building owner, the manager or the building authority. The roof spaces are cleaned periodically.

6.13.8. ELEVATOR

Elevator systems shall be manufactured and installed in accordance with TS 10922. The elevator tower and machine room fire will be made from non-combustible materials that are resistant to fire at least 60 minutes.

More than three elevators will not be positioned in the same well. If four elevators are positioned, they will be separated into groups of two and separated by a material resistant to fire for 90 minutes.

In the elevator casing, there should be a ventilation and flushing chimney of 0.025 times of the bucket area up to at least 0.1 m², or the wells should be pressurized.

In high buildings, the elevator doors will be smoke-tight and resistant to fire at least 1 hours from non-combustible materials.

The following guidelines are required for elevators used in high buildings.

- a) When they receive a fire warning, they will automatically return to the emergency exit level without waiting for the doors to open before the doors open, but that can be used by the authorities when necessary.
- b) Elevators will not accept floor and corridor calls when they receive a fire warning.
- c) The elevators will use the earthquake sensor in the high buildings located in the first and second degree earthquake areas and the elevators will have the mechanism and program to move to the nearest catastrophe and open the doors during the earthquake.

6.13.9. LIGHTNING ROD

In buildings used for the production and storage of explosive substances, matches, petrol, alcohol, Liquefied Petroleum Gas (SPG), natural gas and other flammable substances; Lightning protection facilities will be installed in theater, cinema, place of worship, hospitals, schools, exhibition halls, prisons, detention centers, electricity production and distribution centers, communication centers, banks, silos, hotels, training and recreation facilities, water distribution centers and similar places

6.13.10. TRANSFORMER

If oil-type transformers must be used in any building, following measures will be taken:

- a) All the walls, floors and ceilings of the room where the transformer will be installed will be made to be able to resist to fire for at least 90 minutes.
- b) Oil collecting pit will be installed.
- c) The placement of the room in the building where the transformer is located will be done in such a way that the smoke and heat from the transformer in the event of a fire will not spread to the escape routes and will not prevent free movement.
- d) Automatic fire detection and extinguishing system will be done.

6.13.11. GENERATOR

In all buildings and structures that use generators as primary or secondary energy source the following measures will be taken:

- a) The walls of the room where the generator will be installed, the basin and the ceiling shall be made so that they can resist to fire for at least 90 minutes.

- b) The location of the generator room in the building will be such that fumes and heat generated in the event of a fire will not spread to the escape routes and will not interfere with free movement.
- c) For the place where the generator's fuel deposit is to be found, refer to Article 6.4 of this

Plan. The regulations in the building carrier system stabilization clause shall be followed.

6.14. ELECTRICAL INSTALLATION, EMERGENCY LIGHTING AND DIRECTING

The electrical system, lighting of escape routes, lighting of escape routes, fire detection and warning systems installed in the buildings shall be designed, constructed and operated in such a way that, in case of fire or any other emergency, it will not cause harm to the people in the building, will prevent panic, and will allow the building to be safely evacuated in a safe environment, will be designed to create a safely environment.

The requirements specified in this Section are minimum requirements and do not preclude the use of higher quality and higher performance installations and systems.

All exit points and access routes to the exit points shall be clearly identified, marked and included in the scope of the lighting installation.

A fire alarm system shall be installed in the buildings which are included in Part, where it is not possible to recognize the beginning of a fire by residents in the entire building, to be able to heard the fire throughout the building.

All electrical installations, escape routes lighting, emergency lighting and guidance and fire detection and warning systems shall be designed, installed and approved in accordance with the relevant TSE standards and installation regulations. All kinds of devices and cables to be used in these installations and systems shall have the standard or quality certificate which is accepted as equivalent by TSE or TSE.

Any system, device, equipment and operation that this Plan considers necessary; after installation, will be subject to continuous care, unless otherwise specified, to ensure continuity of operation. Maintenance work shall be carried out at least in accordance with the requirements set out in this Plan and these requirements will additionally be fulfilled if the relevant TSE standards and installation regulations require maintenance requirements that exceed those specified in this plan.

The design and implementation of the electrical installation, escape routes lighting and fire detection and warning systems to be installed in the buildings shall be subject to control and supervision by the competent authority. Systems and devices requiring periodic testing and maintenance shall be tested and maintained under the supervision of the building authority to which the building owner or manager handed over their written responsibilities, as specified by the authority authority.

6.14.1. ELECTRICAL INTERNAL INSTALLATIONS

Electric installation of all kinds of buildings; shall be established in accordance with the current "Electrical Internal Facilities Regulation" and the following requirements shall be observed.

- a) **Protection Devices:** Protection schemes will be implemented to prevent fire in all buildings due to short circuit, overload, soil contact and leakage current. For this purpose, necessary protection devices shall be used against the fault currents that may occur.
- b) **Short Circuit Accounts:** All devices and materials to be used in electrical installations in buildings and structures shall be selected by short circuit calculations. The switching and protection schemes to be used and the devices required to set up these schemes will have electrical characteristics that are appropriate for the calculation results. In any type of current-carrying material such as cable and busbar shall be made from insulating material which does not transmit flame.
- c) **Insulation Materials:** In all structures aimed for health care purposes and over 1000 users except the industrial and storage buildings, in bedrooms, in all windowless buildings and underground structures, in all high buildings; high current supply and distribution cables and lighting installation cables, cables and bus-bar materials used for insulation in all kinds of current-carrying material will be halogen-free, fire-resistant materials that do not produce any poisonous gas when exposed to fire.
- d) **Connection and Fixing Elements:** Suspension supports, cantilevers and similar fasteners used for fixing and fixing to buildings or structures of all kinds of devices and current carriers related to electrical installations in all buildings and structures shall be designed and applied according to the earthquake forces that may occur.
- e) **Extension Cables:** Extension cords will only be used to feed portable appliances and lighting equipment. Extension cords will not replace permanent cabling in any way. Provisions concerning extension cables; will be applied during the renovation, modernization and renovation works in existing and new buildings, buildings and buildings existing under construction.

The following guidelines shall be observed when using extension cables:

- 1) Each extension cord will be attached directly to a socket and will be connected to only one device or lighting equipment.*
- 2) The current carrying capacity of the cable will not be less than the nominal current of the device or lighting equipment to which it is connected.*
- 3) The extension cable will be kept physically in good condition; cords that can jeopardize safety due to crushing, cutting, wear and tear will not be used.*
- 4) Grounding type extension cable shall be used for the devices or lighting equipment that require grounding.*
- 5) Extension cords and flexible cords shall not be fixed to fixed bodies; shall not pass through walls, ceilings, floor coverings, under doors and carpets, and shall not be exposed to physical impacts.*
- f) **Electricity Plans:** In all kinds of buildings, there will be a strong current column scheme for electrical installation and it will stored in a glass cabinet nearest to the main table.
- g) **Strong Current Installation:** The establishment and operation of strong current installations in all kinds of buildings shall be carried out in accordance with the "Regulations for Electric Power Current Facilities" and "Regulations for Grounding in Electrical Installations".

6.14.2 EMERGENCY LIGHTING AND DIRECTING

The escape routes will always be illuminated. Illumination units used for emergency lighting and guidance will be installed in such a way that if the normal lighting is selected and the type that is not illuminated is selected, the normal escape route will be automatically switched on when the illumination is turned off.

The escape routes, fire escapes and fire escapes specified in this Plan that are required to be illuminated, emergency lighting and guidance within the scope of this Part shall be lighting, emergency lighting and guidance in all escape routes in buildings and structures where more than one escape route is required.

ESCAPE ROUTES LIGHTING

The escape routes required to be elucidated within the scope of this Part are the escape routes and fire escapes specified in this Plan and all escape routes to buildings and structures where more than one escape route must be found.

Illumination on escape routes will be made continuously at all times when escape routes in buildings or structures will be necessary. Lighting is the general lighting system of the building or building
Connected lighting system and artificial lighting, natural lighting will not be considered sufficient.

The level of illumination measured on the bases, upholstery and walking surfaces on escape routes shall be at least 10 lux. This level of illumination may be at least 2 lux for demonstration or projection purposes in buildings for assembly purposes.

The placement of the lighting fixtures shall be such as to ensure that the level of the floor and floor lighting at any point of the escape routes is at least 2 lux in case any armature becomes inoperable.

Lighting units used to address the requirements specified in point 73 for marking escape routes may also be used to illuminate escape routes if the conditions specified in item 71 are met.

EMERGENCY LIGHTING

Emergency lighting system ,Such as a fire or an earthquake, to cut off the electrical energy of the building or structure for safety reasons, to automatically switch on when normal lighting is interrupted due to the opening of a circuit breaker or fuse will be arranged to provide sufficient illumination.

The following places and all escape routes, and the places where the facilities used for the collection, the elevators and escalators, the facilities with high risk moving machinery and chemicals, the workshops and laboratories, the electricity distribution and generator rooms, the central battery unit rooms, the pumping stations, the places where the first aid and safety equipments are located, Fire cabinets, fire extinguishing tubes and other fire fighting equipment, if any, in closed car parks and similar areas will be equipped with emergency lighting.

a) Assembly, health care, commercial buildings, office buildings and industrial buildings,

- b)** All structures with a user load of more than 400,
- c)** Buildings with 50 or more users below the exit level,
- d)** All windowless structures and underground structures,
- e)** All accommodations,
- f)** Apartments with more than 20 apartments,
- g)** All high buildings,
- h)** All of the buildings for storage purposes except those that are only in daytime hours and escape routes are sufficiently illuminated by daylight.

Emergency lighting will be provided for at least 1 hour if normal lighting is interrupted. Emergency operation time will be 2 hours if the user load is more than 100, 3 hours if it is more than 500.

The selection and placement of the lighting unit on escape routes shall be such that the level of emergency lighting shall be at least 1 lux at the base, on the upholstery and on the walking surface, at any point on the escape route's center line. At the end of the emergency operation period, this lighting level will not fall below 0.5 lux at any point. The lighting level ratio between the points with the highest and lowest lighting levels will not be more than 40: 1.

If emergency lighting is based on transferring from an energy source such as a city network or other such source to a static inverter or other source of energy, the transfer time will not exceed 3 seconds.

In hazardous high-risk areas such as moving machinery and chemical substances, the emergency lighting level will be 10% of the normal lighting level or at least 15 lux and the ratio between the points with the highest and lowest lighting level will not exceed 10: 1. In high-risk areas, when the normal illumination is turned off, duration of switching to the emergency lighting will not exceed 0.5 second.

