

**GENERAL GUIDELINES ON OCCUPATIONAL  
HEALTH AND SAFETY**  
**MEASURES FOR ENVIRONMENTAL PREVENTION AND MITIGATION**

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## EMERGENCY AND CONTINGENCY PLAN

### INTRODUCTION

Preparing for emergency response, steadily increases in importance given the legal economic and environmental implications that can be generated by emergencies. For this reason, being prepared for emergencies is a priority since they may occur at any given time, resulting in devastating consequences.

In this context, the program for emergency and contingency response is presented. This guide establishes the mechanisms and response actions to attend in a timely, efficient and effective manner any partial or total disruption of activities of the project "**WELL DRILLING DEVELOPMENT IN PALAGUA - CAIPAL**" in case that a risk endangers workers or visitors, the operational stability of the different areas, or work fronts and community working in the surrounding area. It also seeks to reduce the environmental impact caused to the affected area.

The activities developed within the project "**WELL DRILLING DEVELOPMENT IN PALAGUA – CAIPAL**" are diverse and vary in time, so the *Emergency Plan* aims to cover most of the possible events, but there are several activities that require adjustments or adaptation to external procedures, thus leaving open the possibility of adopting temporary measures and plans which are developed according to the particular circumstances of each case.

## **APPLICABLE DEFINITIONS**

**Contingency:** An event that has the possibility of occurrence or non-occurrence.

**Emergency:** An event that has been calculated to occur.

**Possibility:** Something that can be done, exists or occurs. It is analyzed from a qualitative point of view, for example: Low, Medium or High.

**Probability:** Eminent occurrence of the event, without specifying the time. The valuation system is taken from the quantification of the level of possibility.

**Incipient Emergency:** An event that can be controlled by a group of people with basic training and available equipment in the area according to risk.

**Internal Emergency:** It is the event that occurs, it compromises much of the institution involved, requiring specialized staff for its attention.

**General Emergency:** This is one event that occurs within the institution and also threatens neighboring institutions.

**Vulnerability:** Weakness due to an event that can cause impairment.

**Risk:** Degree of impairment resulting from an event.

**Emergency Committee:** Administrative Group operating emergencies before, during and after events, responsible for organizing and operating the Emergency Plan.

**Emergency Brigade:** Task Force trained to attend or respond to emergencies.

**Provision for Emergency Care:** Clothing that provides protection to the task force faced with an emergency.

**Emergency Care Equipment:** Equipment designed to be operated by the brigade in accordance to the risk factor.



## **LEGAL FRAMEWORK**

The following regulatory framework is the legal basis on which this Emergency and Contingency Plan was built:

- **Law 9. of 1979:** National Health Code, Articles 80, 84, 96 and 114.
- **Resolution 1016 of 1989:** By which the organization, operation and method of Occupational Health Programs to be developed by employers or masters in the country is regulated.
- **Decree 1295 of 1994:** By which the organization and administration of the General System of Occupational Hazards is determined.
- **Decree 033 of 1998:** National Earthquake Resistance Code.
- **Substantive Labour Code:** Article 205

## **SCOPE**

To develop an Emergency and Contingency Plan for employees, visitors and other persons involved in the project "**WELL DRILLING DEVELOPMENT PALAGUA – CAIPAL** " through document that states and applies knowledge in order to act efficiently and promptly in case of emergency.

This plan is applicable for the development of the different stages of the project looking aiming towards prevention, control and recovery.

## **OBJECTIVES**

### ***Main Objective.***

To identify potential threats or risks that arise from natural or anthropogenic causes, to take measures for prevention and control, through the formation of emergency brigades and by providing logistical resources for emergency care.

### ***Specific Objectives.***

- To establish and generate skills, conditions and procedures that allow users to work (workers, visitors and other persons involved in the project), prevent and protect themselves in case of disaster or collective threats that may jeopardize the integrity of the project, through quick, coordinated and reliable action, tending to move around to

places of lower risk (Evacuation). In case of people being injured, to have an organizational structure that provides adequate health care.

- To plan evacuation drills to assess the reaction of the staff involved in any determined emergency.
- To identify and implement a planning process of prevention, forecasting, mitigation, preparedness, response and recovery in case of disaster.
- To have an adequate organizational structure in case of emergency.
- To determine threats, make vulnerability analysis and define the respective levels of risk.
- To establish a standard evacuation procedure for all project users (operators, contractors, visitors).
- To establish an operational system “ IN SITU “ for the attention of potential injuries, known and applicable during all types of emergencies
- To promote among workers or employees an environment of trust and motivate their participation in the emergency prevention measures and activities.
- Develop worker or employee skills in order to ensure that they can reach safety in an emergency both individually and as a group.

## **RESPONSIBLE PERSONNEL FOR THE IMPLEMENTATION OF THE PROCEDURES**

The UT-IJP, will disclose, monitor and supervise the overall development and implementation of the Emergency and Contingency Plan, and all other related activities that may come up during the operation of the project " **WELL DRILLING DEVELOPMENT PALAGUA – CAIPAL** " It will also provide the necessary infrastructure and resources for the proper implementation of this plan.

Finally all the people working on the project, are responsible for developing and implementing the activities described and disclosed for the control and prevention of emergencies.

## **CONTINGENCY PLAN**

### ***Threat Identification - Risks.***

A threat is a phenomenon or process of natural origin or caused by humans that may endanger a group of people, their things and their environment, when there is no caution.

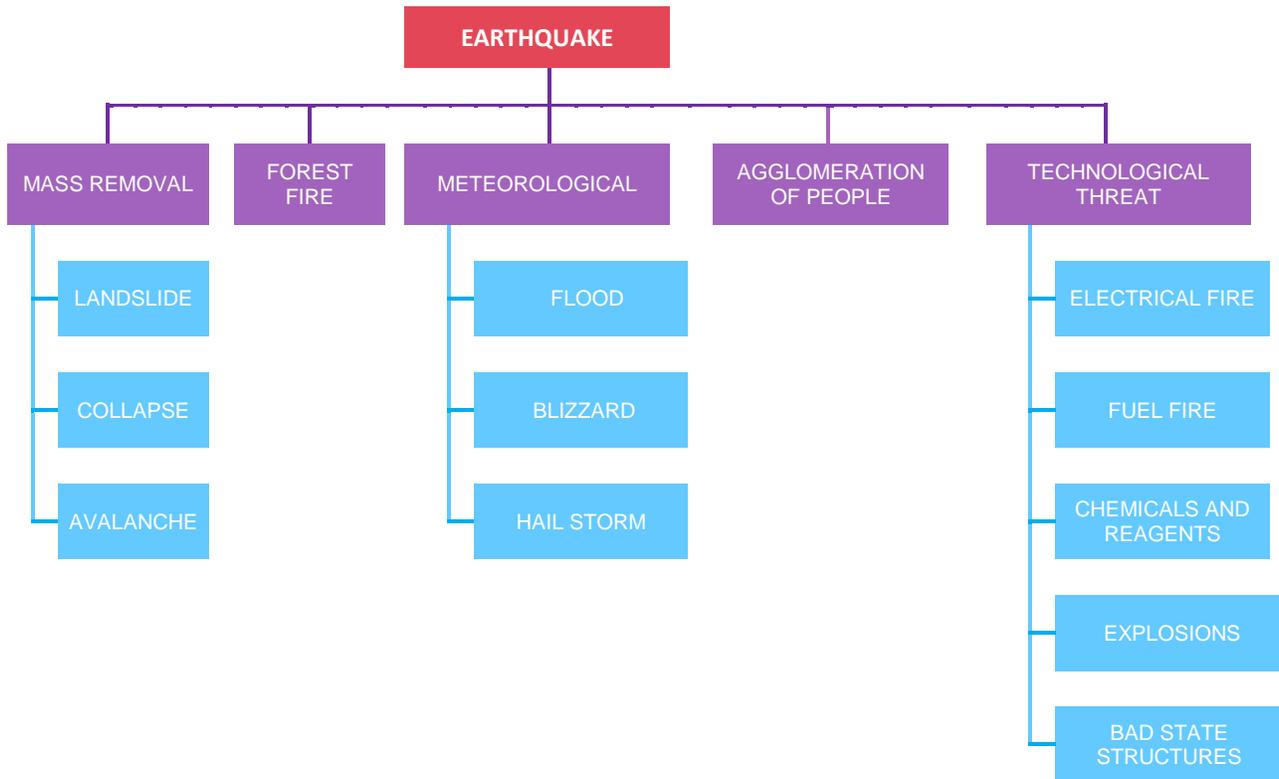
There are different types of threats, some are natural, others are caused by humans, such as those called industrial or technological threats (explosions, fires and toxic spills). Wars and

terrorism are also threats created by humans, these threats may become disasters only when the following three conditions occur simultaneously:

