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AMIRAL PROJECT

EMERGENCY RESPONSE PLAN

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0	IFR	16-Nov-2023	Issue For Review	D.H.CHANG	D.S.LEE	Y.B.IM	

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1 PURPOSE

The purpose of this document is to ensure that all potential emergency situations that might arise during the construction, pre-commissioning, and commissioning of the AMIRAL PROJECT – PKG 4 Project are properly identified, reported, and dealt with in a safe and effective manner.

2 SCOPE

This document shall cover the response and communications system that applies in the event of any emergencies in the Construction area for the AMIRAL – PKG 4 Project.

An emergency is any situation that poses immediate risk to health, life, and property. It may involve a situation or disaster coming from but not limited to fire, gas leak, fatality or serious injury/illness, or serious crime.

3 TERMS AND DEFINITIONS

Emergency Response Plan
contractor personnel shall be familiar with the following:

A. Specific facility emergency response plan.
B. Specific roles/responsibilities (e.g., for supervisors—to provide headcounts).
C. Locations where resources are available.
D. Facility's audio and visual alarms.
E. Evacuation routes and procedures.
F. Assembly areas and shelters."

3.1. EMERGENCY

An event or sequence of events that requires immediate actions to prevent or minimize potential injury to personnel, loss of life, damage to property or environment, and the potential to escalate the condition to an unforeseeable event if special action is not immediately taken.

3.2. EMERGENCY MANAGER (EM)

The Contractor Project Manager who is the overall in-charge to support the Incident Commander during Emergency response

3.3. INCIDENT COMMANDER (IC)

Is the overall in-charge for response to a local emergency (level 1 & 2). He directs responders and medical teams for their specific tasks during emergency response. Except when the emergency is escalated to level 3 at which the AMIRAL PROJECTS Incident Commander/shift superintendent shall take over the command of the response.

3.4. EMERGENCY RESPONSE COORDINATOR

The Emergency Response Coordinator is responsible for coordinating emergency response activities at the site level. He acts as the primary link between the Incident Commander and emergency response teams, ensuring that resources, communication, and logistics are effectively managed.

3.5. EMERGENCY RESPONSE TEAM (ERT)

An emergency Response Team was formed and designated/trained personnel were tasked to act in response to the emergency.

3.6. INCIDENT COMMAND POST (ICP)

Incident Command Post - is a safe location inside the cold zone where the Incident Commander can safely evacuate non-essential personnel, rescue victims, and control the emergency at the scene

3.7. ASSEMBLY POINT COORDINATOR

Designated coordinator assigned in different assembly areas within AMIRAL PROJECT – PKG 4

3.8. SUPPORTING ORGANIZATION

All Saudi Aramco organizations that provide support to AMIRAL PROJECT – PKG 4 and are represented in the call-out list such as AMIRAL PROJECT Fire, Medical, Security, etc

3.9. SITE EMERGENCY RESPONSE TEAM (SERT)

SERT will comprise a group that will direct and support emergency response and will implement on-the-ground emergency response activities.

3.10. EMERGENCY CONTROL CENTER (ECC)

The Project Manager's Office which shall be designated as the Emergency Control Center (ECC) is where Emergency Manager and other designated personnel gather to assist the emergency response by coordinating information, developing strategies, handling logistical support for the response team, and performing other management functions. The centralized ECC allows the Emergency Manager (EM) and staff to deal with incident issues more effectively.
Emergency contractors team and company team will evaluate the situation and work closely to together

4 EMERGENCY PREPAREDNESS

Emergency Preparedness is a plan that is developed in order to handle emergency situations safely. Everything that an individual or a group must do in case of an emergency like fires or explosions, equipment failures, rescue operations, and medical emergencies is covered in this plan. All these types of potential emergencies must be covered in any proper emergency preparedness plan

- Emergency Planning must include:

a. Identification of all types of potential emergencies, disasters, and crises to plan for and develop an appropriate response plan.

b. Definition of Management Roles and Responsibilities to provide continuity, control, and coordinated action during and after an emergency.

c. Availability of Human and Material Resources on-site to efficiently control and conclude each type of emergency identified.

d. Maintaining information and procedures for coordination across organizational lines and integration with higher levels of disaster/crisis management should an emergency escalate beyond the capabilities and resources available on-site

e. Training of Emergency Response Personnel.

f. Frequently testing plans by conducting periodic announced and unannounced drills.

g. Critiquing each Drill with the actual response, revising and updating plans accordingly.

4.1. EMERGENCY RISK AND SCENARIOS

CONTRACTOR Emergency Response AMIRAL Plan shall include Job Specific Credible Scenarios/Work Sheets in line with Saudi Aramco Safety Management Guide Emergency Preparedness Guide Number 08-001-2018. (Refer to attachment 3)

The Contractor shall conduct an emergency drill and develop a credible scenario to ensure adequate emergency preparedness to identify and evaluate the emergency risk.

The Contractor will inform the PMT HSE team of the scenario before drills.