Illumination of emergency can be supplied by;

- a)** Independent lighting fixtures with their own accumulator, charge circuit, mains voltage controller and lamp drive circuit,
- b)** Luminaires which is fed by a central battery unit, that provides a direct voltage from a central accumulator battery, or an alternating voltage via an inverter circuit.

Lighting fixtures used for normal lighting, emergency conversion kits can be transformed into independent emergency lighting fixtures by mounting directly in or near the luminaire housing and making the necessary connections.

In central battery emergency lighting systems, the connections between the central unit and the lighting fixtures shall be made in metal installation pipes and / or with mineral insulated or similar fire-resistant cables to withstand fire up to the duration of the emergency lighting. The main voltage connections to be made to the lighting fixtures which are capable of emergency lighting by themselves shall be made with the cables of the type used for normal lighting.

Central battery type emergency lighting systems will not be used in the first and second degree earthquake areas. Emergency lighting in these areas will be provided by independent emergency lighting fixtures that can work on their own.

EMERGENCY ROUTE DIRECTING

In all structures with more than one exit, the emergency guidance will be made so that the users can easily reach the outlets.

Illumination of the guidance signs shall be made from outside with emergency lighting units in the specifications specified in this Plan, or emergency guidance units with the same characteristics and with illuminated signs shall be used.

Emergency guidance will be provided for at least 1 hour if normal illumination is interrupted. Emergency operation time will be 2 hours if the user load is more than 100, 3 hours if it is more than 500.

Guidance marks shall conform to the standards and regulations that are equivalent to TSE standards or TSE by white on green background. The maximum visible distance of a guidance mark will be equal to 200 times the height of the sign size, and sufficient guidance mark will be added as needed for access from more remote places the further distances from this distance.

There will be no signs or objects in the escape routes, except for the guidance signs, which will cause hesitation and confusion about the escape direction.

Route signs will be visible at all access points on the escape route in both normal lighting and emergency lighting situations. Illumination of externally illuminated guidance marks will have a contrast ratio of at least 0.5 cd / m² and at least 2 cd / m² at all visible directions.

6.14.3. FIRE DETECTION AND AUTO WARNING SYSTEMS

Fire detection and extinguishing systems placed at critical points for fire will be controlled by the authorized company at every 6 months. This include sprinkler systems, heat and smoke detectors and special chemical fire extinguishing systems. Automatic fire detection systems will also be equipped with systems that will notify by phone at the same time. The Acacia Administrative Affairs Unit and the Occupational Health and Safety Unit are responsible for following up the maintenance and control of these systems. In addition, these systems will be visually checked once a month by the Occupational Health and Safety Division.

Fire detection and extinguishing systems mounted on mobile equipment will also be checked by the authorized company at every 6 months. The responsibility for tracking these controls is belong to Mobile Equipment Maintenance Department.

All controls and inspections will be recorded.

The fire alarm system specified in this Plan is a complex system that includes fire detection, alarming, control and communication functions. The supply of the fire alarm system shall be made only through an automatic fuse

which supplies the fire alarm system and, if the premises are equipped, from a secondary supply source such as a generator or uninterruptible power supply. If this supply is disconnected, the fire alarm system will be able to fulfill the sensing functions for at least 24 hours and will be equipped with a fully sealed, leak proof type maintenance-free accumulator which will eventually fulfill all alarm, control and communication functions for at least 30 minutes. If it is deemed necessary, it will be ensured that these periods are longer.

All lines that make up the fire alarm system and are used for communication to the remote control and control centers; they will be kept under constant supervision against breakdown, short circuit and earth leakage.

If a fire alarm system has been disabled for more than 4 hours in a 24 hour period for any reason, the authority will be informed of the situation and fire surveillance activity which is previously approved by the authority will be initiated and maintained unless the fire alarm system is brought back into operation. In addition to normal security personnel in the field of fire surveillance, surveillance tours with additional security personnel will be initiated in unprotected areas.

DETECTION AND NOTIFICATION FACILITY

The activation of a complete fire alarm system will be manual, automatic or one or all of the activation of an extinguishing system.

Manual fire warning will be done with fire warning buttons. Fire warning buttons will be installed on fire escape routes and there will be one fire warning button at each exit point. The placement of the fire warning buttons will be arranged such that the horizontal access distance from any point on one floor to any fire warning button on that floor will not exceed 50 m.

All fire warning buttons will be visible and easily accessible. The fire warning buttons shall be installed at a height of at least 1.1 m and a maximum of 1.4 m from the ground.

Smoke Detection Devices: Automatic smoke detection devices shall be installed in all settlement open areas, common areas and work areas suitable for use on all escape routes of buildings and structures as well as smoke detectors without false alarms.

- a)** In all buildings with high hazard class,
- b)** In the buildings with a middle class of danger and a total usage area over 1000 m²,
- c)** In all high buildings except residential buildings,
- d)** In apartment buildings with an elevation of more than 51.50 m,
- e)** In dormitories, guesthouses, Health Service Buildings and similar places,

Automatic smoke detection devices shall be installed in all industrial premises, in all escape routes, and in corridors, warehouses, installation / equipment rooms, etc., suitable for use with smoke detectors which is not causing false alarms, in non-human areas or in areas without automatic sprinklers, in all common areas and work areas.

Smoke detectors shall be installed in all areas where automatic smoke detection is required, in spaces such as main bulkheads and under floors of raised ceilings with elevated 25 cm or more and materials with risk of burning and with risk of burning, and in other spaces such as elevators and staircases. It is not necessary to install smoke detectors in spaces that are free of combustible material and are not accessible. The spaces which contains materials suitable for burning and bearing the risk of burning will be made accessible and protected by smoke detectors, and a remote lamp will be installed to ensure that the detector is alerted.

All detectors will be available for periodic tests and maintenance.

Other Detection and Warning Devices: Temperature and / or flame detectors shall be installed in places where the use of smoke detection devices is deemed unnecessary or unfit , where deemed necessary.

If the building has an automatic sprinkler system, the fire alarm system will perform automatic detection when the sprinkler is opened. For this purpose, water flow switches shall be installed in each zone line and the contact outputs of these flow switches shall be connected as an input to the fire alarm system. In these cases, places with automatic sprinklers will be treated as equipped with automatic temperature detectors. Automatic temperature increase detectors are not required to be used in these areas.

If the building or structure has other automatic, manual operated other gaseous, dry chemical dust or similar fixed extinguishing system, their activation will be automatically detected by the fire alarm system. For this purpose, the contact outputs indicating that the extinguishing system is active will be connected to the fire alarm system as an input from the extinguishing systems.

ALARMING

If a fire alarm system is activated, alarming with sound and light or data communication will be performed as follows but the alarm information transmission will not be limited to them.

- a) With audible, illuminated and / or alphanumeric displays in the main control panel at the fire control center and in the surveillance panels or repeater panels at other monitoring points,
- b) With audible and illuminated warning devices in order to inform the residents at all the used parts of the building for a fire or similar emergency,
- c) With audible and illuminated warning devices and data communication over direct lines or other communication media will be used to alert the fire and emergency combat teams on board and notify the fire department.

will be done.

FIRE CONTROL PANELS AND REPEATER PANELS

Fire zones will be used as the largest unit for notifying the fire. At each building, each individual floor will be considered as at least one fire zone. If a floor area is greater than 2000 m², more than one fire zone will be

determined. If the total area of a building or building is 300 m² or less, it may be considered as a single fire zone, even if it is multiple floors.

The length of a fire zone in any direction will not exceed 100 meters. The distance required to visually identify the beginning of a fire within a fire zone will not exceed 30 m.

The fire zones will be determined as compatible with the fire divisions specified in this Instruction. The boundaries of a fire zone should overlap with the boundaries of fire zones if possible.

- a)** In all fire alarm systems deemed necessary in this Plan, fire control panels and repeater panels shall be installed in the following places.
- 1)** On the ground floor of the building or building and in a place with permanent staff 1 fire alarm repeater panel shall be installed if it is deemed necessary to install the fire control panel or the main fire control panel in another location.
 - 2)** If there are time intervals when no personal exist at the site where fire control panel is installed, repeater panels shall be installed in a second location or more.
 - 3)** If the fire alarm system covers more than one building, a separate fire control panel or repeater panel will be installed in each building with 2 or more fire zones.
- b)** Fire control panels and repeater panels shall have at least the following audible, illuminated and alphanumeric indicators.
- 1)** A general fire alarm lamp and a separate fire alarm lamp for each fire zone,
 - 2)** If no local fault information is given with the general system fault lamp and a separate illuminated alphanumeric display, a separate fault lamp for each fire zone,
 - 3)** In addition to the above, in the addressable systems, which can evaluate the warnings from the fire warning buttons and the automatic fire detectors individually on a device basis, a lighted alphanumeric display, in which individual fire and fault indications can be monitored,
 - 4)** The active audible warning device when every fire or malfunction signal is received.

The audible warning device can be silenced via a button, but silencing the audible warning will not cause the warning light to disappear. All regional fire and failure lamps will be accompanied by labels indicating which fire zone they belong to, in a clear, precise and non-erasable manner.

SPRINKLER ALARM STATIONS

If a building or structure is installed with a sprinkler system as specified in this Plan, the sprinkler alarm stations and flow switches will be connected to the fire alarm system. Alarm warnings from the sprinkler system will

be monitored either on a separate regional monitoring panel or by creating separate regional alarm indicators on the fire control panel. The monitoring switches of the line shut-off valves and other malfunctioning contacts for the sprinkler system will also be continuously monitored by the fire alarm system.

SMOKE CONTROL AND PRESSURIZATION SYSTEMS FAULT AND POSITION CHANGE SIGNALS

If smoke control and pressurization systems are installed in a building or structure as specified in this Plan, the failure and position change signals for these systems will be monitored either on a separate regional monitoring panel or by creating separate regional status and fault indicators on the fire control panel. Manual controls of the smoke evacuation and pressurization systems can be made either on a separate control panel or on the fire alarm system in combination with the above monitoring panels.

SOUND AND LIGHT ALARM DEVICES

The process of informing the residents of a building or structure for a fire or similar emergency situation will be carried out with sound and light alarm devices.

A pre-warning system will be allowed to facilitate the investigation of the reality of the fire warning, without delaying the fire alarm signal, provided that this information is provided to fire fighting units and personnel trained for fire response . Any fire detection in industrial buildings and storage buildings and structures where dangerous materials are kept and / or processed will automatically trigger the building evacuation alarms and no pre-warning system will be applied to these buildings and structures.

The evacuation warnings will be made both with sound and light except the following exceptions.

- a)** It is not compulsory to use a light warning device in areas where hearing impaired people are unlikely to be present.
- b)** Only light warning devices will be allowed to be used for health-care purposes when provided for buildings.