1. People living or working in hazardous locations (near an active volcano, landslide hazard slopes near rivers which can flood, or in the same neighborhood as military, diplomatic or government facilities).
2. There is an extreme event, either natural or caused by human activity.
3. The phenomenon causes considerable damage, particularly in places where preventive measures have not been taken.

According to the above, the following types of threat are defined:

**FIGURE 1. THREAT CONDITIONS**



***Risk and Natural Hazards Analysis in the Project Area***

Natural hazards are defined as the “greater or lesser probability of occurrence of harm or social disaster within an area, due to activity in a natural process”. Threats are “the likelihood of occurrence of a potential natural disaster for a period of time in any given period”.

*Indirect Area of Influence.*

Each of the municipalities involved in the project has different threats and natural hazards according to its geographical location, geology, topography and human factors which help determine the possible threats or risks present in the area.

**Municipality of Puerto Boyacá**

In the Municipality of **Puerto Boyacá** different natural hazards are identified such as anthropic type, which stand out and can be seen in terms of threats and risks.

- **Waterlogging:** Presented in the flat areas of savanna in the floodplains.
- **Floods:** The municipality has sectors that because of their topographic conditions are subject to flooding, specifically in the areas located in the area adjacent to the Magdalena River and Palagua Swamp.
- **Erosion:** Laminar, rill, gully and creeping erosion (slow movement of soil) are presented in the municipality, as well as degradation by soil compacting which is the loss of the natural soil structure and reduction of pore spaces.

For the Puerto Boyacá Municipality, threats of loss of the surface soil horizon are classified as Low, Medium and High.

- ✓ **Low Erosion Threat:** low threat areas correspond to areas of pasture land a little used for cattle raising activities and some areas where despite of the agricultural activity does not present visible signs of erosion.
- ✓ **Medium Erosion Threat:** corresponds to slope areas of high agricultural productivity and therefore highly susceptible to degradation. Some of these sectors already show clear evidence of degradation such as laminar erosion, cattle roads, and terraces. With the current degree of land exploitation and inadequate farming techniques, including the use of mechanical plowing tractors, the little resting time of the land and the logging of native vegetation, it is likely that the current erosion phenomena will spread to manifest itself in detriment of future agricultural production. The area under this type and degree of threat is located in the Magdalena River basin.
- ✓ **High Erosion Threat:** corresponds to slope areas engaged also in agricultural activities but that their productivity given adverse factors such as soil surface or material prone to degradation, shapes and arrangement of the strata and the climate regime among others, cause its exploitation to produce naturally erosive processes. These processes are strengthened by the planting of grasslands and overgrazing of livestock.
- **Soil Movement:** slopes, water saturation in the soil, the large amount of rain and clearing of the original vegetation mainly by the implementation of crops can cause this kind of threat.
- **Forest fire:** the degree in which an area is threatened by fire depends on how exposed an area of trees, shrub or grasslands depends on several factors.

## SISMIC THREAT TO AREAS

Based on technical studies made in the country, this area is known as a geographical place with an estimated medium risk for seismic hazard. This condition defines special characteristics for the municipality in relation to housing, construction and general infrastructure plans and programs.

The installation of infrastructure programs of all types should consider this level of risk as a priority in all structural designs that are carried out in the municipality.

Disasters prevention and care programs carried out in the region should take into account this natural phenomenon and should be included in school and community education plans. Historically, it has been observed that disasters increase when a community is alien to these phenomena.

### ***Vulnerability.***

Vulnerability is measured qualitatively and it represents the effect of threats on people, property or the existing infrastructure in a work area, involving the economic component. With the vulnerability analysis the potential loss or damage to property of the Company or to private property is identified. Replacement costs, temporary replacement, and repair of damage caused by an emergency are taken into account.

**Table 1. VULNERABILITY LEVEL COMPARISON CHART**

TOTAL SCORE	ACTION TO BE TAKEN
0 – 50	The building is highly vulnerable at a functional level, all aspects that may pose as hazards for people to remain in the project at a time of emergency should be reviewed.
51 - 70	The building has a medium-high vulnerability and an incomplete emergency plan, which could only be partially activated in case of an emergency.
70 - 90	The building has a low vulnerability and a barely functional emergency plan that has to be optimized.
91 - 100	The vulnerability is minimal and the plan presents an optimal state of implementation.

**Source:** Work Group

According to the PBOT Basic Land Ordainment Plan, the Municipality of Puerto Boyacá, The company's and surrounding buildings vulnerability located within the Palagua - Caipal Field is relatively low, and require a functional Emergency Plan to be optimized, with the exception of the areas located in areas near the Palagua Swamp which have a flood risk factor.

It also allows for identification of possible disasters situations and their impact on the company’s resources, vulnerability analysis is performed considering the Diagnosis and Prioritization of Risks aspects.

## **NATURAL TECHNOLOGICAL AND ANTHROPOGENIC RISK ASSESSMENT**

### **Evaluation of the various threats.**

#### ***Threat Identification.***

According to the identification of risks to which the project and labor fronts are exposed, existing potential threats were identified in order to assess the probability of their occurrence. The following table presents a summary of the existing potential threats.

**Table 2. EXISTING POTENTIAL THREATS**

<b>POTENTIAL THREATS</b>	<b>POSSIBLE SCENARIOS</b>	<b>FACTORS THAT PROMOTE RISK</b>
<b>ANTHROPIC</b> Civil disorder type Bombing Assault, robbery, theft Kidnapping or an attempt	Work Fronts, Camp Areas	Project Location Social, economic characteristics of the sector Existence of infrastructure and urban settlements that increase the likelihood of an accident or the severity of its consequences. Main street area, Project Security, Social situation in the area.
<b>NATURAL</b> EARTHQUAKE Weather Floods	Work Fronts, Camp Areas	Location of medium - high seismic zone. History of occurrence of climate-related events (blizzards, hail, storms). Infrastructure, characteristics that increase the likelihood of an event or the severity of its consequences.
<b>TECHNOLOGICAL</b> Electrical Fire, Fire Fuels Exhaust Gas Explosion	Work Fronts, Camp Areas	Human error. Misuse of equipment and tools. Poor use of materials and supplies. Improper storage of combustibles. Inadequate signalling. Inadequate maintenance of machinery and tools.

**Source:** Work Group

**Probability of occurrence of the threat**

In order to organize the basic information for the design of the Emergency and Contingency Plan and to set priorities, according to the severity of each threat, they were classified qualitatively, as is shown in the following table.