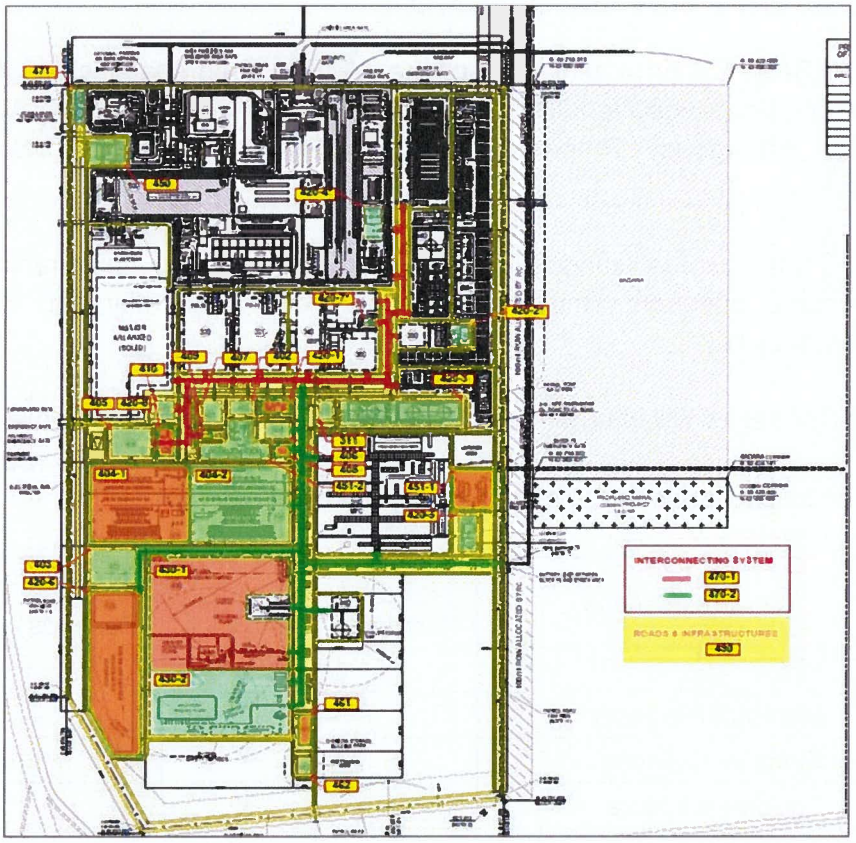
Potential scenarios that may occur are, but not limited to:

Incident Scenario		Risk to			
		Personnel	Property	Business	Environment
1	Fire	✓	✓		✓
2	Medical Emergency	✓			
3	Structure Collapse	✓	✓		
4	Equipment Failure	✓	✓		

5	Confined Space Incidents	✓			
6	High Elevation Rescue	✓			
7	Food Poisoning	✓			
8	Flammable Vapor Release (External)	✓			✓
9	Hazardous Material Release (External)	✓			✓
10	Explosion (External)	✓	✓	✓	✓

4.2. AREA CLASSIFICATION

AMIRAL-PKG 4 PROJECT



4.3. EMERGENCY CATEGORY/IES

Emergency category

Category	Specification
Local Emergency	Emergencies in the Contractor-controlled area including TCF, Laydown area, AG piping (CS Shop), Batching Plant, and any Radiation Activity.

4.4. EMERGENCY CLASSIFICATION (3 Levels)

4.4.1. Level 1 (Minor Incident):

An incident for which the response and recovery is managed within a proponent department's immediate area of responsibility. The response normally involves locally available resources and equipment, may require assistance from neighboring areas and/or limited third party assistance. This type of incident results in limited consequences to company operations, facilities or employees; with no impact to the off-site environment or public. Potential reputational impact is limited to external stakeholders or community. Immediate control of the incident exists, and containment control and relief system(s) are functioning correctly. Examples of such incidents include, but are not limited to:

a) Minor fires within a facility/community.

b) Incidents resulting in injuries to fewer than 3 company employees and/or contractors, with no fatalities.

c) Incident resulting in a partial plant shutdown with limited impact on production and no interruption of supply to the SAG or customers.

d) An unplanned power/utility interruption in a facility/community with an anticipated duration of less than 6 hours.

e) Severe weather causing limited damage to property and/or infrastructure.

f) Interruption to noncritical IT applications and/or loss of a small or remote communications site.

g) An unintentional release of flammable and/or toxic vapor or liquid that does not result in off-site impact, or requires the evacuation of personnel from the facility/site.

h) An inland hydrocarbon spill less than 160 cubic meters (1,000 barrels [BBL]), irrespective of the amount recovered.

4.4.2. Level 2 (Serious Incident):

An incident that may require a wide range of company resources and equipment, additional assistance from government/external agencies, or partial evacuation of the site. This type of incident results in multiple injuries, a single fatality, missing persons, an impact on company operations and/or facilities, or a potential loss of company revenues. Consequences of the incident are currently limited to the site property, but have the potential for migrating off-site and affecting the public health, safety and/or environment for a limited period of time. Potential reputational impact may result from negative domestic mass media commentary. Some containment control(s) and/or relief systems are not operational; however, imminent control of the incident exists. Examples of such incidents include, but are not limited to:

a) Major fire or explosion within a facility/community.

b) Incidents involving company employees and/or contractors that results in a single fatality.

c) Incidents resulting in injuries to 3-4 company employees and/or contractors, or any number of missing/unaccounted for personnel.

d) Incidents that cause an interruption to production or supply to SAG or customers.

e) An unplanned power/utility interruption in a facility/community anticipated for a period of time between 6 and 12 hours.

f) An incident resulting in the shutdown of critical infrastructure such as an IT data center.

g) A cyber security incident that affects a limited number of systems.

h) A credible hostile threat on company assets, communities or employees, including a bomb threat.

i) A large-scale transportation-related incident involving SA interests, such as a company bus transporting personnel to an off-site location.

j) Threat of endemic disease that has resulted in multiple fatalities in the Kingdom.

k) An unintentional release of flammable and/or toxic vapor or liquid that results in significant evacuation of the facility/site; however, there is no current off-site impact.

l) An inland hydrocarbon spill greater than 160 cubic meters (1,000 BBL) but less than 1600 cubic meters (10,000 BBL), irrespective of the amount recovered.

m) External incidents that have a potential impact on SA facilities, communities, project sites or reputation.

n) External incidents that require the response of SA resources to control or mitigate the emergency condition.

4.4.3. Level 3 (Crisis Situation):

An incident that requires multi-organizational response and recovery from emergency teams within the company and, in some cases, SAG/external agencies. This type of incident results in multiple fatalities, a major impact on company operations, sustained loss of company facilities, critical IT, or power systems. Consequences of the incident may extend beyond the site property and can impact public health, safety and/or the environment. The incident may provoke sustained national or international media commentary. Imminent control of the incident is not possible and containment control(s) and/or relief systems are not operational or effective. Examples of such incidents include, but are not limited to:

a) Catastrophic fire or explosion within a facility/community.

b) Incidents involving company employees and/or contractors that result in 2 or more fatalities.

c) Incidents resulting in injuries to 5 or more company employees and/or contractors.

d) Incidents that result in extended production loss or supply loss to the SAG or customers.

e) Major disruption/loss of multiple utility system(s) within a facility/community for an extended period of time (i.e., greater than 12 hours) impacting the ability of critical infrastructure or production support systems to function properly. This may include security or production/operation monitoring systems.

f) Uncontrolled cyber security incident that affects critical IT systems or applications.

g) A hostile act on company assets, communities or employees, including the positive identification of an explosive device.

h) A medical condition/disease that injures or incapacitates a large number of persons

that results in overcapacity of company medical facilities (e.g., an Epidemic-Associated Medical Disaster).

i) A pipeline rupture, or any other unintentional release of flammable and/or toxic vapor or liquid large enough to require significant evacuation of plant/site personnel, closure of any public road or evacuation of any public area. This includes a loss of well control (i.e., well blowout).

j) An inland hydrocarbon spill of 1,600 cubic meters (10,000 BBL) or more, irrespective of the amount recovered.