Evacuation alarms will be activated entirely in the building or structure, with the following exceptions.

- a)** At the buildings where it is not appropriate to evacuate the whole building due to the structure of the building, an alarm will be triggered at the beginning only in areas affected and will be affected by. In this case, installation will be done in order to allow the alarms to be triggered gradually in other areas to evacuate the building in a regular manner.
- b)** Only the personnel responsible from the maintenance and the evacuation of these persons from the building will be allowed to trigger a fire alarm in the buildings where there are people who can not go out on their own due to old age, physical or mental disability and similar reasons.

The audible warning devices will be placed anywhere on the building, with a sound level measured 150 cm above the floor, at least 15 dBA above the average ambient sound level. The audible warning devices will be able to achieve at least 75 dBA at a distance of 3 m and a maximum sound level of 120 dBA. Audible alarm devices shall be installed in sleeping sections to ensure that the sound level at the bedside is above the average ambient sound level of 15 dBA and at least 75 dBA sound level.

The voices of audible fire alarm devices will be distinguishable from the audible warnings used for other purposes in the building. The sound type of the audio warning devices will be the same at everywhere and will be in

the form of a constantly playing horn or ringing tone with a fixed frequency between 500-1000 Hz . Sound warning devices that descend and ascend and give siren tones that fluctuate between two or more frequencies will not be used for fire warning. In cases where gradually evacuation is foreseen, a warning will be allowed to be given at the same fixed frequency for preliminary warning. In this case, however, the warning of evacuation will be made in the form of continuous playback of the audible warning devices.

With automatic broadcast voice messages and live voice messages broadcast from the fire center, voice evacuation warning systems will be used to evacuate or replacement of the residents in the building. Voice evacuation warning systems can also be used to prevent panic in case of an earthquake and to perform evacuation of the building according to the evacuation schedule as deemed necessary.

Sound and light alarm devices will only be used for fire alarm system and other emergency alerts. Voice evacuation systems, fire alarm systems, and other emergency announcements can also be used for other purposes, such as general announcement, fund-raising, etc., provided they take priority and automatically disable other uses.

6.14.4 EMERGENCY CONTROL PROCEDURES

A fire alarm and control system will be arranged to automatically activate the necessary control functions in the event of a fire, making it safer for the residents of the building or structure.

The fire alarm system will perform the following functions when necessary, but the emergency control procedures to be performed will not be limited to these.

- a)** The release of electromagnetic door retainers and similar devices which normally keep open devices for closing fire doors and other openings which must be closed during a fire,
- b)** Pressurization of the stair wells and elevator shafts,
- c)** The activation of the smoke control and discharge systems or the automatic control procedures required for this purpose,
- d)** Emergency lighting control procedures,
- e)** Opening doors and locks locked for security and similar reasons,
- f)** Depending on the properties of the elevators, preventing the usage of the elevators during the fire, or to be used by fire brigades or trained building fire fighting crews for evacuation,
- g)** Automatic notification of fire to local fire brigade, electricity operation, municipality, police or gendarmerie, building owner, building owner and other places as deemed necessary.

Emergency control procedures will be carried out with the control units within the hardware and software integrity of the fire alarm system. Any control and command operations that may be performed by other systems, such as security systems, building automation systems, etc., associated with the controlled system and devices, will in no way interfere with the emergency control procedures to be performed from the fire control panel in the event of a fire or other emergency.

CABLES

It must remain in operation for a long time during a fire;

- a) Signal and supply cables to fire control panels, audio and light alarm devices, audio evacuation system amplifiers and speakers, emergency control devices,
- b) The parts of the cables which are inside the building that are used to inform fire brigade and fire fighting teams,
- c) Communication and supply cables between main fire control panel and secondary fire control panels and repeater panels,

d)

All the fire control panels and supply cables that supply energy to the repeater panels, They will be able to last at least 60 minutes against the fire.

In special cases, such as in buildings where gradually evacuation is being carried out, cables which can last longer in the fire may be required.

Fire warning buttons that are not required to operate long after the detection of a fire, cables between detectors and fire control panels , and cabling to electromagnetic door holders and similar devices that do not present a hazardous situation when the power is cut off does not require fire resistant qualification.

Fire alarm system cables shall comply to the specifications of the fire detection, control and warning equipment manufacturers in order to ensure that the system operates properly and reliably and shall be installed separately from other systems and energy carrying cabling, in a way to protect from electrical noise and similar effects

6.15. PRESSURIZING SYSTEM WITH SMOKE CONTROL, AIR CONDITIONING AND VENTILATION INSTALLATION

The ventilation, pressurization, and smoke evacuation installations at the buildings will be designed, maintained and kept in a condition that will not harm the occupants, prevent panic, and create a safe environment to safely evacuate the building. The requirements specified in this section are minimal requirements, It does not prevent the use of higher quality and higher performance installations and systems.

The installation of the pressurization and smoke evacuation installations to be established shall be determined according to the nature and quantity of the equipment to be used, the use class of the building, the hazard class, the mobility of the occupants and the fire prevention systems in the building.

All pressurization, ventilation and smoke evacuation installations shall be designed, installed and operated in accordance with the relevant TSE standards and installation regulations.

After installation of any system, device, equipment and operating procedure that the Plan deems necessary, it will be continuously monitored, ensuring performance and continuity of operation, unless otherwise specified in the Plan. Maintenance activities shall be carried out in accordance with the requirements laid down in this Regulation at minimum, and in the case of maintenance requirements above the requirements specified in the relevant TSE standards and installation regulations, these requirements shall additionally be fulfilled.

The pressurization and smoke evacuation installation to be installed at the buildings will be tested and maintained under the supervision of the building's fire department.

6.15.1. SMOKE CONTROL

Principles of smoke control: Smoke traps and chimneys and flame guidance chimneys will be used for natural smoke evacuation. As mechanical smoke evacuation systems, the climate systems will be used with special arrangements or separate mechanical smoke evacuation systems will be installed. Accordingly

- At modern architecture, in galleries and industrial structures, at structures like atrium and malls at which smoke chimneys are used in the design of closed bazaars, smoke discharge system should be installed at the top.
- Smoke chimney openings can be always open and they can be operated by mechanical arrangements which can be easily opened manually in case of fire. It is imperative that such mechanisms are kept in continuous operation.
- It is imperative that flame-guiding chimneys are built in buildings that house a large number of people permanently or temporarily.
- The ducts for mechanical smoke evacuation systems must be made of steel, aluminum and similar materials.
- The ducts to be used in all mechanical smoke evacuation systems must be connected with a sufficient number of suspension elements.
- Duct coating material must be at least B1 grade material.
- Smoke flues must not pass through fire escapes and fire safety chambers.
- Due to unforeseen reasons, the section where the duct passes must be covered with a material which will endure fire resistance as much as the structural fire resistance. If the channel passes through a wall, fire dampers should be used in the wall passages.
- If more than one location is ventilated or air conditioned with the same air handling unit, fire damper should be used in the return and collection ducts in crossings between the sites. In structures which require special precautions for collecting, duct type smoke detectors which control the dampers should be placed in the ventilation ducts.
- In case of using plenum as a place such as suspended ceiling, raised floor, etc.; From these sections only; Mineral, aluminum or copper armored cables, rigid metal pipes and flexible metal pipes can pass through.
- Computer, television, telephone, and internal communication systems cables, fire protection systems are allowed to use non-flammable non-flammable pipes.
- Smoke flues should not pierce fire zone walls.
- If the ventilation duct is passing through a protected shaft, a fire damper should be used at entry and exit of the shaft.

- Fire damper is not used in the ducts of the pressurization system.
- The smoke evacuation system must be activated automatically by the building fire alarm system. In addition, there must be the possibility of starting / stopping for remote manual control.
- The installation chimneys and ducts that play a role in the spreading of the fire must be double-sided, at least 8 mm thick, and insulated from each other, outside the installation, in the direction of the fire divisions.
- Ventilation ducts and chimneys are not allowed except for the special details for crossing the fire compartments
- Air ducts should be made of non-combustible material or coated with non-combustible material.
- Fan and ventilation motors in places where natural gas, SPG or hazardous materials are working will be safe proof from explosion and sparks (ex-proof).

6.16. FIRE EXTINGUISHING SYSTEMS

Fire Extinguishing Systems are a fixed extinguishing system used before and during the fire at structures, buildings, tunnels, structures like open land facilities that are covered in this Instruction. The requirements specified in this section are minimal requirements and do not preclude the choice of higher quality and higher performance installations and systems.

The fire extinguishing system installed in the buildings shall be designed, constructed and kept in working condition to prevent damage to the buildings, to prevent panic and to remove the fire.

The fire extinguishing system installed in the buildings shall be designed, constructed and kept in working condition to prevent damage to the buildings, to prevent panic and to remove the fire.

The fixed fire extinguishing systems to be installed and the nature of the installation, the type and quantity of the equipment to be used, the installation, the materials to be installed in the building and the building will be determined according to the fire type. All equipment to be used in the system and / or systems will be certified.

All kinds of fire extinguishing systems shall be designed, installed and approved in accordance with the relevant TSE standards and installation regulations.

After installation of any system, device, equipment and operating procedure that the instruction deems necessary, it will be continuously monitored, ensuring performance and continuity of operation, unless otherwise specified in the instruction. Maintenance activities shall be carried out in accordance with the requirements specified in this Plan at minimum, and in accordance with the relevant TSE standards and installation regulations, the Regulation on the Protection of Buildings from the Fire these requirements will additionally be met if there are maintenance requirements above the requirements.

The design and application of the extinguishing systems to be installed at the buildings shall be subject to control and approval by the competent authority. Systems and devices that require periodic testing and maintenance will be tested and maintained under the supervision of the building owner, the building supervisor, or the building authority to which they have delegated their written responsibilities, as specified by the authority.

6.16.1. WATER EXTINGUISHING SYSTEMS RESERVOIRS AND RESOURCES

If the water pressure and flow values required in the hydraulics calculations made for water fire extinguishing system fire cabinet system, hydrant system, sprinkler system can not be met by central or city networks; A fire pump station and a storage facility must be established in order meet the capacity.

RESERVOIRS AND RESOURCES

There must be at least one reliable water source in the system.

The parts of the water tanks which will be used for water extinguishing systems, which are separated as fire reserves, shall not be used for other purposes but shall be arranged to serve extinguishing systems exclusively for the storage facility.

If there is a sprinkler system in operation, the capacity of the water storage tank will be selected at the capacity to provide at least the time specified in Table 3 depending on the risk class.