**Table 3. PROBABILITY OF OCCURRENCE OF THE EMERGENCY**

CATEGORY	PROBABILITY
LOW	Event that has never happened, but there is information that does not preclude its occurrence, it is unlikely to happen. Is characterized by the color green.
MEDIUM	Event has already occurred at the site or in similar conditions and may even occur in these conditions. It is represented by yellow.
HIGH	Instrumented event or with information which makes it evident and detectable. It has happened in previous projects, and is represented by the color red.

**Source:** Field Work

**Assessment of vulnerability conditions.**

The assessment of vulnerability is established by qualitatively measuring the impact of threats on people and its economic implications. The methodology and results on each assessment is presented below.

**Socio-environmental aspects.**

**People´s Vulnerability**

The potential impact of each emergency is analyzed, for example, the possibility of death or injury. The categories in which the severity of the threats is quantified, are described in the following table.

**Table 4. VULNERABILITY OF THE PEOPLE RELATED THREAT / RISK**

CATEGORIES	VULNERABILITY	COLOR
LOW	The event can produce mild lesions in people without disabilities.	GREEN
MEDIUM	The event can produce injuries resulting in temporary incapacity for up to 180 days, which can be extended another 180 days	YELLOW
HIGH	The event can result in serious injury, permanent disability, death, and high economic losses.	RED

**Source:** Law 1295 of 1994

**Vulnerability and Threat Analysis:**

The vulnerability is understood as the predisposition or susceptibility of an item or element to be damaged or lost. Vulnerability analysis is a process which determines the level of exposure and susceptibility to the loss of an element or group of elements to a specific threat. These features can be seen in the following tables.

**Table 5. ANTHROPOGENIC THREATS**

THREAT	LIKELIHOOD	VULNERABILITY	COMMENTS AND RECOMMENDATIONS
CIVIL DISORDER	LOW	LOW	The location of the Project and the current social situation do not present difficult to control crowd movements.
ATTACK WITH EXPLOSIVES	LOW	HIGH	The social situation of our country makes this a potential risk for everyone.
ASSAULT, THEFT, HOLDUP	LOW	HIGH	The location of the project, may provoke these type of actions at different levels of complexity. Therefore be sought to disclose to the general community and staff involved with the project recommendations to address this fact.
KIDNAPPING OR ATTEMPTED KIDNAPPING	LOW	HIGH	While the risk of kidnapping is pending for most people, it is unlikely to encounter a specific situation of this type in the project and work fronts. Although each officer must ensure his or her own safety especially when traveling to and from the workplace. Nevertheless if this situation should occurs, it would cause serious impacts on people who are present at the time.

Source: RPS – Work Group

**Tabla 6. NATURAL HAZARDS**

THREAT	LIKELIHOOD	VULNERABILITY	COMMENTS AND RECOMMENDATIONS
EARTHQUAKE	MEDIA	HIGH	<p>The location of the project, makes this a medium probability risk.</p> <p>The physical and constructive nature of the project estimates considerable consequences in case of earthquake.</p> <p>It is recommended that the of areas of refuge for people in case of an earthquake should be located in the projects and al the staff should be informed about them. bulky or heavy items should be safely stored and secured to prevent their fall, and fuels should be safeguarded.</p>
FLOOD	MEDIA	MEDIA	<p>The project location has a tendency to flood. Isolated events may occur in some areas of the project due particularly heavy rain.</p> <p>It is recommended to have a drainage infrastructure in good condition and water pumps readily available on the work fronts.</p>
STORM, HAIL AND SRTONG WIND	LOW	MEDIA	<p>Under particular weather conditions strong winds storms and even hail, may affect the project, however the nature of the infrastructure used during the project makes potential damage a small possibility in magnitude.</p> <p>Periodic reviews of temporary camps, signs, ceilings, lighting and other items that may fall during high winds are recommended.</p>

Source: RPS – Work Group

**Table 7. ORIGIN OF TECHNOLOGICAL THREATS**

THREAT	LIKELIHOOD	VULNERABILITY	COMMENTS AND RECOMMENDATIONS
Fire Fuels	MEDIA	HIGH	<p>There are several fuel sources in the project. Different types of materials such as combustible materials (solids, liquids and electrical), as well as the presence of heat sources such as sparks, stoves, or welding equipment, among others are considered to be stored.</p> <p>Electrical installations should be periodically checked in order to keep them in good physical condition and performance.</p> <p>Adequate facilities for storage of liquid fuels should be built.</p> <p>All personnel must be trained in fire prevention and control, and these issues should be reviewed periodically.</p> <p>Fire control drills are recommended as part of the planned activities of the Industrial Safety and Occupational Health program.</p>
EXPLOSION	LOW	HIGH	<p>Propane gas cylinders, oxygen, and acetylene, used in machinery, welding and cutting processes is considered to be stored within the project area, in areas of workshops or stores. This consideration allows for a low probability of occurrence of an event as long as the appropriate security standards are implemented.</p> <p>In any of the cases, if an explosion occurs, it has the potential to be a devastating event.</p>
GAS ESCAPE	MEDIA	HIGH	<p>Along the field there is a gas transmission network, which may constitute a potential emergency threat. All staff should be informed of the location of the network, in order to prevent it from being damaged accidentally, and if possible, activities near this area should be avoided as much as possible.</p>

Source: RPS – Work Group

**Risk assessment.**

The risk matrix allows for a global view on the impact of a threat in different areas of the project.

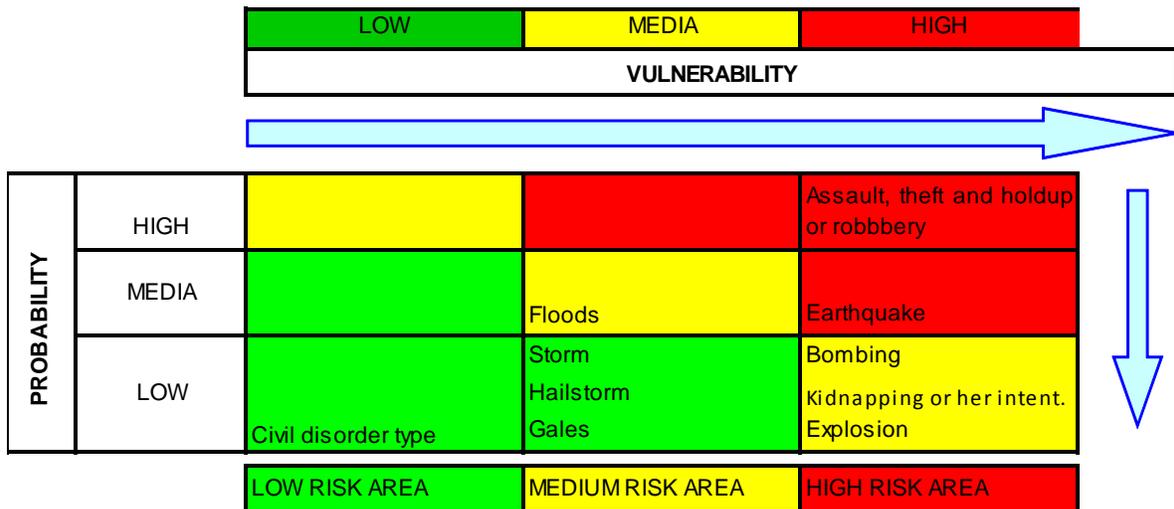
**Table 8. SUMMARY OF EMERGENCY HAZARDS GENERATORS**