4.5. CALLOUT LIST

1	Project Manager/Emergency Manager/ECC	Y. H. JUNG	050-217-9065
2	Safety Manager/Incident Commander	D. S. LEE	053-542-7043
3	Construction Manager/Logistics Coordinator	H.C. KIM	053-718-2192
4	Medical Clinic	ABDUL ILLAH	054-172-1937
5	PMT Project Manager/Company Representative	ABDUL RAHAMAN	054-086-2411
6	PMT Safety Coordinator	LOMSO DYASI	055-168-9821
7	Emergency Contact Number (AMIRAL)	HDEC Hotline	053-960-1472

NOTE: The only number that must be called during an emergency is the AMIRAL EMERGENCY NUMBER and no external numbers.

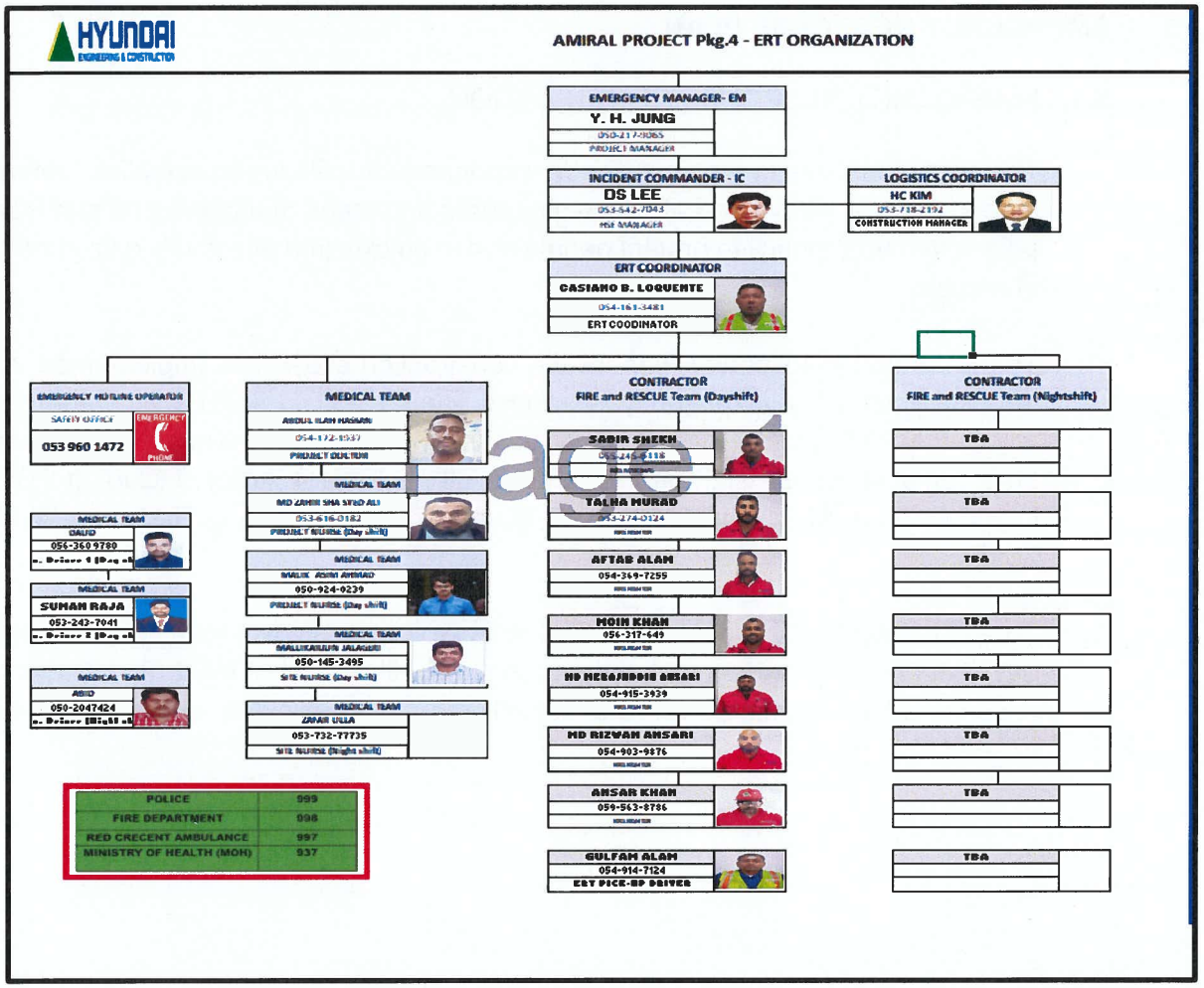
5 EMERGENCY RESPONSE PLAN

5.1. EMERGENCY RESPONSE ORGANIZATION

The core objectives of the emergency response protocols are to establish, before an emergency, simple and effective measures and steps managers and staff can take in that emergency to protect people and to quickly and effectively gain control of a crisis.

The Emergency Response Plan for the construction site will be implemented via the contractor's Site Emergency Response Team (SERT). SERT will comprise a group that will direct emergency response and will implement on-the-ground emergency response activities covered in all package 4 Areas, including TCF, Laydown area AG piping (CS Shop), Batching Plant, and any Radiation Work Zones.

To ensure continuous coverage, SERT will be divided into two teams, one for the day shift and one for the night shift. Each team will consist of eight (8) members, ensuring adequate manpower to effectively manage multiple emergencies if they arise.