Table 3. Water need for s	sprinkler extinguishing systemsFlow rate (1 / min)	Time (min)
Light hazard group	1000	45
Ordinary hazard group	2000	60
Ordinary hazard group	It is determined by hydraulic calculations	
High buildings,	It is determined by hydraulic calculations.	

If fire cabinets and out of building hydrant systems are available beside the sprinkler extinguishing system, the water tank capacity should be determined by adding the values given in Table 4 to the sprinkler extinguishing water.

Table 4. Water requirements for fire cabinets and hydrant system

	Fire Cabinet Flow (1 / min)	Hydrant Flow (1 / min)	Time (min)
Light hazard group	100	400	30
Ordinary hazard group	100	1000	60

Extra hazard group	200	1500	90
---------------------------	-----	------	----

If only fire cabinets system is available as water extinguishing systems, the water capacity shall be at least 12 m³ for at least 200 liters of flow for 60 minutes.

In case there is only environmental hydrant system is available in the structure, water requirement shall be determined by hydraulic calculations to be carried out according to risk class, with compensating 1,900 liter capacity for 90 minutes.

PUMPS

Fire Pumps: They are water pumps which provide pressurized water to water quenching systems and are expressed by nominal flow rate and nominal pressure value. The pumps must be no more than 65% of the nominal discharge head and the valve head (zero flow) discharge height must be no more than 140% of the nominal discharge head value and 150% of the discharge head must not be smaller than 65% of the nominal discharge head. Such pumps can be used for system demands at 130% of rated flow values, provided that they meet the desired pressure value.

If a pump is used in the system, there must be a spare pump with the same capacity. If there is more than one pump, at least 50% of the total capacity should be backed up and enough spare pumps will be used.

Pump rotation can be done by electric motor as well as by internal combustion engines or turbines.

If a backup diesel pump is not used, the power supply of the fire pumps will be supplied from a reliable source and will be fed independently of the structure's general electrical system.

Auxiliary elements such as fire pumps, automatic air release valve, circulation relief valve should be available.

Each pump should have a separate control panel. The panel should be locked. The electrical control panel must be equipped with stage fault, stage-sequence fault, control stage fault, information lights. The turn on / off switch must not be accessible until the panel lock is released.

Each pump should have a separate control pressure switch. The pressure switches should be placed in the control panel, the water pressure should be detected by the pipe connection, should be protected against water hammer, the lower and upper values should be adjusted separately and independently and should be lockable after set.

Pump control can be pressure controlled full (Automatic start-stop automatic) or semiautomatic (Automatic start-stop by hand).

Appropriate equipment will be provided to maintain the temperature continuously above + 4 ° C in the pump room or pump station.

Emergency lighting shall be provided at the pump station around the working area of the devices requiring service, inspection and adjustment.

The ground will be prepared to be inclined for adequate drainage, and water will be removed from critical devices such as pump, driver, control panel.

FIRE CABINETS SYSTEM

The fire cabinets system consists of fixed pipelines and fire cabinets.

a) Fixed pipeline:

- 1) Fixed piping that has at least 50 mm diameter which supplies water to fire cabinets systems should be determined according to the hydraulic calculations.
- 2) In high buildings, shopping malls, car parks and similar places, connection ports should be left on wet or dry fixed pipe system to enable the usage of fire brigades and trained personnel and these connection ports should be in protected areas such as fire escapes or fire safety volumes.
- 3) All hose connections on the fixed pipeline shall comply with the norms used by the fireman. If the connection ports are left in a fixed piping that provides water to the system of sprinklers and fire cabinets, these connections will be made directly on the main columns. **b) Fire cabinets**

- 1) Fire cabinets will be installed at high buildings, bazaars, buildings for assembly, accommodation and sanitary buildings, all buildings that have more than 2000 m² closed usage area, factories and workshops bigger than 1000 m².
- 2) The fire cabinets shall be arranged in such a way that the distance between each floor and the fire walls is not more than 30 m. Fire cabinets will be placed as sightful as possible near the corridor exit and stairway landing. In case of the building is protected by a sprinkler system and fire connection ports are available in the floors, the distance between fire cabinets can be increased up to 45 m.
- 3) Cabinets and cabinets with hoses will be large enough to allow the necessary equipment to be laid. They shall be designed so as not to make it difficult to use hoses and devices during the fire and shall only be used for fire fighting purposes.
- 4) Round, semi-rigid fire hose cabinets must be in compliance with TS EN 671-1 at the structures that does not have hoses, trained personnel who has laying and connection skills or fire officer. Hose should be round, semi-rigid according to TS EN 694 norm, have 25 mm in diameter and hose length should not exceed 30 meters. Nozzle (nozzle) or lans off, spraying and / or be able to fountain.
- 5) The fire cabinet that has round hose which doesn't have fire connection should have design flow rate 100 l/min and the pressure at the lance entrance should be 400 kPa. When the pressure ascends over 700 kPa pressure reducers should be used.
- 6) The fire cabinets that has flat hose which should attend a trained fire officer must conform to standards EN 671-2 no. Flat hose nominal diameter of 50 mm and 20 m should not exceed the length of hose. Nozzle (nozzle) or lans off, spraying and / or be able to fountain.

Cabinet design flow rate 400 l / min and 600 kPa pressure should be at the entrance to lance. Pressure 900 kPa pressure reducer should be used in case of pass.

HYDRANT SYSTEM

For fire protection of buildings, the hydrants that are placed to hydrant system which will be installed in order to cover the entire area around the structure or building as possible as it could be to intervene to the fire from outside which could not be quenched at first response will be placed in a manner that fire department and vehicles can easily approach and connect.

Hydrant system design flow rate should be at least 1900 l / min and flow rate should be increased according to risk class structure. Hydrant outlet should be 700 kPa pressure.

The measurement between hydrants should be 50 m distance at very risky areas, 100 m at risky areas, 125 m at medium-risky areas, 150 m at less risky areas.

Under normal conditions, hydrants should be placed averagely 5-1 mm away from protected buildings.

If there is no ring system is available at the water pipe hardware which supplies water to hydrant system, the lowest pipe diameter that can be used should be 150 mm.

Hydrants that are will be used at the system must be above ground fire hydrant and must conform to standards and TS 2821 no. In the hydrant system, underground and/or above ground cut-off valves at available points and places in order to facilitate hydrant replacement and maintenance.

In the responsibility areas, the municipalities that have residential areas where the vehicles in service can not access or maneuver and which does not have available access according to the articles at Second Part First Chapter should have fire pools and reservoirs equipped with above ground fire hydrants or pumps installed at available places in these settlements in order to intervene effectively to fires that can occur.

SPRINKLER SYSTEM

The following places must be protected by a full or partial automatic sprinkler system.

- a)** All high buildings except the office and residence,
- b)** In camp grounds and guesthouses where the number of beds exceeds 200,

The diameter of the fixed pipe installation that provides water to the sprinkler systems should be determined according to the hydraulic calculations.

In areas with earthquake hazard, four-way supports must be used to prevent the main columns from drifting in any direction against seismic movements and to prevent fracture of the pipes by using flexible connections in branch pipes of 63 mm or larger diameter.

If the main supply pipe of the sprinkler system addresses more than one fire zone; each zone or column line must be equipped with flow switches, test and drain valve and line breaker with monitoring switch.

In the case of possible small scaled fires, the sprinkler will be replaced immediately in the event of explosion or damage, and in order to ensure the continuity of the fire safety system, there will be fewer than six spare sprinkler heads in sufficient quantities according to the size of the system and special keys for the replacement of heads.

The pipes that feed the sprinkler system must have cut-off valves. Precautions should be taken to ensure that the valves in pipelines, the regional control valves and all valves between the water supply and the sprinkler system remain open.

When the pressure reducing valve is used in the system, one pressure gauge must be placed in front of and behind each pressure reducing valve.

Buildings and facilities should be designed according to the risk groups which they are classified as low hazard class, medium hazard class and high hazard class in terms of their intended use and the materials they contain.

Depending on the fire risk class of the facility and the structure, the maximum protection area for the unit floor protected by the sprinklers connected to any supply column of the sprinkler system should be 4800 m² maximum for light and ordinary hazard groups and maximum 2300 m² for extra hazard groups.

FIRE BRIGADE CONNECTION

In high structures and structures with a frontal width exceeding 75 m, a fire brigade will be connected to water fire extinguishing systems so that the firefighter can flood the system from the outside. There will be a check valve in the system and the components which will enable to discharge the water between check valve and fire brigade will be replaced.

6.16.2. FIXED EXTINGUISHING SYSTEMS WITH FOAM,GAS AND DRY DUST

Fixed extinguishing systems with foam, gas and dry dust shall be designed according to the relevant, current, certified and relevant TSE standards, depending on the quality and needs of the installation.

An appropriate type of extinguishing system is installed in the volumes where the water extinguishing effect is not considered sufficient, or where there are substances which may react with water are present, stored and produced.

During the installation of any kind of gas extinguishing system, sound and light warnings must be provided and installed to inform personnel working in the operating area and the place where the system is activated during automatic gas discharge and to allow people to evacuate the extinguishing area.

Extinguishing gas used in gas fire extinguishing systems designed with halon alternative gases should be validated for a long time with local and international regulations and standards.

6.16.3. MOBILE FIRE EXTINGUISHERS

The number of fire extinguisher is determined by the situation and the risks existing in the places.

At least 1 unit for each independent section, , for each 200 m² floor area, 1 unit shall be added and a suitable type of 6 kg fire extinguisher shall be provided; at places where class A fire is likely to occur multi-purpose dry chemical dusty or watery, at places where class B fire is likely to occur dry chemical dusty, carbon dioxide or foam, at places where class C is likely to occur, dry chemical dusty or carbon dioxide, at places where class D fire is likely to occur, dry metal dust extinguishing devices shall be kept.

In the parking lot, warehouse, plumbing and similar places, a wheeled extinguisher is also provided.

The extinguishing tubing is positioned outwardly, near the transition spaces and marked in such a way that it can be seen evenly distributed, so that it can be easily inserted in any case.

For portable extinguishing tubes, the wall connection ring of the extinguisher is mounted so that it can be easily removed from the wall and the distance from the floor to the suspension ring is not more than about 90 cm.

All car fire extinguishers will be TS 11749-EN 1866 quality certified and other portable fire extinguishing tubes will be TS 862- EN 3 quality certified.

Periodic inspection and maintenance of all fire extinguishers shall be carried out according to TS 11748 standard. Manufacturers or service companies that handle extinguishers must have the Ministry of Industry and Commerce certificate for sufficiency and service. Service providers are obliged to show their documents to customers when requested.