<b>ANTHROPOGENIC RISKS</b>			
<b>THREAT</b>	<b>LIKELIHOOD</b>	<b>VULNERABILITY</b>	<b>RISK</b>
CIVIL DISORDER	LOW	LOW	LOW
BOMBING		HIGH	MEDIA
ASSAULT, ROBBBERY. HOLDUP	HIGH		HIGH
KIDNAPPING OR KIDNAPPING ATTEMPT	LOW		MEDIA
<b>NATURAL HAZARDS</b>			
<b>THREAT</b>	<b>LIKELIHOOD</b>	<b>VULNERABILITY</b>	<b>RISK</b>
EARTHQUAKE	MEDIA	HIGH	HIGH
FLOOD		MEDIA	MEDIA
STORM, HAIL STORM AND STRONG WINDS	LOW		LOW
<b>TECHNOLOGICAL THREATS</b>			
<b>THREAT</b>	<b>LIKELIHOOD</b>	<b>VULNERABILITY</b>	<b>RISK</b>
ELECTRICAL FIRE		HIGH	HIGH
FUEL FIRE	MEDIA		HIGH
EXPLOSION	LOW		MEDIA
GAS LEAK	MEDIA		HIGH

**Source:** RPS – Work Group

The following paragraphs summarize the risks that generate emergencies and their assessment according to the risk area:

**Table 9. SUMMARY OF HAZARDS EMERGENCY GENERATORS**



Source: RPS - Group of Working

In conclusion it is possible to state that there are high risks associated with the multiplicity of factors in the area. In the anthropic aspect, assault robbery or holdup are worth noting, in the technological aspect, stands the risk of fire of different types, in the natural aspect, the highest vulnerability regards to the occurrence of an earthquake, which can trigger all types of emergencies. In the medium-risk area, there are floods and explosions, explosions due to project activities, kidnapping or kidnapping attempts and, finally disorders related to civil crowds and those related to weather conditions.

### ***Monitoring and Evaluation***

During the implementation of the emergency program drills should be scheduled to assess the resilience of those who visit the project, those permanent to it, and labor fronts, attention by staff or emergency response brigades, and verification of logistical equipment used for emergency support.

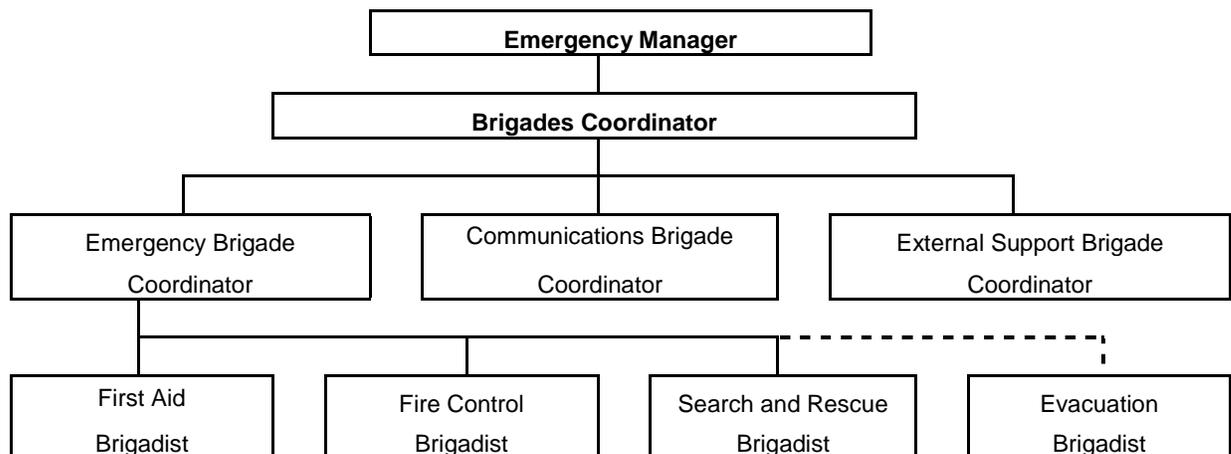
## **REACTION GROUP ORGANIZATION AND OPERATING PROCEDURES**

The immediate and safe response to emergencies depends on efficient care to minimize workers' injuries, damages or losses to equipment, machinery and infrastructure. It also serves as a guide for employees on the procedures of care, attention and direction by an authority enabled to make decisions.

**Organizational structure of the response team.**

Due to the fact that during the implementation of the project activities a variable number of personnel will be working; there is no definite organizational structure of the response team. However, the steps to be undertaken during an emergency are set. Therefore, the possibility that the response in case of an emergency is distributed among the most permanent people within the premises is left open. There would always be a person responsible for these activities. Nevertheless, a basic structure as follows should be taken into account:

**FIGURE 2. ORGANIZATIONAL STRUCTURE OF RESPONSE TEAM**



\* People who make up these groups should be designated and trained promptly

**General Procedure**

Once the emergency response personnel or brigade is designated, training workshops will be specific to each of the brigades formed. These people will be identified and are in turn responsible of replicating, disseminating and monitoring the emergency plan in its various components and, of course, actively participating in case of an emergency. Disclosure of the Emergency Plan should be made to all staff working on the project, as well as identifying the people in the response team and the activities to be followed should take into account the following steps:

**Control actions.**

1. The person who discovers the emergency should report what happened to coworkers who are in the area, the Brigade formed at this point or the nearest camp, if the person is trained he or she should attempt to control it, if it is not so, he or she should evacuate the place.



2. Upon hearing the alarm signal depending on the type of emergency that has occurred, all staff should apply the established and known procedures. The following are the steps that should be considered:

- The Brigade staff of the area where the emergency comes up, should report to the camp and inform the type of event and the site where it is happening. Then, he or she should proceed to control the emergency and evacuate his or her staff if necessary.
- The person who receives the communication in the camp, proceeds to report the event to the Coordinator of Brigades and immediately, if necessary, requests backup from the corresponding external emergency response team (Fire, Red Cross, Police, etc.). Priority is given to keeping telephone lines and roads clear.
- The Brigades Coordinator being informed of the case, makes sure that emergency response personnel is aware of the emergency. He performs the appropriate analysis of the situation and if necessary goes to the site to support the emergency.
- The general emergency groups begin the process of preparation for output on each of their areas and await confirmation of the evacuation command in order to move with the staff.
- Other personnel suspend their activities, initiate the process of preparing for exit and wait for the brigade's command to start the evacuation.
- Upon confirmation of the evacuation, personnel goes along the established route towards the agreed meeting point and remains in place until further notice.
- Once at the check point each brigade or guide counts the people which he is in charged of for the evacuation and informs the General Evacuation Coordinator.
- When the emergency is controlled and it is deemed safe to return to the facilities and work areas, the Emergency Coordinator advises or reports to the staff at the check point.

### **Final check point**

In each work area, there should be a suitable site located to reunite the staff, taking into account the number of evacuees and checking that everyone has been able to get out. That is managed by the emergency coordinator so that in case that there is someone missing, it can be reported in order to start the search procedure.

### **Notifying Rescue Agencies.**

Depending on the extent of the emergency and in case of needing support rescue or first aid agencies close to the area will be notified. This may mean that lives will be saved or serious damage to the facility will be prevented.

For this notification the following steps should be taken into account:



I. Use the emergency telephone list that should remain in a visible place, or be carried by field personnel.

II. Provide clear and specific information as follows:

- Name of the company.
- Name and work position of who makes the call.
- Description of the situation at hand and special requirements if any
- Exact address of the company or the site where the emergency occurs (giving directions to make access to the location easier.)
- Phone number of where to call to confirm the veracity of the claim made
- Any other information requested by the rescue agency.

### **Evacuation of wounded or injured people**

In case that there are injuries during an emergency, the injured person must be taken to the meeting point and, if necessary, the Emergency Coordinator will request the necessary assistance for transportation to a nearby medical center, in order to receive the required aid or assistance.

### **Communication systems.**

The work area should keep available communication equipment (Avantel, PTT radio, cellular) in order to have timely communication both internally and externally. This will be verified. It is necessary to have the list of numbers and references of people who have such equipment, e.g.

