4.1 RISK ASSESSMENT

Risk is a potential that a chosen action or activity will lead to a loss of human or property.

Risk assessment is a step for Risk Management. Risk assessment is determination of qualitative and quantitative value of risk related a situation or hazard.

Hazard is a situation that poses a level of threat to life health or environment.

Risk assessment involves the following:

- Hazard Identification
- Vulnerability Analysis
- Risk Analysis
- Emergency Preparedness Plan

1 HAZARD IDENTIFICATION

The project is a proposed combined operational Offices for DGCA, AERA, AAIB, BCA & Airport Authority of India and there may be following types of hazards:

1.1 Natural hazard:

Earthquake

Flooding

1.2 Manmade hazard:

Health Injuries

Fire & explosion

Electrical

Mechanical

Radiation

Thermal

Chemical

2 VULNERABILITY ANALYSES

This is a proposed combined operational Offices for DGCA, AERA, AAIB, BCA & Airport Authority of India hence offices are vulnerable to risks.

3 RISK ANALYSES

The risk is likelihood of harmful effect big or small due to hazard, together with severity of harm suffered. Risk also depends on number of people exposed to hazard.

Risk analysis provides severity of harm from particular type of hazard.

3.1 Earthquake:

The project is located at seismic zone IV where earthquake can occur from 4.0-7.0 Richter scale.

3.2 Flooding:

The project site is located in an area where no natural river or drainage exists. However, flooding can occur due to excess rain.

3.3 Health Injuries

1. Safety nets will be provided at appropriate level and various shafts/ openings will be kept covered to prevent falls, slips, trips etc.
2. Necessary safety belts, helmets and eye-masks as required will be enforced at site.
3. Adequate guardrails will be provided to the staircases and common areas.
4. Adequate guardrails/ fences will be provided around the water storage spaces to prevent drowning accidents.
5. Adequate protection/ fence will be provided around the excavated areas.
6. The machinery and the equipment will be regularly tested and maintained with the specific emphasis against accidents failures.
7. The deployed Safety officers will ensure that the personnel/ labour will be kept at a safe distance from working machinery to avoid accidents/ injuries due to toxic gases/ chemical/ noise.
8. Moving parts of various parts of machineries/ equipment will be properly guarded.
9. Rest rooms and first aid facilities will be made available for the workers.

3.4 Fire & Explosion:

Since it is a proposed combined operational Offices for DGCA, AERA, AAIB, BCA & Airport Authority of India, fire can occur due to electrical spark or gas leakage from kitchens.

Fire is mainly caused in due to carelessness, short circuits, and malfunctioning of gas regulator, tube, and such related products.

3.5 Electrical:

The electrical current can pass to the floor & metals due to inadequate insulation or accidently.

3.6 Mechanical:

The mechanical fault that can cause the risk & hazard include the elevators.

3.7 Radiation:

Due to use of wireless equipment there may be electromagnetic radiation.

3.8 Thermal:

Thermal heat can be generated from the D.G sets and the vehicles in the colony.

3.9 Chemical:

Chemical use in the proposed combined operational Offices for DGCA, AERA, AAIB, BCA & Airport Authority of India limited to cleaning agents & medicines.

4.2 Disaster Management Plan

Disaster Management provides the opportunity to plan, prepare and when needed enables a rational response in case of disasters/ mass casualty incidents (MCI). Disasters and mass casualties can cause great confusion and inefficiency in the hospitals. They can overwhelm the complex resources, staffs, space and or supplies. Lack of any tangible plan to fall back upon in times of disaster leads to a situation where there are many sources of command, many leaders, and no concerted effort to solve the problem.

An internal risk management authority is formed which may undertake periodic evaluation of safety precautions to be followed by each department for hazard recognition with the following steps:

Building will be undertaken on a periodical basis to identify the measures taken to prevent/reduce the impact of the potential hazards.

All peoples will be encouraged to routinely assess all activities to identify potential hazards.

To make the proceedings easier, the all the persons will embark upon disaster planning using a phase plan. The building emergency planning is divided into three phases:

1) **Pre-disaster phase**

Planning: Risk assessment and planning for preparedness will be done, the building plans will be formulated and then discussed in a suitable forum for approval.

The disaster manual: The building disaster plan shall be written down in a document form and copies of the same should be available in all the areas of the building.

Education and training: Regular training by suitable drills shall be undertaken in this phase.

2) **Disaster Phase**

Phase of activation: Alter and notification of emergency.

Activation of the chain of command in the building.

Operational phase: This is the phase in which the actual tackling of mass casualties will be performed according to the disaster/emergency plan.

Phase of deactivation: When the administration/ command of the building will be satisfied that the influx of mass casualty victims is not continuing to overwhelm the building facilities.

3) **Post Disaster Phase**

This is an important phase of disaster planning where the activities of the disaster/ emergency phase will be discussed and the inadequacies will be noted for future improvements.

4.3 SAFETY MEASURES:

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