All fire extinguishers will be selected and placed according to the Regulations on Protection of Buildings from Fire by the Occupational Health and Safety Division and according to the risks in the field of work. No employee other than those of the Occupational Health and Safety Division will change the location of fire extinguishers.

The periodical inspection and maintenance of the fire extinguishers in the field will be carried out monthly by the supplier under the supervision of the Occupational Health and Safety Division.

The periodical inspection and maintenance of the fire extinguishers in the field shall be carried out monthly by the supplier company in the custody of the Occupational Health and Safety Division. Defective or empty fire extinguishers shall be replaced immediately with fire extinguishers in good condition and they shall be sent to a supplier with a certificate of sufficiency and suitability for refilling. In order to be able to replace empty or defective fire extinguishers with fire extinguishers in good condition, sufficient spare fire extinguishers will be kept in the mine field.

Employees who detect a fire extinguisher with an imperfect or empty situation will immediately contact the Occupational Health and Safety Department and replace the problematic fire extinguisher with a new one. For evening and night shifts, a spare fire extinguisher will be left to be determined in the mine field, and the employees will replace the defective fire extinguisher with a new one. The reason for the change in the location of the fire extinguisher, place, date and the name of the employee will be filled in by the employee changing the fire extinguisher.

Fire extinguishers containing dry chemical powder and CO₂ will be installed to the field and vehicles. Heavy vehicles will be equipped with 6 kg or 12 kg dry chemical powder fire extinguishers, light vehicles will be equipped with 2 kg dry chemical powder fire extinguishers.

Operators and drivers are responsible for checking and recording fire extinguishers at the beginning of each shift.

For night shifts, spare fire extinguishers will be left at the Main Entrance Security Building. Fire extinguishers found to be damaged at night shifts will be changed by signing the delivery record.

6.17. STORAGE AND USE OF DANGEROUS GOODS

The provisions of this Part of the Instruction shall cover the procedures for storing, filling, using, producing and selling dangerous goods.

LEGISLATION

Works carried out in this Chapter must also comply with the zoning legislation and relevant TSE standards and the following statutes.

Regulation on the Protection of Employees' Dangerous Substances and Explosive Atmosphere, **a)** which came into force by Official Gazette dated 30/04/2013 and numbered 28633

- b)** Equipment and Protective. Systems for use in Potentially. Explosive Atmosphere ,which came into force by Official Gazette dated 30/06/2016 and numbered 29758
- c)** Regulation on Procedures and principles for manufacture, import, transport, conservation, storage, marketing, usage, disposal, inspection of unmonopolized explosive substances and hunting equipment and similar items which came into force by Cabinet Decree dated 14/08/1987 and numbered 87/12028

6.17.1. CLASSIFICATION OF DANGEROUS SUBSTANCES

Hazardous substances are classified as follows.

- a)** Explosive Materials,
- b)** Flammable and Explosive Gases,
- c)** Flammable liquids,
- d)** Flammable liquids,
- e)** Oxidizing materials,
- f)** Toxic and detrimental materials,
- g)** Radioactive materials,
- h)** Etching materials,
- i)** Other dangerous materials.

6.17.2. GENERAL PROPERTIES OF STORAGE VOLUMES

Where dangerous goods are stored, the following articles shall be taken into account:

- a) In public places, works related to dangerous goods under or near residences must comply with the requirements of the relevant standards.
- b) Buildings related to hazardous materials will be made as single storey and will be fire resistant for 120 minutes. A multi-storey building may only be allowed to the extent provided for in the relevant regulations and regulations.
- c) Environmental safety will be ensured in dangerous items for various purposes, depending on the quantity of hazardous substances and the order of danger.
- d) Access roads to the building will be kept open all the time and no parking will be done. The security officer is obliged to provide this.
- e) According to the nature of the production and the dangerous substance the basements of the buildings shall be made of static electricity conducting concrete, special asphalt or concrete mixed with iron oxide. Besides the door will be fitted with brass copper or aluminum plates grounded against static electricity.
- f) The entrance and exit doors of the buildings, windows, shutters and ventilation ducts will be opened to the outside in case of pressure, so that they can easily escape from the building when in danger.
- g) There will be no railings or cages in the building's windows, each of the sections in the business premises with multiple sections, one directly outside the main corridor

there shall be at least 2 gates opened. The inner compartments will be made with resistant to the highest pressure, with a durable, crack-free flat surface and non-combustible material, will be lightly painted or whitewashed, easily washable. Slightly inclined bases will be connected to a storage or recovery well with a drainage system. Wastewater treatment facilities in accordance with dangerous substances can also be used for this purpose.

- h) The ceilings and floors of the buildings should be fireproof, leak proof, non sparkle due to crash, and should be made of lightly curved material, windows should be made in large pieces, such as mica, wired glass or unbreakable glass.

6.17.3. EXPLOSIVE MATERIALS

Substances that enter the reaction quickly without adding another material which is under friction, impact and heat effect and cause harm to the environment are called explosives.

Any work done with explosives shall be carried out in accordance with Section 6.17. The provisions of the by-laws set out under the heading Legislation of the article shall apply

6.17.4. FLASHING AND EXPLOSIVE GASES

The substances in vapor phase under normal temperature and pressure are defined as gas. In this case, gases with a critical temperature below 10 ° C are called pressurized gases, gases whose critical temperature exceeds 10 ° C and whose absolute vapor pressures exceed 300 kPa at 50 ° C are called liquefied gases. In the case where both types of gas are dissolved in a solvent, the gas enters the class of dissolved gases under pressure.

In the form of gaseous or liquefied dissolved or liquefied, the tubes containing all the pressurized gas shall be made in accordance with the specifications of the pressurized gas contained therein, in accordance with the regulations specified by the essential and existing standards required by the technique.

Each tube will have a protective cap with ventilation holes to prevent the accumulation of gases inside the valves and safety valves of the other cylinders, except for the SPG (LPG) tubes, which will be surrounded by a circle at a certain height so as not to touch the bottom side.

The tubes shall not be filled with pressurized gases which have a pressure above permitted and above the weight specified on the tube. It will be taking into consideration that the tube will be completely empty and clean before they are filled, the tubes which are filled with gases whose critical temperatures are generally higher than the ambient temperature will be prevented from entering the dangerous pressures by not being completely filled. The tubes filled with pressurized gases will be subjected to weight control after being emptied and filled.

The following measures shall be taken in storage of compressed gas cylinders:

- a) Full tubes will be protected against temperature changes, sunlight, radiation heat, cold and moisture.
- b) All the tubes will be stored in the upright position, which will not touch anywhere.
- c) Necessary precautions will be taken by attaching or fixing all tubes in the storage area against the danger of falling.
- d) Tubes that will be stored in the amount that will not cause danger in workplaces tubes shall be kept away from radiators and similar heat sources in separate buildings or compartments resistant to fire for at least 120 minutes and precautions shall be taken against tipping or rolling of the tubes.
- e) The tubes shall be classified according to the characteristics of the gas contained therein and the empty tubes shall be collected in a separate place.
- f) The places where the tubes are stored will have proper ventilation system and these places will have adequate gates.
- g) The places where the tubes are stored will have proper ventilation system and these places will have adequate gates.
- h) Warning labels will be placed where the tubes are stored.

7. PREVENTION OF FIRE

Prevention is the first line of defense in terms of fire. All reasonable and appropriate measures will be taken to reduce the risk of fire to the lowest possible level.

7.1. CLEANING / ORGANIZATION / MAINTENANCE INSTRUCTIONS

Properly determined and applied Cleaning / Maintenance Instructions are required to reduce both the risk of fire and the consequences of fire.

Deficiencies in cleanliness and layout will increase the risk of fire in the working environment. This means that adequate cleanliness and layout standards will be applied by Acacia Mining Operations and sub-employers. Planned inspections will identify deficiencies in terms of cleanliness and order, and all workplaces will be evaluated for cleanliness and order before commencing work.

General cleaning and ordering practices required to protect from fire are given below

- All floors and escape routes will always be kept clean.
- The cables will not be exposed to heat.
- Flammable and inflammable liquids shall be stored in suitable metal containers and kept away from ignition sources. These metal containers will be labeled which indicates what is inside and the danger
- Spills of fuel and flammable liquid will be cleaned immediately.
- Spills of fuel and flammable liquid will be cleaned immediately.
- Flammable and inflammable liquids will be taken and used in required quantities.
- All flammable and inflammable liquid wastes and splash nozzles will be kept in closed metal containers until properly disposed.
- All chemical containers and tanks will be properly marked. The containers and tanks will be kept closed when not in use.
- Chemical containers will be regularly checked for leaks.
- Waste and garbage will not be allowed to accumulate in the corridor, work areas, machinery surroundings, and maintenance and repair areas. Cleaning will be done at the end of each shift and at the end of work.

7.2 SAFETY SIGNS

No employees shall smoke cigarettes and shall not use open flames in the presence of flammable liquid, solid or gaseous diesel tanks and pumps, oil tanks, SPG tanks, combustible and flammable liquids. If there is a fire and explosion hazard in an area, signs indicating danger such as smoking and open flame will be used as follows.



7.3. PERIODIC CONTROL-MAINTENANCE OF ELECTRICAL FACILITIES AND EQUIPMENT

- All electrical facilities, parts of equipment and grounding lines shall be periodically inspected by authorized electricians and provided with fire protection. The electrical equipment that is subject to inspection shall be registered by the electricians.
- The electrical components of all heavy and light vehicles shall be periodically inspected by authorized electricians and maintenance records shall be maintained.
- Parts and equipment which has minimum TSE standard shall be used in electrical units, installations and controls.

7.4. LIGHTNING RODS

Critical buildings and facilities will be protected from lightning with lightning rod systems. The installation of the lightning conductors and grounding measurements shall be carried out by the authorized electrician in accordance with the relevant legislation. The measurement results, the locations of the lightning rods and the protection diameters will be stored in a central file. The control and maintenance of lightning rods shall also be carried out annually under the supervision of an authorized electrical engineer.

7.5. SMOKING POLICY

It is forbidden to smoke in buildings, offices, explosive storage, where flammable liquids or gases are present and stored, where chemical processes are carried out or where chemical substances are stored, and in the places and cabins of vehicles and earth movers.

Places containing fire hazards will be marked with '**Cigarette and Open Flame Forbidden**' safety signs. Sufficient ashtrays that are resistant to fire will be installed around the buildings to meet smoking needs of workers.

7.6. PRESSURIZED GASES

Pressurized gas cylinders shall always be kept in a vertical position away from heat sources, open flames and cigarettes. For details, see Article 6.7.14 of this Plan.