- • Radio # 5, Juan Perez, brigade work face 3.
- • Mobile 357-800-800, Mr. Pedro Rodriguez, Camp # 2.

The Emergency Manager will inform the directors of the project regarding the evolution of the event and will make the necessary requests deemed necessary to attend the emergency.

### **Measures to protect property.**

The activities of the project "**WELL DRILLING DEVELOPMENT PALAGUA - – CAIPAL** ", make it of great importance to have an established procedure aiming towards the rapid protection of physical and magnetic documents, securities, money, information, or any other valuable element. Such procedure must be fully known by those in charge of the mentioned elements.

The procedure for this staff is the following:

1. Define specifically (by work post or position) which documents should be protected in the event of an evacuation.
2. Establish the place where they will be safely stored and protected. It should be noted that they might be locked and this place should preferably be fireproof or fire retardant.
3. At the time the alarm sounds and the process of preparing for exit begins, the person in charge should proceed to place the documents in the pre defined location to protect them, or be carried by the person responsible.

#### **Determining when danger has passed.**

The Emergency Coordinator together with rescue agencies, shall determine when the situation has been controlled and will evaluate if it is safe for staff to enter the facility again, or, if they must remain outside.

#### **Reestablishment of activities.**

If there is no risk in re-entering the facility, the Emergency Coordinator advises the staff through the communication system or directly, giving the necessary recommendations for each case.

## **WHAT TO DO IN CASE OF CONTINGENCIES**

Based on the results of the analysis of vulnerability and threats, described in the contingency plan, whose main purpose is to educate and raise awareness among workers of the risks that can be generated on site, and to develop preventive measures that can be put in place to reduce the risk of occurrence.

The plan, describes the preventive measures to control the emergency and the actions that should be taken for each of the identified risks:

#### ***Contingency Plan in Case of Fire Outbreak***

The fire is a phenomenon that occurs when one or more combustible or flammable materials are consumed in an uncontrolled way by fire, causing losses in lives and property. The initial stage of a fire is called fire outbreak, it is at this stage where all people with basic knowledge of this risk, can intervene and prevent the fire.

## Cause

It is crucial to learn that there are four classes of fires (A, B, C, D). Fires can be set off by different factors: chemical, physical, mechanical or electrical. They can occur because of facilities or equipment, or ungrounded electrical connections (wiring), accumulation, storage and improper handling of combustible materials, tank or fuel spillage and for each of these kinds of fires, different substances are used to extinguish them. The equipments containing these substances are called EXTINGUISHERS. Following is a description of the most relevant features of these.

**Extinguishers:** Any of the equipment carrying inside an extinguishing agent that are easily located in an area to protect and transfer to the site of incipient fire.

### Fire Extinguisher Class "A"

It is an extinguisher whose use is most appropriate for the fires of the type "A", i.e. for those who are known as common solid combustibles such as wood, textiles, paper, rubber and certain types of rubbers. The base of this extinguisher's extinguishing agent is water. They operate at constant pressure, with tank pumping or by chemical reaction. This type of fire extinguishers is practically not being manufactured now for various reasons, and one of them is that the multiple-use fire extinguisher can be used for this type of fire.

### Fire Extinguisher Class "B"

This type of extinguisher is the most effective in fighting fires class "B". These are fires that occur in flammable liquids and / or petroleum fuels. The base or the extinguishing agent of this type of fire extinguisher is a mixture of chemical powders, among which we can name: Sodium Bicarbonate, Potassium Bicarbonate (Purple K), Potassium Chloride, Ammonium Monophosphate and Potassium Bicarbonate Urea.

Its operation is through internal pressure given from the time of filling or through external pressure given by a cylinder and the dust ejected. These powders are not toxic nor do they have side effects on the body. However, in high concentrations they can be suffocating.

Depending on the powder packaged it can be used for AB and ABC fires, but should not be used for fires class "D".

### Fire Extinguisher Class "C"

Just as there are for Class "A" and "B" fires "C" also possesses an effective extinguishing agent. In this type of fire the risk in relation to contact with electrical energy must be taken into account; therefore, incorrect use of the fire extinguisher can be harmful.

The base or extinguishing agent used in this extinguisher is Carbon Dioxide (CO<sub>2</sub>), which in their properties highlights the non-electrical conductivity. Its operation is through internal pressure, which is given by the same CO<sub>2</sub> within its container

### **Fire Extinguisher Class "D"**

This extinguisher is necessary and effective in fighting class "D" fire, knowing beforehand that these are the fires that occur in Reactive Materials. The base of the extinguishing agent in this type of extinguisher are:

- G-1 Powder is a screened graphite of organic phosphate that emits gases, which smother and cool, it is used in fires involving Magnesium, Sodium, Lithium, Titanium, Calcium, Aluminum, Steel, etc.
- Powder Metal, is a metallic extract mainly composed of Sodium Chlorate and Tricalcium Phosphate. It is used in fires of Magnesium, Sodium, Potassium and other alloy components
- Non-commercial powders such as talc, graphite powder, dry sand and baking soda

### **Other extinguishing agents**

- Foam is a mass of gas bubbles formed by solution of water and other chemicals.
- Extinguishing PRX. This liquid agent fire suppressor is an aqueous solution of specially formulated non-corrosive, non-toxic, organic salts. Besides its potential use as a fire extinguisher it produces a sealing coat of vapor, providing a cooling effect that benefits the process of declining fuel temperature below auto-ignition point. Its color is red, has a storage duration of 12 years, Freezing Point -12 °C and Boiling Point of 102 °C

### **Preventive measures**

- To identify the chemical properties of the products being stored
- If possible do not store flammable products. If there is no alternative, keep them in closed, containers and ventilated places.
- Do not overload electric lines.
- Avoid connecting more than one appliance in each outlet.
- Redistribute equipment or install additional circuits.
- Avoid smoking in confined areas.
- Do not throw matches, cigarettes into containers of solid waste collection.
- Report the presence of gas or fuel leaks or flammable liquid spills.

- Identify fire exits and nearby phones to call external support groups.
- Adapt specific sites for fuel supply and storage.
- Place fire extinguishers according to the combustible material and in the appropriate places to provide emergency care.

### Action in case of emergency

**Table 10 ACTIONS IN CASE OF FIRE THREAT**

STEP	WHAT TO DO?	HOW TO DO IT?
1	1. Notify or inform the occurrence of event	Whoever finds the event, immediately warns the camp, or Emergency Coordinator in the area.  If you are in a closed site, go outside, leaving the door closed without lock, go to an open area and wait for instructions from emergency personnel. Turn off electrical equipment near to the event
2	2. Remove people to a secure site	Start immediate evacuation, with the support of the brigade. Remove people at least at a distance of 10 m
3	3. If the threat is not controlled, get help from the Firefighters	The brigade attempted to fight the fire with the extinguishers available. If the outbreak of fire is not controlled, immediately notify the firefighters
4	4. Ensure that all staff are in the meeting place	The emergency coordinator, calls the emergency and contingency brigade, who support and direct the evacuation process.
5	5. After inspecting the fire investigation to proceed	The brigades are working with the fire department guide them on the event and the additional risks that can be met. After inspecting and controlling the event, the investigation phase of the accident will begin.

Source: RPS - Working Group

### **After the contingency**

1. Maintain contact with workers from the area where the event took place.
2. Help those who need care.
3. According to the situation, not to return to the site.
4. If the electricity supply was interrupted, do not try to restore it until it is verified that it will not cause any further damage.
5. If anyone was injured, do follow up on attention and recovery.

### **Contingency Plan in Case of Bombing with Explosives in the Area**

#### **Causes**

The country's current social situation potentiates this risk in any place of the city.

