

# Guiding procedures for response to emergency situations on construction projects



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## GUIDING PROCEDURES TO RESPOND TO EMERGENCY SITUATIONS ON

CONSTRUCTION PROJECTS By Maj ® Muhammad Ijaz Student MS Disaster

Management-2012 at NUST (MCE) Introduction Construction projects involve

use of heavy machinery, execution of numerous work activities

simultaneously. Working environment like in Pakistan where safety culture

does not prevail results in increased vulnerability to accidents thus frequent

emergency situations on construction projects. The author being a Project

Manager on construction projects have experienced number of emergency

situation involving loss of life of worker.

The Safety Rules requires that the constructor shall establish Emergency

Response Procedures for every project, Life Insurance of worker is also

mandatory clause of the contract agreement in Pakistan but normally not

implemented in letter and spirit. This article will be useful to assist

constructors in developing Emergency Response Procedures. Detailed

Emergency Plan helps to minimize the human suffering and economic losses

that can result from emergencies. It should be understood that the size and

complexity of projects, as well as their access and location, have a bearing

on the degree of planning necessary for emergencies.

It is therefore strongly recommended that the constructor ensure that a

member of staff on site assist in developing the emergency response plan.

The Planning Process Planning shall begin before any work commences on

the project. Although there may be little time between the award of the

contract and the start of the project, a good emergency response plan can

be generic and, with some minor changes, can be easily adapted to specific

sites and readily implemented.

This is especially the case where a constructor specializes in similar types of projects. For meaningful Development of Response Plan following considerations should be kept in mind: 1) Identification and assessment of hazard 2) Assessment of resources 3) Mean of communication 4) Implementation of the plan 5) Basic Principles 6) Sharing the Procedure 7) Post Emergency Consideration Each of these points is explained in the following sections. Identification and assessment of hazard

The process of hazard identification and assessment involves a thorough review that should include, but not be limited to, the following points: • Transportation, materials handling, hoisting, equipment or product installation, temporary structures, material storage, start-up, and commissioning activities • Environmental concerns • Consultation with the client regarding potential hazards when working in or adjacent to operating facilities • Resources such as material safety data sheets (MSDSs) to determine potential hazards from on-site materials. • Proximity to traffic and public ways.

Because construction sites are frequently fast-changing, the process of hazard assessment must be ongoing to accommodate the dynamic environment. Once hazards are identified, the next task is to assess the potential or risk involved in each. For each hazard identified, ask: • What can go wrong? • What are the consequences? For each potential hazard it is important to identify resources necessary for an appropriate emergency response. For most events in construction, a simple analysis based on the experience of the people involved on the project is likely sufficient.

Assessment of resources It is important to identify which resources are available and have contingency plans in place to make up for any deficiencies. The most important resource on most projects will be a provincial rescue system like 1122. It is essential to verify that rescue system is in effect in the area. Most cities of Punjab have a 1122 system in place, but it is important to know the facilities or limitations available in that location. Is a high-reach rescue team available? What is the response time? What must site personnel do in the meantime?

Other on-site resources such as fire extinguishers, spills containment equipment, and first aid kits must be maintained and clearly identified. Construction equipment may be included among potential emergency resources. Personnel, especially on-site medical staff or workers trained in first aid, should be included in the plan. There may be situations where outside resources are so far away that an adequate response is not possible. In these situations, resources may have to be obtained and kept on site. Examples would include fire protection or ambulance/medical resources in remote areas.

Whatever the situation may be, people, equipment, facilities, and materials are needed for emergency response. Where they will come from must be determined in advance. Moreover, the people supplying these resources must be made aware of their role in the plan. Mean of communication An important key to effective emergency response is a communications system that can relay accurate information quickly. To do this, reliable communications equipment must be used, procedures developed, and personnel trained. It is a good idea to have a backup system in place, in case

the system is rendered useless by the emergency. For example, telephone lines may be cut. The type and location of emergency communication systems must be posted on the project. This will include location of telephones, a list of site personnel with cellular phones or two-way radios, and any other equipment available. Emergency phone numbers and the site address/location should be posted beside all site phones. On large sites, the location of emergency phones must be clearly marked. The poster like Emergency Response can be used to record this and other information.

A communication system must be made up of strategically placed equipment and properly defined responsibilities. The emergency response plan posted in a conspicuous place on the project must identify the designated equipment and the people to operate it. Implementation of the plan The task of administering and organizing the plan is vital to its effectiveness. The person who has this task will normally be the person in charge of the emergency response operation or may be assigned to Quality Control Manager (QCM).

It is their task to ensure that everyone clearly understands their roles and responsibilities within the emergency response plan (a chart may be helpful in this regard), that emergency resources, whether people or equipment, are kept at adequate levels in step with the progress of the project. It is very important to review the emergency plan on a regular basis and especially after an emergency has occurred. Changes may be necessary where deficiencies became apparent as the plan went into operation. Basic Principles An emergency can be reported from any source i. e. orker on site, an outside agency, or the public. Remember that circumstances may change

during the course of an emergency. Any procedures you develop must be able to respond to the ongoing situation. The following list covers basic actions to take in an emergency. These steps apply to almost any emergency and should be followed in sequence.