7.7. DIESEL TANKS

Diesel tanks that meet the fuel requirements of the vehicles will be installed in accordance with the relevant legislation. Areas where these tanks are located will be equipped with safety signs and a sufficient number of fire extinguishers.

7.8. OTHER CONTROL PRECAUTIONS

Acacia Mining Operations will also take the following measures in addition to the above measures in areas and works involving fire hazards.

- 1) Flammable and inflammable liquid spills will be cleaned immediately so as not to create a fire hazard.
- 2) Kerosene or other flammable liquids will not be used for cleaning.
- 3) Solvents will not be used near open flames and sources of ignition.
- 4) Small quantities of flammable liquids which are taken from storage as small quantities will be stored and used in safe containers indicating what is inside them.
- 5) Battery charging stations will be ventilated. It is forbidden to smoke and open flames at these stations.
- 6) Hot Working Permit will be obtained before welding, cutting, burning.
- 7) Lighting fire will not be allowed at the field area . When there is a need for this sort of thing, contact the HSE Department.
- 8) Electrical equipment such as computers, fans, air conditioners, and heaters will turned off at the end of shifts and they will not be allowed to work at night, unless they are required to work for equipment in their area.
- 9) Rubber coated equipment (tanks, silos, etc.), sieves and conveyor belt lines will be marked with warning signs indicating the risk of fire that may occur during hot work.

7.9. EMERGENCY ESCAPE-DIRECTION SIGNS AND ILLUMINATION

Critical buildings and installations will be marked with exit and direction signs, which clearly show escape routes to fire zones. Signs shall be placed in such a way as not to cause confusion during fires and emergencies. Emergency lighting will also be installed in critical buildings and areas. Maintenance of the electrical escape signs and lights will be carried out and registered by authorized electricians every month.

Output and direction signs and emergency lights will be operated with battery and will operate for at least 1 hour in case of power failure.

7.10. WORKING PLATFORMS AND WALKWAYS

- Whether flammable or not materials will not be allowed to be placed in work areas or walking paths where these materials could create a direct fire hazard or prevent fire intervention.
- Work areas and walking areas should be cleaned from unnecessary flammable materials, including:
 - Flammable materials or substances no longer required for operation o Flammable wastes
(eg sawdust, flammable dust)
 - Packing materials, especially plastic and polyester foam, which can produce heavy and black smoke and toxic smoke in large quantities when initially extinguished.
- All spills containing flammable liquids will be cleaned immediately. When required, appropriate cleaning materials will be supplied and used.
- Flammable liquids must be poured over the drip tray and materials in these trays must be disposed at frequent and regular intervals (eg after casting activity is over)
- Where necessary, the work areas should be cleaned from combustible dust with methods like regularly cleaning, vacuuming the spills.

7.11. WASTE MATERIALS

- Containers which are suitable for waste materials should be provided. These containers should be legibly labeled for their intended use and content.
- Oily or drenched fabrics, wastes or clothing will be stored in closed metal containers, which will be emptied at regular intervals and their contents will be safely disposed.
- •Contaminated waste must be disposed of safely in accordance with the Environmental Management System. If necessary, waste disposal specialists should be used.

7.12. WORK APPLICATIONS

- Keep container (s) closed when not in use. If possible, use containers equipped with a self-closing cap.
- Only use flammable liquids in areas where ventilation is good and ignition sources are not available.
- Use extreme caution when using or operating engine fuels, solvents and thinners. Almost all refined liquid petroleum products absorb flammable vapor and can naturally turn to gas state at temperatures in the normal working environment or at lower temperatures

- Do not use flammable liquids to clean machinery or parts of machinery.
- Appropriate markings shall be placed in areas where ignition sources or flammable substances may be used
- The identified fire risks must be intervened immediately

In accordance with ACACIA guidelines, all personnel are obliged to terminate the work when it is considered unsafe. This is also include the risk of fire.

7.13. FIRE EXTINGUISHER USAGE AND TRAINING

All Acacia Mining Operations and sub-employer staff will be trained about the general principles and use of fire extinguishers.

Trainings will include types of fire extinguishers, instructions for use and fire intervention exercises. These trainings will be given by an externally specialized company or Occupational Health and Safety Department.

Follow the instructions below when using the extinguishers containing the Dry Chemical Powder;

- ⇒ Pull out the pin. When the discharge lever of the fire extinguisher is pressed it allows the fire extinguisher to drain .
- ⇒ Direct the hose end of the fire extinguisher towards the base (source) of the flame.
- ⇒ Drain the fire extinguisher by squeezing the discharge arm. Start from a safe distance at the beginning and approach the flames as they get smaller (go ahead).
- ⇒ Make sweeping motion until the flames completely disappear and make sure the fire is completely turned off. Continue to observe the fire zone. If it happens again, intervene again.

When using fire extinguishers containing CO2, observe the following instructions;

- ⇒ Open your fire extinguisher by turning the valve counterclockwise. In this way, the fire extinguisher will be discharged.
- ⇒ Spray CO2 towards the bottom of the flames. Start from a safe distance at the beginning and approach the flames as they get smaller (go ahead).
- ⇒ Make sweeping motion until the flames completely disappear and make sure the fire is completely turned off. Continue to observe the fire zone. If it happens again, intervene again.
- ⇒ Make sweeping motion until the flames completely disappear and make sure the fire is completely turned off. Continue to observe the fire zone. If it happens again, intervene again.

⇒ When you are using a CO2 in enclosed area, the amount of CO2 inside the area will increase and it will harm people.
Ventilate the enclosed area immediately or leave it by warning people

The fires at the mine field will be extinguished immediately by workers who notice the fire.

All fires will be reported immediately after the fire is under control.

7.14. RISK ASSESSMENTS

7.14.1. ALL ACTIVITIES

Risk Assessments assess fire potential and possible consequences. Risk Assessments should specifically address below aspects:

- Presence of planned or unintentional ignition sources
- The proximity of flammable materials to the working area or storage area
- Possible consequences of fire and possibility of fire leaping into nearby areas
- Providing suitable and adequate fire fighting equipment and personnel
- In case of fire or spill, contingency planning is required
- The expertise of the personnel involved in the work and those who will be employed at the beginning of the fire in case of fire

7.14.2. HOT WORKING

Hot work, whether with spark potential or naked flame, should only be performed under the control of the Work Permit supported by the official Risk Assessment.

7.15 DANGEROUS AREAS

7.15.1. AREA CLASSIFICATION

Areas are classified as dangerous or non-hazardous by using established standards. The process of identifying hazardous areas is a multidisciplinary process carried out by Process and Safety Engineers while dangerous area classification is made.

Fields can be classified as:

Zone 0 : Areas where the flammable atmosphere is constant or exists for a long time **Zone 1** : Areas where flammable atmosphere may occur during normal operation.

Zone 2 : Areas where the possibility of flammable atmosphere occurring during normal operation does not exist and if it emerges, it is short-lived.

Non-Dangerous: Areas which does not contain 0, 1, and 2 zones.

FACILITIES AND EQUIPMENT IN HAZARDOUS AREAS

The equipment and facilities used in zones 0, 1 and 2 shall not be explosive and shall be safe due to the nature of electrical equipment.

Unexpected sources of flaming sources such as mobile phones, matches and lighters will not be brought to these areas.

MOTOR VEHICLES AND INTERNAL COMBUSTION ENGINES

Special care is required when using motor vehicles and internal combustion engines. Especially:

- Motor vehicles and internal combustion engines will not be placed in zones 0 and 1
- Motor vehicles and internal combustion engines will only be allowed in Zone 2 with the Hot Working (Spark Potential) permit

HOT WORK IN DANGEROUS AREAS

All hot work will only be done in accordance with the Hot Work Permit, regardless of whether it is in the dangerous area or not, whether it has spark potential or naked ale. The granting of a Hot Work permit depends on the results of the official Risk Assessment of all existing fire risks and classification of the Hazardous Area.

In all cases where possible, avoiding hot work in hazardous areas is an ACACIA rule . The engineers who plan the job have a duty to minimize the need for hot working and to provide reasonably priced alternatives with careful work during design and planning.

7.16. USAGE AND STORAGE OF FLAMMABLE MATERIALS

7.16.1. USAGE

- Field Managers and Supervisors will have information about hazardous and combustible materials used or stored in their area of responsibility and will create contingency plans to combat with spills and fires these materials.
- Personnel using flammable materials will have appropriate competence and will be trained about the use and characteristics of these materials
- Personnel who use or work with flammable materials shall use appropriate personal protective equipment including, but not limited to, face protection, hand protection and fire-proof clothing
- Appropriate fire fighting equipment will be provided in areas where flammable materials are used.

7.16.2. STORAGE

- Field Managers and Supervisors will have information about the combustible materials stored in their areas of responsibility

- Flammable materials will not be stored near flames, high heat sources (potential or real) or flammable materials
- Flammable materials shall be stored in safe storage areas or facilities
- Storage areas for flammable liquids and gases are will be ventilated well to quickly remove vapors from leaks, spills, or unexpected accidents
- There shall be legible signs and notices in the storage areas of the flammable materials to warn the staff about prescence of flammable substances.
- Where necessary, storage areas must have adequate level of preventive equipment; for example trays to prevent spreading of spills to other areas
- Containers used for flammable materials will be labeled legibly and correctly with respect to their contents
- Glass containers will not be used to store flammable liquids.

7.17. FIRE PROTECTION OF BUILDINGS AND FACILITIES

At a minimum, buildings will comply with local requirements. New and modified buildings / installations and workshops will be formally assessed and sufficient arrangements will be made to:

- *Fire Detection*
- *Fire fighting equipment (fixed and portable)*
- *Staff escape routes*

The buildings, installations or field where there are structural changes or usage changes will be revaluated.

7.18. FIRE DETECTION

7.18.1. FIXED FIRE DETECTION SYSTEMS

The most common types of fire detection systems used in ACACIA sites and installations within the project area are:

- **Heat detectors** (electro-pneumatic, electronic, heat sensitive wire, quartzite bulbs) (TS EN 54-5)
- **Smoke Detectors** (photocell-electrical, ionisation detectors, continuous air sampling) (TS EN 54-7, TS EN 54-14)

- **Flame detectors** (infrared detectors, ultraviolet detectors)
- **Gas Detectors** (TS EN 50194-1)

LOCATION AND USAGE

At a minimum, fixed fire detection systems will be installed and used in accordance with the manufacturer's recommendations and local legislation.

Detection systems will not be subjected to any changes without a rigorous Risk Assessment. Changes must be made by ACACIA Electrical Technicians only within the knowledge of ACACIA OSH Unit. All changes must be recorded and performed on site.