#### **Preventive measures**

- Observe and report any suspicious activity to authorities
- Do not touch or move any suspicious material
- Restrict access to the general public
- Evacuate calmly and without creating panic

**Proceedings.**

**Table 11. PROCEDURE IN CASE OF ATTACK WITH EXPLOSIVES IN THE SECTOR**

STEP	WHAT TO DO?	HOW TO DO IT?
1	The staff lies down on the floor	Move towards the outside of buildings, whenever possible. In open areas lie on the ground and seek shelter.
2	Notice to physical security institutions	The Emergency Coordinator communicates with the hotline
3	Identify other possible artifacts and inform the competent authorities	The Emergency Coordinator gives notice to the emergencies and contingencies brigade. The brigade identifies foreign elements, such as packages, vehicles, bicycles, motorcycles, packages, boxes or cans that are suspicious, but not approach or handle them.
4	Provide first aid for injured	The emergency and contingency brigade evaluate the staff members who has suffered injury. Ask for support from ambulances and refer injured workers to the nearest health centers . They fill in an accident at work report for ARP. When private individuals are injured the data of the referral site must be written down.
5	The brigade prepares a census: injured personnel, and damages to equipment, property, and environment.	The emergency and contingency brigade prepared census: injured personnel, equipment and property involved, affected parties, property damage in the environment. The Emergency Management Coordinator reports this in turn to the Building Manager.
6	Ensure that the area is controlled and safe	The administration through the person he delegated decrees the emergency has been controlled, and people return to their normal work activities. The an accident investigation must be carried out.

Source: RPS - Working Group

### After the contingency

- a. Assist if needed.
- b. Maintain contact with police authorities
- c. Evaluate the area before returning to the site
- d. If the electricity supply was interrupted, not try to restore it; without verifying first that it will not cause other damage.
- e. If anyone was injured, do follow up as to their location and the treatment provided

### *Contingency plan in case of earthquakes*

#### Causes

Studies conducted by different institutions at a national, have defined an average level of seismicity for the project area.

#### *Preventive measures*

- Identify the safest places on site where daily activities are carried out.
- In enclosed areas, identify resistant structural columns or sturdy resistant tables.
- In open areas, locate places away from where building or construction debris or stacking materials, walls, poles and wires of high and medium voltage or fallen buildings may be.
- Memorize, identify, and locate evacuation routes and MEETING POINTS.
- Do not place heavy or breakable objects on unsecured shelves or file cabinets
- Check that there are no electrical wires obstructing the exit routes.
- Do not place heavy objects and glass on the top shelves or racks, separate chemicals, fuels, and glassware.
- Check that aqueducts and other facilities if any, and are in good condition: natural gas, electricity and telephone.
- Maintain high traffic places such as stairs, hallways and exits clear of obstructive objects.
- Maintain in good conditions storage systems for chemicals and fuels.

**Proceedings.**

**Table 12. PROCEDURE IN CASE OF EARTHQUAKE**

STEP	WHAT TO DO?	HOW TO DO IT?
1	Remain calm and seek shelter at a secure site	All staff should avoid running when evacuating. Seek refuge near strong structural elements or under strong elements: tables or desks.
2	Evacuate the entire staff to the Meeting Point.	Through coordination of brigade, evacuate the camps and work fronts calmly. Meet at the Meeting Point
3	Evaluate the work area to assess the present physical conditions.	The emergency and contingency brigadists will search for: structural damages, broken or damaged water pipes, gas pipe leaks, damage in electrical installations, lack of stability in debris piles or stored materials. Verify for any earthquake victims.
4	Transfer of injured people to health care centers	If there are victims, provide first aid, contact the emergency pre-defined lines, assist in rescue, and evacuation to hospitals. If the victims are workers, carry out work accident report for the ARP.
5	Assess damage to infrastructure	If gas leaks: implement contingency plan for a gas leak. If structural damage: Do not allow entry of personnel to the affected area. In case of a broken water pipe: close valves where possible to channel water flow, using pumps to drain. In case of damage to electrical installations: interrupt the service and restore it to sites affected if possible. If there is piled debris with stacking instability: remove height.
6	After analyzing the state of the physical structures return to the area.	Brigades reported the situation to the Emergency Coordinator. He in turn relays information to the Building Manager. Based on risk assessment, staff is either authorized or not to enter the facility. If anyone was injured conduct the accident investigation.

Source: RPS - Working Group

### **After the contingency**

- Do not enter the affected area until you understand and meet the security conditions, and receive reports from the area of communications, the Emergency Coordinator.
- If someone was injured, keep track and do follow up.
- Report if there are any damaged or broken gas, water, or sewer pipes, or electrical wiring at risk of electrocution.
- Make necessary repairs within the facility
- Wait for instructions to return to the work area

### ***Contingency Plan in Case of Explosion***

#### *Cause*

The nature and quantity of materials stored, allows establishing a low probability of explosion, as long as they are stored under security regulations.

#### *Preventive measures.*

- a. Do not store flammable products. In an absolutely necessary case, store in closed containers, in a well ventilated place.
- b. Avoid connecting more than one appliance in each outlet. Do not overload power lines.
- c. Avoid connecting more than one appliance in each outlet.
- d. Redistribute equipment or install additional circuits
- e. No smoking in restricted areas
- f. Do not throw lighted matches or cigarettes butts in containers for solid waste collection
- g. Report the presence of gas or fuel leaks or spills of flammable liquids
- h. Identify emergency exits and nearest phones to call external support groups.
- i. Adapt specific sites for fuel storage and supply.
- j. Locate fire extinguishers according to the combustible material at the right places to provide emergency care.

**Proceedings.**

**Table 13. WHAT TO DO IN CASE OF EXPLOSION**

STEP	WHAT TO DO?	HOW TO DO IT?
1	Report the occurrence of event	Whoever discovers the event immediately notifies the Emergency Coordinator or the nearest person in charge.
2	Isolate the area where the event happened	Once the Emergency Coordinator has been informed, he will be communicated by radio with the Response Group Brigade, and they will isolate the area.
3	Inventory of injured people sent to hospital	Having secured the area, if there was a threat of fire, the Response Group puts out the outbreak. If there is fire, they will ask the Fire Department for help. An inventory of the injured people is conducted. If the casualties are sent to hospital, a report of the accident must be made.
4	Report and Resume Normal Activities	Report the end of the incident to the Emergency Coordinator to whom it was initially reported: who in turn, reports to the Building Department and based on risk analysis, the decision to resume normal activities or not is taken. If someone was injured, an accident investigation must be conducted.

Source: Consortium IASCOL-CGS

After the contingency

- Maintain contact with workers in the area where the incident happened.
- Help all those in need.
- Depending on the danger of the situation, do not return to the site
- If the electricity supply was interrupted, do not try to restore it until it is verified that it will not cause any further damage.
- If anyone was injured, keep track and do follow up.

## **EMERGENCY PLAN**

The emergency plan provides preventive measures and training activities for workers such as mechanisms for the motivation of the staff involved with the project on prevention and emergency care. It describes the control activities, understood as measures of reacting to emergency situations.

### ***Basic preventive action plan to prepare for emergencies.***

The purpose is to give all workers a basic knowledge of emergency preparedness, so that they can react appropriately and contribute to preserving their own personal safety as well as that of the public. This plan is based on educational activities and training drills of correct ways to react in any eventuality. The following strategy was developed to achieve the aforementioned plan.

### ***Institutionalization of the Emergency Plan***

Once the document has been revised and approved the Management Department should issue a communication indicating:

- i. That from this day on the Emergency Plan has been adopted.
- ii. That the Emergency Plan is known and can be applied by company employees rather than contractors and/or subcontractors.