5.2. EMERGENCY RESPONSE PERSONNEL ROLES AND RESPONSIBILITIES

5.2.1. Proponent Organization Manager

a) Assigns organization EPC and a backup, who should have a thorough knowledge of the organization's activities and the authority to obtain commitments.

b) Coordinates with the EPC to develop a departmental emergency management organization and establish a response team to operate during emergencies using the structure of an ICS.

c) Ensures that there is a process defined for, and personnel assigned to, an emergency management organization that is tasked to properly plan for, respond to and recover* from emergency events that may have a negative impact on personnel, environment, assets, or company reputation. (*See NOTE in section 1.)

d) Allocates resources required to maintain the departmental emergency management organization.

e) Ensures that the proponent organization's emergency response plan (ERP) is in place and is reviewed/updated at least once a year and that partial updates are made after significant changes in processes or equipment; after drills and incidents; updates to telephone numbers and emergency equipment lists; and to address personnel changes.

f) Participates in a periodic (minimum every 3 years) overall emergency management program review to evaluate the effectiveness of the program.

g) Ensures there are methods for effective internal and external ongoing communications during emergencies.

h) Ensures that personnel involved in the emergency management organization are trained to possess the adequate skills required to fulfill their roles and responsibilities as described in the ERP, this Saudi Aramco (SA) SMG, OE Corporate Process 11.3, Emergency Preparedness, and SMS Element 8.

i) Ensures that nonemergency response personnel receive training in the actions to take during an emergency event.

j) Ensures that emergency exercises and drills are conducted that evaluate the effectiveness of training and adequacy of the ERPs.

5.2.2. Emergency Manager (Project Manager)

The Emergency Manager shall be responsible for the overall direction of the emergency response strategy during any emergency on-site. The Emergency Manager shall appoint the Construction Manager to carry out his duties and responsibilities in his absence.

He shall: (directly and/or through the ERT)

a. Upon being alerted of an Emergency shall activate his office as the Emergency Command Center (ECC).

b. Activate through the Assembly Point Coordinator the local STOP Work alarm as necessary.

c. Coordinate with the Incident Commander the response activities & situation assessment

d. Request other organizations' support if the emergency escalates to level 3 – Crisis situation or as necessary.

e. Single point of Contact when Plant Emergencies require response/evacuation of the Fenced Construction areas.

f. Contact the Incident Commander and establish the extent of the incident, injuries received, and the type of support required;

g. Assess the potential for the incident to escalate and scale response activities;

h. Authorize mobilization of the Contractor Emergency Logistics support;

i. Communicate regularly with the Incident Commander, and agree with timings for exchanges of information;

j. Ensure that the Incident Commander receives support to enable him to effectively respond to the incident;

k. Liaise with the assigned local hospitals where there is a requirement for casualties to be evacuated as per Incident Commander information;

l. Authorize Area and Site Evacuations if required by the Incident Commander;

m. Declare the sounding of the "All Clear" siren for the resumption of work after the incident is declared over as per Fire and Rescue leader information;

n. Carry out a Post-Emergency evaluation

5.2.3. Incident Commander (Safety Manager)

The Incident Commander shall be directly responsible for the Emergency Response and;

a. Upon receiving the emergency report shall immediately call the Project Manager to activate the Emergency Command Center and proceed to the

Incident Area.

b. Instruct all ERT responders to proceed to the incident area.

c. Directs the response team for the required action.

d. Continuously update the ECC with the emergency situation.

e. Provide information and advice concerning the Health, Safety, and Environmental aspects of the emergency and response activities;

f. Inform medical staff of the likelihood of casualties, numbers, and extent of injuries;

g. Liaise with ERT about the requirement for additional rescue and medical resources, if necessary;

h. Co-ordinate the arrival and deployment of ERT and Medical crews;

5.2.4. Logistics Coordinator (Construction Manager)

a. Upon being alerted of an Emergency shall report to the Incident Command Post to provide support to the Incident Commander for logistics requirements

b. Arrange for the provision of additional equipment such as cranes, forklift to support the firefighting and rescue effort;

c. Develop a handling plan for non-injured persons or transport passengers;

d. Arrange transport to the Accommodation with the Administrative Manager (AM), should it be necessary to evacuate the entire site or part thereof;

e. Arrange subsistence for persons involved in the emergency, and provide assistance to and act upon the instruction of the Emergency Manager.

f. Coordinate with the Clinic / First-Aid Center

g. Provide assistance to and act upon the instruction of the Emergency Manager

5.2.5. ERT Responders

a. Upon receiving instruction to respond to an emergency shall proceed to the

incident area via a safe route.

b. Isolate the incident area and receive instructions from the SERT Leader for the required response.

c. Preserve the incident scene for collection of evidence.

d. Conduct the first response to the incident scene (medical, fire, spills, etc.)

e. Combat and contain fire in its initial stage if it is safe to do so until help arrives.

f. Assist medical team in medical emergencies

g. Conduct search and rescue emergency if necessary.

5.2.6. Assembly Point Coordinator (APC)

a. Upon receiving instruction from EC shall activate the Stop Work Alarm by sounding the horn/whistle

b. Keeps a correct list of personnel working under his responsibility at any time of the day, in order to ensure that all workers are evacuated to Emergency Assembly Point.

c. He shall closely monitor the movement of his workers to ensure all are evacuated. A system and procedure shall be outlined on site to completely move all workers to the assembly point in case of emergency.

d. During evacuation he shall wear a visible and reflective vest to efficiently guide his workers to the assembly point. If the Supervisor appoints someone to lead during the evacuation, he shall ensure that a visible vest is available.

e. He shall coordinate with the Incident Commander and report site situation based on his assessment.

f. Headcount shall be conducted by each task Supervisor to ensure all are counted.

g. If any missing person after the headcount, ERT shall be activated for search and rescue.