WORKING

Fire detection systems will include an automatic alarm system that:

- Notify the staff about the fire
- Providing information about where the fire is located
- Activating a fire stop system (eg spray system)
- If these possibilities are not available for any reason:
- Personnel should be informed (eg with a loudspeaker system)
- There will be no smoking at the affected area
- Hot work on the affected area must only be allowed within the Work Permit control and only after alternative arrangements have been made for fire detection and protection (eg the use of fire watchers).

INSPECTION AND MAINTENANCE

Fire detection systems should be inspected and maintained by a qualified person and according to the manufacturer's instructions and recommendations. The manager will ensure that a suitable inspection and maintenance program for fixed detection systems is available.

Inspection results and repairs carried out for the fixed fire detection system should be recorded and kept in the field for future reference.

7.18.2. MANUAL FIRE DETECTION

FIELD RELATED INSTRUCTIONS

Plans to be applied after the fire is detected or the fire alarm is heard are specific to the area and will vary between locations. For example, in an outdoor installation, some of the personnel can not be immediately

evacuated but may be required to remain in place to secure the facilities and equipment or to form a fire response team. For this reason, the information given here is for the case only

Personnel of teams established at buildings, buildings, facilities and businesses; the officers, owners or administrators are trained by using local fire brigades and civil defense organizations about fire protection, fire extinguishing, rescue of life and property, first aid activities and cooperation with fire department and organization, and the exercises and knowledge and skills are increased. Besides, all officers and night watchers are trained about how to use fire extinguishers and equipment in the building and how to get to fire in the shortest possible time.

SPECIAL TRAINING

Administrative personnel of municipal fire brigades and public authorities which contain private fire brigades and fire officers of private organizations are trained by General Directorate of Civil Defense, and other personnel are trained by their own organizations.

The staff will be informed about the site-specific fire and emergency directions during initial safety training. Education will include:

- Things to do in case of fire
- Things to do in case of fire
- Manual alarm point locations
- Fire extinguisher locations

In addition, fire and assembly instructions will be placed strategic points throughout the field.

In addition, fire and assembly instructions will be placed strategic points throughout the field.

PERSON WHO DETECTS THE FIRE

The person who detects the fire must do followings:

- 1) Person should shout "FIRE, FIRE, FIRE" to trigger the alarm.
- 2) If the fire is small and easily extinguishable and there is a fire extinguisher, he should try to put out the fire without risking himself or if the fire can not be easily extinguished or if the first attempt to extinguish the fire does not produce results, close all doors must be closed and area must be evacuated.
- 3) Person must comply to fire and emergency plans specific to the field / installation.

Plans to be applied after the fire is detected or the fire alarm is heard are specific to the area and will vary between locations. For example, in an outdoor installation, some of the personnel can not be immediately evacuated but may be required to remain in place to secure the facilities and equipment or to form a fire response team.

For this reason, the information given here is for the situation only.

After hearing the alarm, personnel should do the following:

- 1) Person should close / secure the equipment that he used and leave the area / building by using the nearest safe outlet and closing the doors and windows left behind
- 2) Operate according to local fire and emergency directions.

Staff should not waste any time to get their personal items.

8. PROTECTION OF FIRE

8.1. ESTABLISHMENT OF FIRE PROTECTION TEAMS , TASKS AND WORKING PRINCIPLES

8.1.1. ESTABLISHMENT OF TEAMS

From the structure, building, facilities and enterprises; the following teams are formed in all kinds of buildings, buildings, facilities and enterprises with more than 50 people and houses with 10 independent sections.

- a) The extinguisher team,
- b) The rescue team,
- c) The protection team,
- d) First aid team.

In other structure, building, facilities and enterprises; The teams are established which the owner, administrator or supervisor will see fit and other measures are taken.

Teams are established with the approval of the greatest supervisor, according to the need of the supervisor appointed to carry out the instruction is provided in Article 5.3. The extinguishing and rescue teams consist of at least 3 people, while the protection and first aid teams consist of at least 2 people. (If civilian defense services are established in the institution, the duties of the so called teams are carried out by these services.)

Each team has a team head. The head of the team at the same time is the deputy assistant responsible for implementing the plan.

8.1.2. DUTIES OF TEAMS

The duties of the teams are stated below.

- a) **The extinguisher team**, To quench and/or to prevent expansion by interfering to the fire immediately
- b) **The rescue team**, To carry out the duties of rescuing life and property in case of fire,
- c) **The protection team**, To protect the recovered goods and documents, to prevent possible panic and confusion caused by fire,
- d) **First aid team**, Making first aid to a person who is injured or ill due to fire.

8.1.3. WORKING PRINCIPLES OF TEAMS

It is essential for the teams to cooperate with each other and to make mutual help.

In case of fire management of teams is belong to the supervisor or his / her deputies who are in charge of implementing the plan until the fire brigade arrives. During this time, the teams receive orders from their supervisors. When the fire brigade comes, extinguishing and rescue teams immediately enter the fire officer's command.

Building owners and managers and building supervisor must have the necessary equipment which teams will use to respond to a fire and perform rescue operations. Depending on the size of the build, the purpose of use, the existing protection systems and the team characteristics, gas mask, inhaler, spare hose, lance, hydrant key and similar materials shall be provided with taking opinion of the local fire brigade and civil defense directorate. The materials to be provided must comply with the materials used in the fire brigade. Maintenance and protection of tools and materials is carried out by officers under the responsibility of the supervisor in charge of implementing the plan.

Fire fighting teams, who receive the fire alarm, immediately take their place by taking their equipment. At the scene;

- a) **The extinguisher teams**, It takes place in the lower, upper and side rooms of the fire place and try to quench the fire and prevent the fire from expanding.
- b) **The rescue teams**, If they exists, they save the lives first, then with the help of the other people who find the first document to be saved, the file and the other person in the fire,
and ready to be emptied under the supervision of the bureau chiefs, if possible, by putting nets and bags. Sacks and bags are transported to parts of the building that are not dangerous to burn if the building authorities need it. The general discharge of the burning building begins with an order from the fire brigade or the largest marshal, who arrives at the scene.
- c) **The protection teams**, They guard the evacuated objects and documents in a safe place where security forces or building authorities show and after the fire has been extinguished they will deliver it to the building authorities.

- d) **First aid teams.** They provide first aid services for people injured or sickened at the fire. The building owner who is aware of the fire, Supervisor and officer and fire fighting team personnel are assigned to the task in the quickest manner and carry out extinguishing, rescue, protection and first aid works.

8.2. STABILIZED FIRE FIGHTING EQUIPMENT

The most common fixed fire fighting systems include:

- Hydrants
- Sprinkler System at High Speed (Automatic and Manual)
- Sprinkler System at Medium Speed (Automatic and Manual)
- Rapidly Expanding Foam Systems (Fixed and Portable)
- CO2 Fire Stop Systems (can be used in unmanned areas).

LOCATION AND WORK

At a minimum, fixed fire systems will be installed and used in accordance with the manufacturer's recommendations and local legislation.

Fire fighting systems will not be subjected to any changes without a rigorous Risk Assessment. Changes must be made only by ACACIA personnel. All changes must be recorded and performed on site.

INSPECTION AND MAINTENANCE

As a minimum, fire fighting systems must be inspected and maintained by a qualified person and according to the manufacturer's instructions and recommendations and local regulations.

As a minimum, fire fighting systems must be inspected and maintained by a qualified person and according to the manufacturer's instructions and recommendations and local regulations.

Inspection results and repairs carried out about the fixed fire fighting system should be recorded and kept in the field for future reference.

8.3. PORTABLE FIRE FIGHTING EQUIPMENT

- **Water:** It is suitable for extinguishing fires containing water-filled extinguishers, paper, wood and garbage.

WARNING:

Water fire extinguishers should not be used in electrical fires where water can come into contact with electrical sources.

- **Foam:** Foam-filled extinguishers can be used successfully in fires involving paper, wood and general garbage. However, foam fire extinguishers are primarily designed for use in oil containing fires.

WARNING:

Foam fire extinguishers should not be used in electrical fires where the foam may come into contact with electrical sources.

- **Dry Chemical Powder:** Fire extinguishers filled with dry chemical powder can be used in garbage and oil fires as well as electric fires. However, the use of dry powder in electrical equipment often makes the equipment unusable.
- **Carbon Dioxide (CO2):** CO2 extinguishers are designed for use only in electric fires. If they are used in fires involving garbage and debris, press of the fire extinguisher may disrupt the fire bed and cause burning material to spread. They are not suitable for oilbased fires due to the same reasons.

LOCATION

- Portable fire fighting equipment must be installed in accordance with local fire regulations, national fire protection guidelines and other requirements.
- Portable fire fighting equipment must be installed in accordance with local fire regulations, national fire protection guidelines and other requirements.

OPERATION AND USE - REFILL

- After each use, all extinguishers must be refilled immediately. The chemicals should never be mixed because the chemical reaction may damage the extinguisher.
- Refilling should only be performed by trained personnel.

INSPECTION AND MAINTENANCE

All maintenance of portable fire extinguishing equipment must be carried out by a qualified person and in accordance with the manufacturer's recommendations and local regulations.

The following inspections specify the minimum requirements for any inspection program:

- All extinguishing units must be in plain sight and clearly visible. Signs or painted red backgrounds can be used to indicate the location of the extinguisher.

- All extinguishers must be visually inspected each month for operational safety (eg, whether the seals are in place, no damage to the nozzles and hoses, and the units are easily accessible).
- Annual inspections should be carried out according to the manufacturer's specifications and applicable regulations.
- Annual inspections should be carried out according to the manufacturer's specifications and applicable regulations.

9. TRAININGS AND EXERCISES

9.1. TRAINING PROGRAM

All personnel should be familiar with the common causes and types of fire and know how to use fire fighting equipment. This can be achieved through the use of a comprehensive training program that includes:

- Training courses for all firefighting personnel, including scheduled and regular refresher courses
- Regular exercises and practices carried out in the field

TRAINING REGISTRATIONS

Training records for all staff will be kept in the field.