### ***Disclosure of the Emergency Plan***

Aimed at workers and visitors emphasizing the actions to follow in case of:

- i. Discover emergency events (fire, gas leak, explosion, bomb attack, earthquake, etc.).
- ii. Activation of emergency alarms in case of accident or sudden illness of a worker.

The surrounding community must also be involved and integrated to participate in prevention activities and emergency care as part of an ongoing educational process developed within the training and outreach activities.

### ***Education and Training Response Team - Emergency and Contingency***

The brigaders and workers will be trained regularly to update their knowledge on management and control of emergencies and contingencies that apply to different groups. This programming will be published periodically in the activities schedule. The training will be based on the following topics:

- i. **First Aid:** Attitude of the volunteer helper, evaluation of the injured, rescue technique: cardio pulmonary resuscitation, altered consciousness, shock, soft tissue injuries, wounds, bleeding, osteo muscular trauma, immobilization, bandaging, and first aid techniques.
- ii. **Prevention, control and firefighting:** chemistry and physics of fires; differences between fire and conflagration, the fire tetrahedron, kinds of fires and fuels, fire extinguishing systems, and the use of fire extinguishers
- iii. **Evacuation and rescue:** effective communication, evacuation, relocation of people, salvage of material belongings and evacuational process, basic transportation of injured personnel, coordination of evacuation process, and, basic rules for evacuation of personnel.
- iv. **Management of hazardous substances:** Layout and knowledge of safety data sheets with hazardous substances management and contingency measures in case of spillage.
- v. **Practice Drills** of possible emergencies in the respective area.

### ***Plan of emergency control actions***

To operate the emergency control actions, it is necessary to establish actions chronologically distributed before, during and after the emergency, the above is necessary because the emergency response requires an organization that allows the use of all available resources efficiently, minimizing personal injury, damage to equipment, or loss of property.

### ***Operating Procedure of the Emergency Brigades***

Emergencies tend to present during the execution of the project will be classified according to gravity, and this will be the starting point for defining the emergencies that will be handled by the Emergency Coordinator.

**Table 14. SEQUENCE OF ACTION IN CASE OF EMERGENCY**

STAGE	RESPONSIBLE	TAKE ACTIONS	OTHER ACTIONS
1	Who discovers an event: * Workers * Visitors * Security Guards * Others (community)	Notify nearest person to assure that it is reported immediately to one of the following: * Emergency Coordinator * Response Group Brigade	* Prioritize the safety of persons * Control the situation if it is possible to do so in a safe manner * Protect equipment and installations from further damage of the event ONLY IF possible and safe.
2	Staff who is informed * Emergency Coordinator * Response Group Brigade * Director of Emergency (Camp)	* Assess the situation. Determine need for evacuation of areas. * Coordinate control of the event actions with the Brigades . * Communicate with Central Office or Unified Command Post. * Request help from any relief corps present in the area	* Make follow-up of the event and the chances of successful control. * Feedback information to the Communications Director (or Project Manager)
3	Emergency Coordinator Response Group Brigades	* Support the intervention of relief corps * Provide first aid to those affected as required. * Evacuate personnel threatened by the event. * Coordinate the transfer of injured who require attention to the health care centers, using vehicles.	* Feedback your information to Communications Director (or Manager) or Project Manager
4	Emergency Coordinator Response Group Brigades	Coordinate actions for the restitution of normality after the emergency. * Reset communications. * Take stock inventory of the event. * Retrieve información. * Retrieve information for the Communications Director . * Restore the basic services: energy, water, gas, etc. * Request staff, substitutes, if required.	Responsibilities of the Communications Director * Submit official version of the events. * Communicate with different stakeholders.

Source: RPS - Work Group

## **EMERGENCY WARNING EQUIPMENT**

The main elements that should form the emergency response team in the field camp and at the work front are presented in the following table.

**Table 15 MINIMUM EQUIPMENT FOR EMERGENCY CARE AT CAMP SITES AND WORK FRONTS**

MINIMUM EQUIPMENT	QUANTITY IN OFFICE AND / OR FIELD	QUANTITY AT WORK FRONT
First Aid Kits	One at the First Aid Area	One per vehicle for non-exclusive use in Emergencies.
Stretchers	One at the First Aid Area	One per Work Area
Directory of work posts and external support agencies	One Published on the Bulletin board	One for each non-exclusive use vehicle for emergencies
First Aid Area	One Located at the Main Office	Not applicable
Fire Extinguishers	According to Risk Analysis at the Camp Site or Office	One per vehicle and / or machine (PQS-multipurpose min. 10 lbs.)
Surveillance Personnel	According to the project's needs	According to the project's needs
Radio or mobile cellphone	One at each Office or Camp Site	One per activity coordinator

**Table 16. MINIMUM EQUIPMENT FOR THE ATTENTION OF EMERGENCIES AT OFFICES AND/OR CAMP SITES**

MINIMUM EQUIPMENT	QUANTITY OF EACH ONE AT CAMPSITE AND / OR OFFICE	FEATURES OR CHARACTERISTICS
First Aid Kits	One ( 1 )	Clean and sterile gauze, cloth tape, tongue depressors, latex gloves, elastic bandage, povidone, (iodine solution), saline solution, thermometer, antiseptic alcohol, antiseptic soap, (disinfectant), band-aids. Elements for restraining arm and leg injuries.
Gurneys	One ( 1 )	One (1) portable stretcher.

**Source:** RPS – Work Group

## SUPPORT AGENCIES

List of centers and relief agencies that provide support in emergency care: clinical and hospital centers, and government entities, rescue and help corps.

### SUPPORT INSTITUTIONS DIRECTORY

**Table 17. EMERGENCY TELEPHONE FIXED LINES MOBILE AND AVANTEL**

NAME	NUMBER	COVERAGE
Disaster Warning	111	National
Police	112 ; *118 Tigo	National
Time	117	National
Fire	119 ; *115-120 Tigo	National
District Attorney	122	National
Single National Emergency Number	123 *128 Tigo	National
Health Emergency Services (Ambulance)	125	National
Highway Patrol	126 - #767 (*SOS)	National
Transit	127	National
Red Cross	132	National
Ambulance	137	National
Civil Defence	144	National
Emergency Assistance Military Forces	146	National
Gaula	147	National
Army	152	National
DAS	153	National
CAI	156	National
Dijin	157	National
Gaula Anti-Kidnapping	165	National
Narcotics	167	National

**SOURCE:** RPS –Work Group

## EVACUATION PLAN

Objective.

Protect the life and physical integrity of workers and visitors who are in the offices, camps or working areas at the front at the time of an emergency, moving them to safety with the lowest risk possible

***Responsibilities.***



***Executive Level.***

Work Management: their responsibility is to maintain this evacuation plan in permanent operational conditions.

***Level Coordinator and Emergency Response Teams***

It is for workers in the Emergency Response Group (evacuation and rescue, first aid, prevention of fire outbreaks), present in the project and at work fronts: their responsibility is to implement the necessary actions for carrying out the evacuation procedures in order to insure the safety of the people threatened by the emergency.

Initially, there will be an alarm system consisting of whistles which will be kept by the Emergency Coordinator, brigaders and security personnel; later, there will be a siren warning system.

***Communication equipment***

The communications system consists of:

- i. Mobile phones, Avantel (walkie-takie/mobile combination) and Radios will be kept at the camp’s management office
- ii. PTT radios and mobile cell phones will be available at the work fronts, as well as temporary camps, and other security points.

***Evacuation routes***

All personnel will evacuate the work area and go to the MEETING POINT known to everyone which should be pre - established during the training stage.

The main emergency exit route for the evacuation of the work fronts will be marked with warnings to guide the personal information to the Meeting Point, located at an exterior or safe area.