5.2.7. Discipline Supervisor / Foreman

The Discipline Supervisor/Foreman has the following responsibilities (immediate action to be taken) prior to the arrival of the ERT team at the site.

a. Preserve the incident scene for collection of evidence.
b. Isolate the incident area and receive instructions from the ERT Leader for the required response. Ensure the records of all treated cases are maintained and produced upon demand.
c. Conduct First Aid (if trained and certified) as applicable. Stabilized the victim, if safe to do so until Medical/ERT arrives.
d. Extinguish the incipient stage of fire (small fire) using fire extinguishers. If safe to do so until ERT arrives.
e. Upon receiving instruction to respond to an emergency shall proceed to the incident area via a safe route.

5.2.8. Medical Team

a. Mobilize the team as per Incident Commander instructions, if required
b. Transfer critical cases to the designated medical facilities where they can be managed effectively
c. Ensure the records of all treated cases are maintained and produced upon demand.

5.2.9. All Personnel

In the event of a fire emergency and upon hearing the alarm:

a. Remain calm and DO NOT PANIC
b. Stop all the work, leave the area, and proceed immediately to Assembly Area
c. Shut off power or machines if SAFE to do so
d. Do not re-enter the site to save property
e. Ensure YOU are counted at the ASSEMBLY POINT
f. Return to work ONLY if instructed by EC

6 EMERGENCY RESPONSE PROCEDURE

6.1. EMERGENCY ALARM SYSTEMS

6.1.1. CONTRACTOR ALARM SYSTEM

The current alarm system is for general evacuation and All Clear only. The alarm is raised utilizing Air Horns and Hand Whistles. Other instruction will be done verbally through Megaphones at the assembly area through the Assembly Point Coordinators.

Alarms Type	Horns/Whistle
Stop Work Alarm	5 short (3 seconds) Blast
All Clear Alarm	Continuous blasts for 10 seconds

6.2. LOCAL EMERGENCY

CONTRACTOR will respond and control all the emergencies occurring within the AMIRAL PROJECT – PKG 4

a. When a local emergency situation takes place, the first immediate action shall be to activate the Local Stop Work Alarm to notify personnel working in the affected area to Stop Work, shut off equipment, and proceed to assembly areas.

b. SERT to respond to the incident area.

c. Headcount shall proceed and be reported to the Emergency Manager.

d. Emergency Manager assesses the situation to determine the incident level and decides to continue the response, terminate the emergency, or escalate and request higher management involvement and additional resources from Support Organizations.

6.2.1. ACTIONS TO BE TAKEN WHEN HEARING STOP WORK ALARM

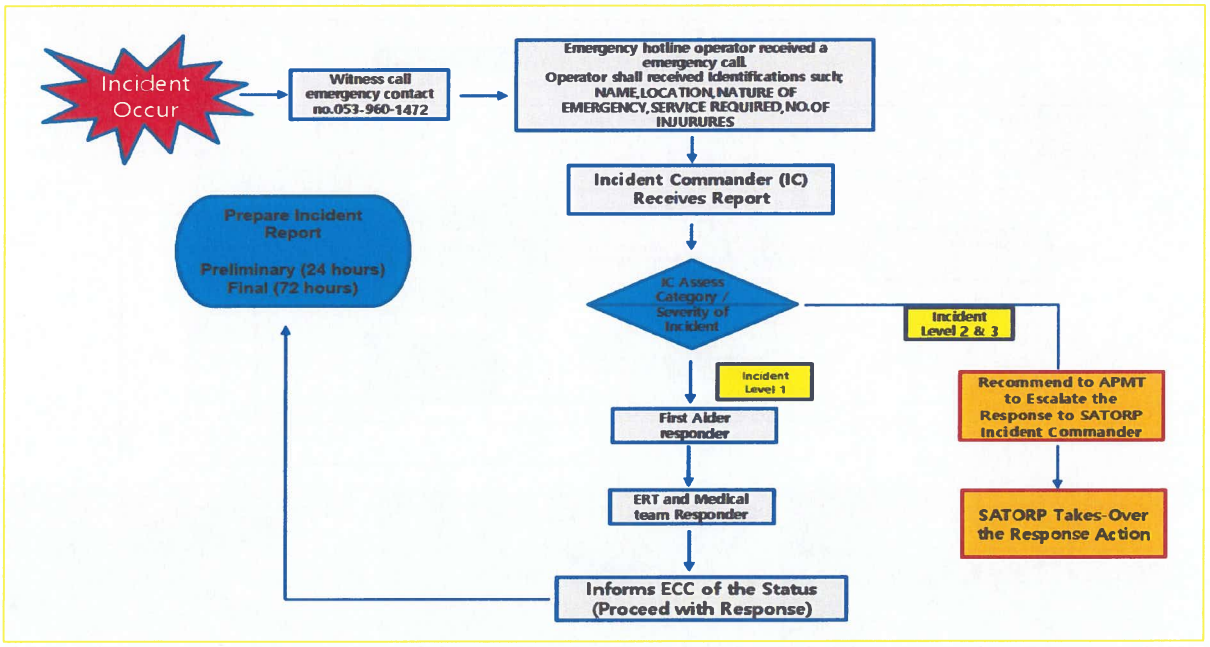
a. Stop work and shut down equipment that could become a source of ignition such as welding machines, generators, and other Internal Combustion Engine powered equipment.

b. All personnel shall report to the assembly area via the safest route, wait for further instruction, and not return to work areas until ALL CLEAR is announced.

c. Pull vehicles to the side of the road, turn off the engine, and park with the keys left in position. No attempt shall be made to restart the engine or move the vehicle until permitted by the EC.

d. Conduct a roll call or headcount to account for every person. In the event a person is missing, his/her name and last known location shall be communicated to the Incident Commander immediately

Emergency Response Flowchart (Local)



6.3. MEDICAL EVACUATION (MEDEVAC)

MEDEVAC is a sum of the medical evacuation activities made in order to prevent

death or to diminish the serious damage that might occur to a person due either to illness or injury, especially those where a risk of life is emphasized.

Assessment of the patient, and first aid treatment at the location of the accident;

6.3.1. Primary Evacuation (PE)

• In the case of an extreme emergency, where the patient is in a life-threatening condition, (i.e. cardiac arrest, severe shock etc.) the patient will be transported immediately to the nearest medical facility.