- Stay calm.
- Assess the situation.
- Take command.
- Provide protection.
- Aid and manage.
- Maintain contacts.
- Guide emergency services.

Stay calm – Your example can influence others and thereby aid the emergency response.

**Assess the situation** – Determine what happened and what the emergency is. Look at the big picture. What has happened to whom and what will continue to happen if no action is taken? Try to identify the cause that must be controlled to eliminate immediate, ongoing, or further danger.

**Take command** – The most senior person on the scene should take charge and call, or delegate someone to call, emergency services and explain the situation. Assign tasks for controlling the emergency. This action also helps to maintain order and prevent panic.

**Provide protection** – Eliminate further losses and safeguard the area. Control the energy source causing the emergency. Protect victims, equipment, materials, environment, and accident scene from continuing damage or further hazards. Divert traffic, suppress fire, prevent objects from falling, shut down equipment or utilities, and take other necessary measures. Preserve the accident scene; only disturb what is essential to maintain life or relieve human suffering and prevent immediate or further losses.

**Aid and manage** – Provide first aid or help those already doing so. Manage personnel at the scene.

Organize the workforce for both a headcount and emergency assignments. Direct all workers to a safe location or command post. This makes it easier to identify the missing, control panic, and assign people to emergency duties. Dispatch personnel to guide emergency services on arrival. Maintain contact – Keep emergency services informed of situation. Contact utilities such as SNGPL, SSGPL, Electric Supply etc. where required. Alert management and keep them informed. Exercise increasing control over the emergency until immediate hazards are controlled or eliminated and causes can be identified.

Guide Emergency Services – Meet services on site. Lead them to emergency scene. Explain ongoing and potential hazards and cause(s), if known. Sharing the Procedure To be effective, an Emergency Response Procedure must be clearly communicated to all site personnel. The following activities should be considered:

- Share the procedure with new site subcontractors and new workers to ensure that it covers their activities adequately.
- Share the procedure with suppliers to ensure that it covers any hazards that the storage or delivery of their materials might create. Share new work areas in operating plants with owner/client to ensure that new hazards are identified and covered in the procedure.
- Share the procedure with the Joint Health and Safety Committee or Health and Safety Representative on a regular basis to address new hazards or significant changes in site conditions.
- Place the procedure in a conspicuous location. The Emergency Response Procedure for a construction project must continually undergo review and revision to meet changing conditions.

Post Emergency Consideration

The recovery process, or what happens after the emergency response has been completed, is a critical step in the plan. Many emergency tasks may be

handled by people who are not accustomed to dealing with emergencies. People may have seen their work partners and friends badly injured and suffering great pain. Once the emergency is over, the attitude should not be “ Okay, let’s get back to work” or “ Let’s go home. ” Some of the people involved may need assistance in order to recover. In some cases professional counselling may be needed.

As part of site emergency planning, construction companies should have measures in place to deal with post-traumatic stress. Local hospitals, ambulance services, and medical practitioners may be able to help. Debriefing is necessary to review how well the plan worked in the emergency and to correct any deficiencies that were identified. Debriefing is critical to the success of future emergency response planning. Conclusion Slow response, lack of resources, or the absence of trained personnel will lead to chaos in an emergency.

To minimize human suffering and financial losses, all personnel must know their responsibilities under the emergency response plan. Remember - planning for emergencies should include the following points: 1) hazard identification/assessment 2) emergency resources 3) communication systems 4) administration of the plan 5) emergency response procedure 6) communication of the procedure 7) debriefing and post-traumatic stress procedure. The plan should be used to set emergency procedures, implement and communicate the procedures, and ensure that any required training has been completed.

The plan should also be evaluated regularly to ensure that it conforms to current operations and conditions. In any Emergency Response Procedure, <https://assignbuster.com/guiding-procedures-for-response-to-emergency-situations-on-construction-projects/>



the following steps are basic and essential: • Stay calm. • Assess the situation. • Take command. • Provide protection. • Aid and manage. • Maintain contact. • Guide emergency services. Reader must keep in mind that these are generalized guidelines/procedure and not itself an Emergency Response Plan. The plan should be formulated keeping the specific conditions of the project in mind.

Though these guideline/procedures are prepared for the professional involved in construction project, however these may serve as useful basis for Emergency Managers working in related sectors like manufacturing plants, quarry sites etc. References Write a manuscript (term-paper) on any article related to disaster response and recovery. Last date of submission is 31 March 2012. But please must take into an account the following points, while writing the article. - The term-paper is an important part of the academic. - The article must be in the lines of the course/subject parameter, i. . , “ Disaster Response and Recovery” - The article must be of 7-10 pages. Please don't expand it by giving unnecessary discussion, be brief and to the point. - The article must be supported by at least 12 references at the end of the manuscript which should be arranged in alphabetic order, according to the given style; For Journal Articles; Name of authors, (year), “ Title of the article/paper”, Journal, volume, page, ISSN For Book/Thesis Articles; Name of authors, (year), “ Title of the book/thesis”, (Publishers) For Conference Proceedings;

Name of authors, (year with month), “ Title of the article/paper” (Conference theme) For Web-page Articles; (Complete site detail, with date and time) For citation, please follow the given instructions; For one author, (Ali,

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