The Director of emergency will identify and locate the MEETING POINT in the project area or its surroundings. Workers and visitors, shall arrive by the available routes to the previously established Meeting Point.

It must be stated that in certain special cases, the access roads to the work place will be used as emergency routes to evacuate / exit the work area.

**ROLES AND RESPONSIBILITIES OF THE BRIGADERS**



### **Emergency Coordinator**

#### *Functions.*

- The emergency coordinator's main task is to establish, implement and evaluate the Emergency Plan, in coordination with different groups. Manage the resources allocated, following the rules and procedures established by the project.
- He/She oversees the organization and the conditions necessary to ensure the success of the evacuation. You must also ensure compliance with the emergency plan ensuring the administrative technical and logistical resources for its implementation, maintenance and commissioning.
- In an emergency, the Coordinator is the person who will assume the communications' control and management and is therefore responsible for making decisions such as: partial or total evacuation and shut-down activities.

#### **Responsibilities.**

- Give support and back up to the organizational structure of the emergency plan taking leadership of it.
- Participates in the selection process of members of different groups of the Brigade.
- Develops, revises and implements the operational procedures and regulations policy for the conditions of company-specific hazards in their stages of prevention, care and recovery.
- Establishes lines of authority and allocation of responsibilities to ensure compliance with plans and the by laws of the Emergency Brigade.
- Coordinates beforehand with agencies working in emergencies, and in advance establishes procedures to follow if necessary.
- Encourages each member of the Brigade, to cooperate, participate and comply with the provisions of the Emergency Plan and the by laws of the organization as well as training programs and training.
- Evaluates periodically the activities scheduled by the Brigade
- Runs a national emergency drill at least once a year.
- Seeks advice on a permanent basis and provides training to members of the Brigade, in management and disaster prevention.
- Makes the Emergency Plan known to all members of the staff.
- Keeps the group coordinators always informed on changes or security policies adopted by him or by the general management.

- Receives the alarm or communication and activates the Emergency Plan. If the alarm is communicated by a person, inquires with the leader of the respective area as to the type and characteristics of the emergency
- Establishes permanent communication with all area leaders or their alternates, providing the necessary support to control the emergency.
- Makes decisions and takes extraordinary control actions not provided for the emergency cash.

Assesses and communicates the needs of:

- Evacuation
  - Intervention group or domestic support (Brigade)
  - Intervention teams or external support (Fire, Red Cross, Civil Defense, among others.)
  - Return to normal
- Maintain the number of brigaders in accordance with the requirements of coverage for the company besides ensuring that they cover all their work hours as well.
- Receive reports of safety inspections carried out by the control groups and fire prevention, evacuation, rescue, first aid, to give the corresponding processed correction of anomalies.
- Coordinate with the agencies in emergency care, the procedures to be followed in each case.

***Fire control group.***

*Functions.*

It is directly responsible for monitoring under normal conditions equipment fire protection, to ensure adequate operation at the time of an emergency, and to coordinate the necessary resources for the proper functioning of each team.

*Group Leader*

- Plans and maintains the organization of the group.
- Has his staff registered and develops action plans.
- Provides whatever is needed for preparing and training his group.
- Checks that all the equipment is maintained, cared for, and used properly.

*Brigaders*

## **BEFORE THE EMERGENCY**

- Obtain basic knowledge of fire and fire control methods.
- Conduct trainings and practices that enable them to acquire the necessary skills to perform.
- Participate in defining the elements needed to perform their work safely.
- Perform preventive maintenance of equipment.
- Carry out inspections of workplaces, report abnormal conditions and suggest methods of control.
- Train other staff members in aspects of fire prevention and control.
- Know the different fire hazards that are present in their area of responsibility and monitor their control.

## **DURING THE EMERGENCY**

- Respond promptly to any emergency situation that is present on the premises of the company, using equipment available to take care of them.
- Act in coordination with other response teams and follow the instructions given by the group leader and coordinator of the brigade.
- Support the evacuation of the facility and possible rescue of trapped.

## **AFTER THE EMERGENCY**

- Perform debris removal, collect and clean the equipment used in emergency care.
- Assess the procedures performed and, if necessary, suggest any amendments.
- Prepare report on what happened, possible causes, actions, and recommendations for correction.
- Carry out the preparation of the equipment needed to respond to another emergency in the shortest time possible.

### *Responsibilities.*

- Conduct regular inspections of existing fire fighting equipment in their area of responsibility.
- Check the operation of the alarm transmission mechanisms within the company and to support areas from local authorities.

- Oversee the operation of pumps and valves of the hydraulic fire fighting system (if any).
- Make the control of public services in the area of the fire.
- Fire extinguishing or control.
- Conduct research as to the causes of fires.
- Permanent training.
- Prepare and train the staff in use of fire extinguishers.

### ***First Aid Group***

#### *Functions.*

It must ensure the maintenance of first aid equipment and identify the needs of acquiring new equipment to enable the proper care of the wounded, through the brigade coordinator.

#### Group Leader

- Plans and directs the operation of the First Aid group.
- Makes list of officials for each of the areas of the project and submits permanent disabilities or illnesses and constantly updated.
- Provides whatever is necessary for preparing and training the group.
- Checks that equipment is maintained and used properly

### ***Brigaders:***

#### **BEFORE THE EMERGENCY**

- Participate in training and simulations that will enable them to master the knowledge and skills to administer first aid.
- Define the elements and equipment necessary to perform their work.
- Regularly check the provision of first aid kits and the state of the support elements available for the project and keep them in condition to be used at any time.
- They make sure to implement a rapid and appropriate transportation system and verify its operation.
- Perform the location and classification of health facilities in the area of interest according to their distance and level of care



## **DURING THE EMERGENCY**

- Collaborate in the evacuation of staff from any area where they might be
- Move the equipment needed to provide first aid care for injuries.
- They provide first aid.
- Under the supervision of attending physician coordinate and monitor the movement of the injured to health facilities.
- Complete the report of the care given to each one of the victims or injured

## **AFTER THE EMERGENCY**

- Assess the quality and timeliness in providing first aid.
- Make recommendations for the adjustment of procedures or attention plans.
- Inspect, clean and replenish the elements and equipment used for the care of the injured leaving them in proper conditions to be used again.
- Present report to the coordinator of the brigade activities done, caseload, severity, and place shipments for reference and information necessary for the replenishment

### ***Support and Control Group***

#### *Functions.*

- To cordon off the affected area or areas in an emergency.
- Restrict the entry and control the exit of people to the project in coordination with the Brigade Coordinator and / or Emergency Coordinator.
- Prevent acts of theft and/or vandalism with the security groups.
- Immediately notify External Support Groups (Fire, Red Cross, Civil Defense, Police, among others), according to indications given by the Brigade Coordinator and / or team Emergency Coordinator. In case of not having effective communication with the above, the Safety Coordinator should call relief units upon his sole discretion.
- Support the Brigade, during and after the emergency.
- Provide support and guidance to external emergency services upon arrival and enter the company premises.



**ASSESSMENT OF ENVIRONMENTAL IMPACT  
AND INDUSTRIAL SAFETY IN  
DEVELOPMENT WELLS  
PALAGUA – CAIPAL FIELD  
PUERTO BOYACA (BOYACA, COLOMBIA)**



**MEMBERS OF THE EMERGENCY BRIGADE**

BRIGADE COORDINATOR (TO BE ELECTED)

NAME: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FIRE CONTROL GROUP (TO BE ELECTED)

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

FIRST AID GROUP (TO BE ELECTED)

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

EVACUATION GROUP (TO BE ELECTED )

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

GROUP SUPPORT AND CONTROL (TO BE ELECTED)

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____

NAME	_____	NAME	_____
PHONE	_____	PHONE	_____