• Transport the patient to the Site Medical Clinic or the nearest hospital to stabilize his condition;

• The Site Doctor will evaluate the medical needs of each situation. Should there be
any question he is to call COMPANY Emergency Medical "HOLD" for any assistance he may require.

- Refer to figure #1 (Medevac flow chart)

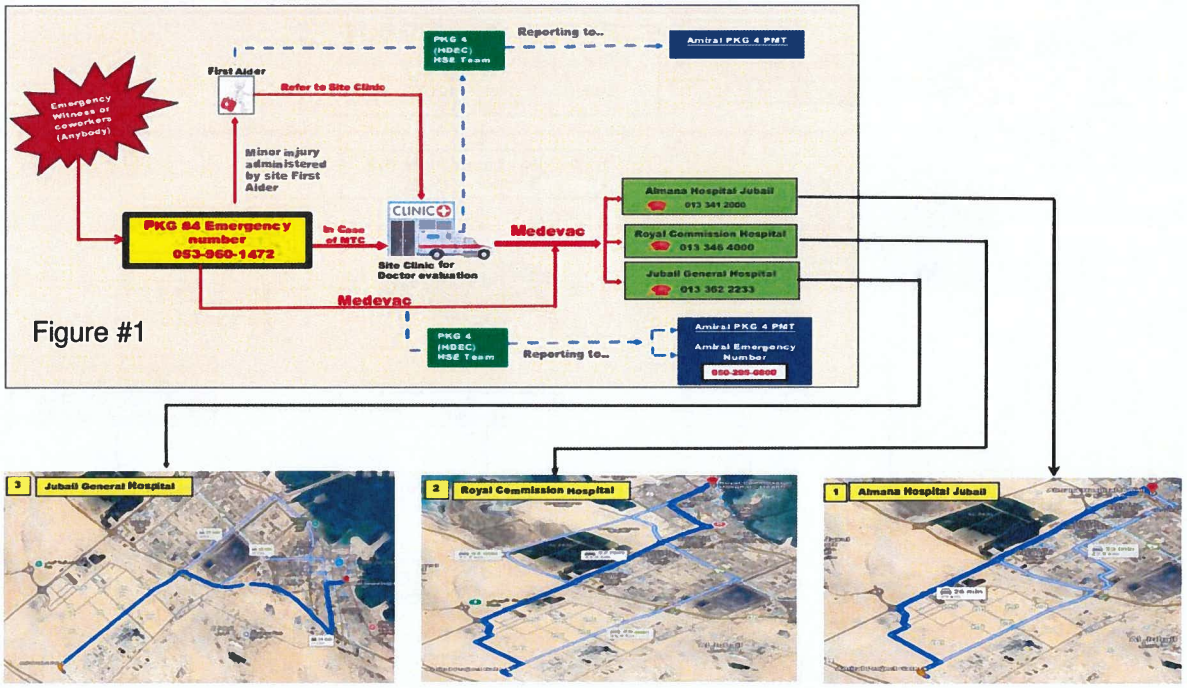


Figure #1

6.3.2. Secondary Evacuation (SE)

• Should the Primary Evacuation hospital be unable to cope, for example in the case of multiple casualties, a Secondary Evacuation hospital will be used.

• Further evacuation, if the case requires it, to the hospital where definitive care will be provided (Secondary Evacuation – SE)

6.3.3. Medical Emergency Classification

• 1st Degree – Life or limb endangered within minutes

• 2nd Degree – Life of limbs endangered within an hour.

• 3rd Degree – Life or limb are not endangered, but the condition is serious enough to require immediate medical aid for the victim.

Contractor to ensure that all organizations use the same method to request an aircraft medical evacuation (MEDEVAC) in line with the G.I 1321.015 (ISSUE DATE 01/03/2017). Non-compliance with this General Instruction will result in a delay of the response time by Johns Hopkins Aramco Healthcare (JHAH) and Aviation Departments.

The contractor is to ensure that all organizations use the same method to request an aircraft medical evacuation (MEDEVAC) in line with the G.I 1321.015 (ISSUE DATE 01/03/2017). Non-compliance with this General Instruction will result in a delay of the response time by Johns Hopkins Aramco Healthcare (JHAH) and Aviation Departments.

6.4. FIRE PREVENTION

Contractors and subcontractors shall be instructed on fire prevention measures at job sites. Adequate firefighting equipment shall be available in all work areas, including warehouses, storage yards, offices, and accommodations. Firefighting equipment locations and evacuation plans shall be clearly posted. Fire escape routes, exits, and alarm points must remain unobstructed and well-maintained at all times.

The Emergency Manager and Incident Commander are responsible for establishing which is detailed in the Project Emergency Response section of this document and in Contractor CSSP (subsection 16.13.1 Fire Prevention). The site must consider the following factors:

- Size and quantity of flammable gasses or liquids
- Areas of loading/ unloading, storage. And use
- Fixed fire protection systems
- Potential fire response staffing
- Local fire response capabilities
- Initial staff training and maintenance of competency
- Fire response equipment required

Response Procedure in case of a Fire

- Call for help/sound an alarm
- Operate fire extinguishers and equipment only if you are trained in their use.
- Ensure that all personnel are evacuated per the local emergency response plan.
- Isolate all fuel sources and/ or threatened facilities and close doors. Do not attempt to extinguish gas fires.
- Do not fight fires beyond the incipient (initial) stage or beyond your level of training.
- Locate the fire fighting equipment and approach the fire from the upwind side.
- Never operate an extinguisher in such a manner that any part of your body is located directly above the fill cap.
- Test the fire extinguisher before attempting to extinguish the fire.
- After the fire is extinguished, stand by to make sure the fire does not start again (reignites).

Provision for response to a small fire is limited to the use of fire extinguishers or small fire hoses with no entry into burning structures or the use of firefighting protective equipment.

7 NOTIFICATION AND REPORTING

The Emergency shall be immediately reported by the witness or through his supervisor via a telephone call to TBA (Emergency Hotline Number)

When transmitting a message by telephone or messenger, ensure that you clearly identify yourself by giving:

a. Your Name
b. Your Badge Number
c. Your exact location
d. Nature of emergency
e. Service required
f. Repeat the message
g. Number of Injured personnel

8 Emergency Response and Preparedness

During nighttime operations, the implementation of the Emergency Response Plan (ERP) is paramount. The CONTRACTOR shall ensure that emergency response resources are available during night work in accordance with the CONTRACTOR ERP.