APPLIED EXERCISES

Applied exercises will be carried out at regular intervals according to the determined program. Exercises will be implemented to strengthen staff skills and knowledge of fire fighting techniques and also to highlight deficiencies in the Fire fighting instructions

ANNEX-1 FLAMMABILITY CLASS OF BUILDING MATERIALS

ANNEX-1:

	1	2	3	4
	Class of Flammability	Description of Building Materials	Behavior Observed in the Fire	Building materials specified in the said class
1	A	non inflammable		

2	A1	No Fireproof	Non-flammable non-combustible non-charcoal (Electric tube furnace test is applied)	<p>a) a) All other stones that can be used in construction technique such as sand, gravel, alluvium, clay</p> <p>b) B) Minerals, soil, volcanic slags and natural bims.</p> <p>c) c) Building materials obtained from It means of combustion and / or expansion processes such as cement, lime, gunsum, anhydrite, blast furnace slag, expanded clay, expanded schist, expanded perlite and vermiculite and foamed glass.</p> <p>d) d) Mortar, concrete, reinforced concrete, prestressed concrete, gas concrete or porous concrete, light concrete, building stones and building slabs made from mineral materials, common mortar or concrete admixtures.</p> <p>e) Mineral fiber materials without organic additives.</p> <p>f) F) Bricks, tiles, ceramics.</p> <p>g) G) Glasses</p> <p>h) H) Alkali and alkaline earth metals and their alloys, fine powdered unalloyed metals and alloys.</p>
3	A2	Flammable	It contains flammable parts, but they do not burn, they do not fire, they do not contribute to the fire load.	In all cases, special handling is required. Like the non-combustible filler composites such as gunsum cardboard plaster.
4	B	Flammable Building Materials		
5	B1	Hard to Flaming	After the flame source has risen, it continues to burn.	<p>a) Wood wool or shavings lightweight boards.</p> <p>B) Multilayer mineral fiber lightweight plates (lightweight structure made of wood wool covered with mineral fibers on one and / or two surfaces)</p> <p>C) Gunsum board plates with perforated or unperforated surfaces</p> <p>D) Artificial resin liquids with mineral additives on a solid mineral base.</p> <p>E) Heat charges.</p> <p>F) Pipes and fittings made of d>3.2 mm hard polyvinyl chloride (PVC), chlorinated polyvinyl chloride (PVCC) and polypropylene (PP) without softener.</p> <p>G) Wooden parquet, PVC, vinyl flooring</p> <p>H) asbestous cardboard and paper.</p>

6	B2	Normal Flame	It forms flammable fumes and toxic gases. (Experiments with chimney kilns are carried out to realize those entering B1 and B2 classes)	<p>5 >400 kg / m³ and thickness d>2mm or 5>230 kg / m³ and d>5mm thick wooden materials.</p> <p>b) Plates made of wood plywood or decorative prestressed material with thickness d>2mm is non-thermoplastic non-wood coated or surface-pressed material on all surfaces.</p> <p>c) plastic covered wood fiber plaques with d3 mm.</p> <p>d) Gypsum board connection plates.</p> <p>e) Multilayer rigid foam lightweight plates.</p> <p>f) Hard PVC plate Thickness 3 mm hard PVC, polypropylene, high density polyethylene, copolymer, styrol (ABS/ASA/PVC), acrylonitrile-pipes and connections made of this styrene.</p> <p>h) Thickness 2 mm polymethacrylate cast sheet.</p> <p>i) Thickness > 1.6 mm polyester plates.</p> <p>l) $\rho = 940 \text{ kg / m}^3$ and thickness >1.4 mm d > 1.0 mm unfoamed polyethylenes.</p> <p>K) Thickness x 1.0 mm polyamide.</p> <p>PVC.Flooring materials such as flexible plastics such as rubber, synthetic rubber.</p> <p>m) Unfossilized, tar or bitumen-added polyurethane or polysulfide, based on silicon and acrylate, is placed between two building materials at least B2 class each time.</p> <p>n) Asphalt</p> <p>O) Electrical cables,</p>
7	B3	Easy flaming	Materials that do not fall into the above categories can not be used in any way.	<p>Wood <2 mm Paper, reed, straw, sawdust, cotton, cellulose fiber loose or in powder form all kinds of flammable substances.</p>

6	B2	Normal Flame	It forms flammable fumes and toxic gases. (Experiments with chimney kilns are carried out to realize those entering R1 and B2 classes)	<p>a) $5 > 400 \text{ kg / m}^3$ and thickness $d > 2 \text{ mm}$ or $5 > 230 \text{ kg / m}^3$ and $d > 2 \text{ mm}$ thick wooden materials.</p> <p>b) Plates made of wood plywood or decorative prestressed material with thickness $d > 2 \text{ mm}$ is non-thermoelastic non-wood coated or surface-pressed material on all surfaces.</p> <p>c) plastic covered wood fiber plaques with $d \geq 3 \text{ mm}$.</p> <p>d) Gypsum board connection plates.</p> <p>e) Multilayer rigid foam lightweight plates.</p> <p>f) Hard PVC plate</p> <p>Thickness 3 mm hard PVC, polypropylene, high density polyethylene, copolymer, styrol (ABS/ASA/PVC), acrylonitrile-pipes and connections made of this styrene.</p> <p>h) Thickness 2 mm polymethacrylate cast sheet.</p> <p>i) Thickness $> 1.6 \text{ mm}$ polystyrene plates.</p> <p>j) $\rho = 940 \text{ kg / m}^3$ and thickness $> 1.4 \text{ mm}$ $d > 1.0 \text{ mm}$ unfoamed polyethylenes.</p> <p>k) Thickness $\times 1.0 \text{ mm}$ polyamide,</p> <p>l) PVC Flooring materials such as flexible plastics such as rubber, synthetic rubber.</p> <p>m) Unfossilized, tar or bitumen-added polyurethane or polysulfide, based on silicon and acrylate, is placed between two building materials at least B2 class each time.</p> <p>n) Asphalt</p> <p>o) Electrical cables,</p>
7	B3	Easy flaming	Materials that do not fall into the above categories can not be used in any way.	<p>Wood $< 2 \text{ mm}$</p> <p>Paper, reed, straw, sawdust, cotton, cellulose fiber loose or in powder form all kinds of flammable substances.</p>

ANNEX-2 FLAMMABILITY AND RESISTANCE CLASSES OF CONSTRUCTION MATERIALS AND ORDER ELEMENTS

1			2		4		5
Resistance to Fire			Flammability Class of Materials Used	Definition of Building Elements			Short View
	Class	Time (min)	Main Elements 1)	Other components not included in the second set			
1	F 30	> 30	B	B	Fire-Resistance Classes F30		F 30 - B
2			A	B	The key elements are fireproof and fire resistant F 30 building		F 30 - AB
3			A	A	It is composed of building materials with fire prevention fireproof and fire resistance class F 30		F 30 - A
4	F 60	> 60	B	B	Fire-Resistance Classes F60		F 60 - B
5			A	B	The fire resistance class F 60 and its main parts are composed of non-combustible building materials		F 60 - AB
6			A	A	Non-combustible building materials with fire resistance class F 60		F 60 - A
7	F 90	> 90	B	B	Fire-Resistance Classes F 90		F 90 - B
8			A	B	The main parts of with fire resistance rating F 90 are composed of non-combustible building materials		F 90 - AB
9			A	A	Consisting of non-combustible building materials of fire resistance class F 90		F 90 - A
10	B		B	Fire-Resistance Classes F 120			F 120 - B
11	A		B	The main parts of with fire resistance rating F 120 are composed of non-combustible building materials			F 120 - AB

12	A		A	Consisting of non-combustible building materials of fire resistance class F 120	F 120 - A
13			B	B Fire-Resistance Classes F 180	F 180 - B
14			A	B The main parts of with fire resistance rating F 180 are composed of non-combustible building materials	F 180 - AB
15			A	A Consisting of non-combustible building materials of fire resistance class F 120	F 180 - A
	F 180	> 180			

1) **Main Elements include the following.**

- a) **XXX, including those which are stable in stability from non-structural building blocks (e.g. ,Like frame constructions on non-bearing walls)**
- b) **In construction elements surrounding volume (space), the layer which should not be destroyed on the plane of the construction element in the experiment made according to the "Fire resistance of construction elements" standards.**
 - **The total thickness of this layer should be at least 50 mm in mattresses; Blank spaces are allowed in this layer ..**
 - **Assessment of combustion behavior of structural elements may not be considered as surface and coating layers or other surface treatments.**

2) **This designation is based on the fire resistant ability of the building elements only.**

		Fire Doors	For all light-glazed	Ventilation system for	Fire Closures for air

Annex-5 FIRE RESISTANCE CONDITIONS TO BE SEARCH FOR NORMAL BUILDING WALLS, UPHOLSTERY AND ROOF

	Stairwell tower				
		F90 - A B2			
3	Stairwell tower upholstery	See Appendix-4 Line 9			
4	Upper and lower floors of open	F90 - A	F90 - A	F90 - A	F90 - A
5	Doors opening into the basement or roof of the stair lifts	F30	F30	F30	F90 - A (2)
7	The light-permeable material on the	F90 - A (2)	A	A	A
8	Rails instairwell towers (except BanisterS)	B2	A	A	A
		A			

		- F30 – B - B	F30 – B	F30	
10	Open to the public corridor walls	Annex -4,Privileges can be allowed in situations where there is no need for higher requirements than in line			
	1)School, Student Dormitories, Hospital, Bur		At least B2		

Elevator clearance walls are valid

It also applies to ventilation ducts and garbage chimneys.

Annex-6 REQUIREMENTS FOR FIRE RESISTANCE TO BE SEARCH FOR MATERIALS USED IN NORMAL BOTTOMS (1)

1	Below are the minimum requirements for building materials to be used when no higher requirements are sought				
		<p>B2 B2 B2 B2</p> <p>Building materials that continue to extinguish easily after the operation (class B3) is not used in the construction and repair of structures.</p>			
2	Materials used for jointing joints of outer walls	31	B1	B1	B1
3	Materials for side seals of joints in row 2	B2	B2	B2	B2

4	Wall coverings in rooms (see Annex 5 for escape routes)	B2		B2	B2	B1	
5.1	Insulations in or on the floor	B2	B2	B2	B2		ceiling lower ss a, B2
5.2	Insulations on F30 – A, F30 – AB, F90-A class	Class B insulation materials can be used in these upholstery, provided that it is covered with ≥ 2 cm thick stalks.					
6	Ceiling coverings in rooms (see appendix 5 for escape routes)	B2	B2	B2	A		

7	Facade flammable coverings and insulation of their joining elements	B2 class facade finishes are not used in a high quilted building.			
8	Facade coatings and their combination	B1	B1	B1	B without spaces A without spaces
9	Outer wall inner face insulation	B2	B2	B2	B1
10	Façade Bar-shaped Insulation covering lower consinction (lattice or grid)	B2	B1	B1	B1 The distance between the outer cover and the outer wall must be x 4 cm to allow B2. Window and door casings must be
11	Covers of grill fixtures and lower ladder surfaces	A	A	A	A

1) 1)School, student dormitories, hospital, bureau and administration are also valid for buildings.