For the effective implementation of ERP during night work, CONTRACTOR shall ensure:

- All personnel are familiar with the emergency response plan and receive training on their roles and responsibilities during emergencies
- Trained Emergency response team, medical team, and ambulance available during the entire night work period.
- Trained Emergency response and medical team available during the entire night work period.
- Trained Emergency response and medical team available during the entire night work period.

- Trained Emergency response and medical team available during the entire night work period.
- Trained first aiders and adequate number of first aid kits are available in accordance with MMSR.

9 DRILLS

Drills shall be conducted under the supervision of the Contractor Safety Manager, on a quarterly basis to test and simulate in turn:

a. Medical emergency;

b. Fire;

c. Toxic and flammable gas cloud;

d. Communication

Each emergency Response Scenario should be prepared and reviewed by Safety Manager before conducting Emergency Drills. Drills shall be documented by Contractor Safety Department. COMPANY Representative will be informed about the schedule of these drills.

10 DRILL EVALUATION (CRITIQUE MEETING)

A Critique Meeting is a follow-up meeting to the debriefing process for the participants, where they are briefed on the evaluation report and recommendations for changes. It gives participants a chance to provide further feedback and an opportunity to share concerns about necessary improvements, allowing them to comment on the effectiveness of the drill and the evaluation process after having a chance for reflection and thought on the issues.

A Critique Meeting with all parties {i.e., Observers, Participants and Proponent (PMT) observers} will be conducted immediately after the drill.

11 SUPPORT ORGANIZATION

1	AMIRAL/SATORP Fire Station	TBA
2	AMIRAL Fire Captain On Duty	TBA
3	AMIRAL Medical Team	TBA
4	AMIRAL Security Supervisor	TBA
5	Hospital	TBA

12 TRAFFIC CONTROL

a. All vehicle traffic during an emergency shall stop for the emergency response vehicle. Engines must be switched off and not restarted until announced that the emergency is over.

b. Any vehicle parked in the area surrounding the incident scene must not block access to the area. The key must be left in the vehicle.

c. Area Safety Officer and/or Security shall be responsible for control of traffic and to facilitate the smooth entrance of all Emergency Response Vehicles.

d. Ambulance and fire trucks shall be allowed to enter the accident area without any delay.

13 CONTRACTOR SECURITY

During any emergency situation, security personnel shall:

a. Close the gate (to avoid any entry from outside)

b. Ensure that the roads are clear

c. Prevent any person or vehicle not authorized from entering the incident area.

Only authorized Emergency Service, Safety Staff, and Project Staff will be allowed into the site incident area.

14 TRAINING

Personnel involved in the emergency management organization are to be trained and should possess the adequate skills required to fulfill their roles and responsibilities as described in the Emergency Response Plan (ERP).

Mandatory training sessions shall include at least:

a. Contractor Orientation and Induction;

b. Regular meetings to explain and understand the emergency procedures.

c. Critical work training like operations in confined space shall cover basic response plan during an emergency.

d. ERT will all have third party certificates and will be tested by Amiral team before appointed

e. Training sessions for Contractor personnel will be documented by Safety Department. Safety Manager or his deputy shall train the Site Emergency Response Team members on a quarterly basis.

f. Subcontractors Safety Manager shall ensure training sessions for their personnel to familiarize them with the Emergency Response and Evacuation Plan.

g. Emergency Response training (such firefighting and Confined space) was internally conducted by CTR qualified trainer.

h. This training session shall be documented and the minute of meeting will be sent to Contractor Safety Manager.

Note: Induction Training shall be updated regularly to incorporate the changes of the site layout/condition.

15 Emergency vehicle

a. Contractors shall provide or make arrangements to provide a dedicated, full-size emergency vehicle (ambulance) at each work site medical facility (clinic) to transport injured/ill personnel to the nearest hospital. If the work location is off-road, the contractor shall provide a four-wheel drive ambulance.

b. Ambulances shall have purpose markings, be configured safely, and be equipped, at a minimum, with emergency and resuscitation supplies as specified in the MMSR manual.

16 Rescue Plan/s

A rescue plan is a plan outlining specific rescue tactics in case of an emergency. A rescue plan should include prompt actions and warnings to save lives and minimize damage, as well as a plan for transfer of care and a debriefing process. A rescue plan should also consider the personnel, equipment, hazards, and training involved in the rescue.

17 REFERENCE

- Saudi Aramco Safety Management Guide - SMG 08-001-20 18, Emergency Preparedness.
- Saudi Aramco General instruction G.I. 6.001 – Notification Requirements for Incidents
- SA-AMI-000-HDAI-710029 NIGHT WORK PROCEDURE

18 ATTACHMENT

Attachment 1 – List of Emergency Equipment

Attachment 2 – Scenario Analysis Record

Attachment 3 – Contractor Credible Scenario

Attachment 4 – Drill Briefing Log

Attachment 5 – Drill Critique Questionnaire

Attachment 6 – Site Layout (Emergency Assembly Area)

Attachment 7 – TCF Layout (Emergency Assembly Area)

Attachment 8 – BATCHING PLANT Layout (Emergency Assembly Area)

Attachment 9 – Emergency Contact No.

Attachment 10 – Confined Space Rescue plan

Attachment 11 – Working at Height Rescue plan

Attachment 12 – Fall Protection Plan

Attachment 1 – LIST OF EMERGENCY EQUIPMENT

Medical Equipment	Quantity	Location
ERT pick-up vehicle	1	ERT Office
Ambulance	2	Site Clinic
First Aid Kits	14	Site Offices
Rescue Stretcher	5	ER equipment room and Site Clinic
VHF Radio	5	Site Offices
Mobile Stretchers	1	Site Clinic
Long Back Board	TBA	Site Clinic
Short Back Board	TBA	Site Clinic
AED	2	1 in Ambulance / 1 in Site Clinic
Spider Strap	2	ER equipment room
Spine Board	1	ER equipment room
Work at Height Rescue Equipment	**Quantity**	**Location**
Full Body Harness with trauma straps	7	ER equipment room

Declaration Rescue Device	1	ER equipment room
Basket Stretcher	1	ER equipment room
Rescue Telescopic Stick	1	ER equipment room
Spill Response Equipment	Quantity	Location
Plastic Shovel	2	ER equipment room
Mono Goggle	20	ER equipment room
Rotary Pump (Manual)	1	ER equipment room
Gumboots	8	ER equipment room
Disposal Suit	25	ER equipment room
Spill Kits	4	ER equipment room
Fire Fighting Equipment	Quantity	Location
Fire Extinguisher	20	ER equipment room
Fire Hose Reels	45	Site Offices and TCF Offices
Escape Smoke Hood	10	ER equipment room
Fireman suit	7	ER equipment room
Rescue Flashlights	2	ER equipment room
Hammer (10 kg)	1	ER equipment room
Hammer small	2	ER equipment room
Manual Siren	1	ER equipment room

Air Horn	9	ER equipment room
Fire-Water Tanker	1	Package 4
Fire Hose 1.5 size 30 meters each	2	ER equipment room
Fire Hose 2.5 size 30 meters	1	ER equipment room
Fire Nozzle	2	ER equipment room
Diversion Cone	10	ER equipment room
Megaphone Speaker	1	ER equipment room
Whistle	3	ER equipment room
Fire Axe	2	ER equipment room
Confined Space Rescue Equipment	Quantity	Location
Rescue Tripod	2	ER equipment room
SCBA	3	ER equipment room
Manila Rope	2	ER equipment room

Attachment 2 – SCENARIO ANALYSIS RECORD

Part I **Plant/Unit/Equipment:** _____ **Scenario No.:** _____

Type of Emergency:

Flammable Vapor Release☐	Structural Collapse☐	Fire☐
Toxic Vapor Release☐	Search/Rescue☐	Explosion☐
Hazardous Material☐	Confined Space☐	Medical☐
Natural Disaster☐	Equipment Failure☐	Security☐

Other _____

Part II Hazard Identification and Evaluation (sources of information)

Verify *Step 1* of the credible scenario development process has been completed to identify hazards that may impact the organization's assets or personnel. Identify the sources of data used to identify hazards:

Formal hazard review☐
List Types of formal hazards reviews used (PHA, What If, FMEA etc.)_____

Informal hazard reviews/institutional knowledge (employee interview) ☐
Names of Persons Contacted:_____
_____

Historical event records☐
List location and date of previous events captured:_____
_____

Hazardous materials inventories ☐
Attach hazardous materials locations and quantities associated with this scenario marked on plot plans.
Attach safety data sheets (SDS) for hazardous materials involved in this scenario.

Part III Event Identification (hazard identification results)

Conduct and record *Step 2* of the credible scenario development process. An analysis that tracks the hazard from its source to potential areas of damage should be completed to determine how people, environment, assets, or company reputation could be affected. Identify and record the incident:

- immediate cause _____
- initiating event _____
- consequences _____

Record the event here in as much detail as possible: (attach additional sheets if required)

_____
_____
_____
_____
_____
_____

Part IV Identify Credible Incidents (results of hazard identification; scenarios)

Step 3 requires applying the following criteria defining credible scenarios for the event identified:

- *Worst credible incident* – Highest consequence incident identified that is plausible or reasonable. This incident may exceed the resources of the immediate organization and on-site or local response capabilities.
- *Major incident likely to occur* – High consequence incident that may have already occurred within this facility/department or a similar facility. Effective response is critical in preventing escalation of the incident.

Apply the criteria from above to this incident identified during hazard identification and evaluation. This will then identify this incident as one among a listing of "credible incidents" that will be used by the organization in the development of their ERP, pre-incident plans, and subsequent exercise/drill planning.

List the reasons here why this scenario was determined to be credible or was determined to be not credible.

Part V Assess Frequency and Consequences

Step 4 requires that to develop a credible scenario, the emergency planner must evaluate the frequency and potential consequences of the credible incident scenario. Using the risk ranking protocol as identified in the LPD SMG *Qualitative Risk Assessment*, planners will determine the probability of occurrence (frequency) and severity of the consequences for this incident scenario. The scenario will provide specific information on:

- Expected assets/buildings/equipment impacted by the event.
- Effects on personnel, estimated numbers effected (including off-site).
- Expected size and duration of the incident.
- Effects on operations or business.

This information is critical in order to allow response organizations to properly develop pre-incident plans. Also, identify specific information, particular to the scenario location, which may impact the magnitude of the incident.

Record this information here and attach plot plans, drawings, equipment locations etc., in order to clearly identify the anticipated effects of the incident. This information is required for developing pre incident plans.

Part VI Prioritize Credible Scenarios

Step 5 requires assessing the risk (severity and probability of occurrence) and assign a risk ranking to help prioritize the scenario.

Probability (1=least likely; 5=most likely)	Consequence: (1=least severe; 5=most severe)	Ranking (Probability x Consequence)

This step assigns a numerical value to the risk (severity and probability of occurrence) for each identified credible incident from *Step 4*, and prioritizes them for emergency planning purposes. This risk assessment should take into consideration any mitigating features or controls that currently exist (engineering or administrative), the nature and consequences of the effects, and the probability of the incident occurring.

Part VII Documentation

Step 6 requires that this credible scenario be properly documented. Documentation required includes:

- This worksheet to be completed, reviewed and approved.
- List of sources where hazard identification information was obtained (part II).
- Hazard identification results (part III).
- Complete list of scenarios developed and the reasons for including (or excluding) this incident as a credible scenario (part IV).
- The names of personnel that participated in developing this scenario.

Participant Name	Job Title	Badge No.

- All documents utilized or references to each document identifying drawing/document number, title, revision, and date.

Document Title	Number	Location

Reviewed by: (EPC) _____ **Date:** _____

Approved by: (Org. Mgr.) _____ **Date:** _____

Attachment 3 – CONTRACTOR CREDIBLE SCENARIO

Appendix Q-1 Scenario Analysis Worksheet - (IP Evacuation)

Type of Emergency: Evacuation of Injured Person from Site

	Fire		Toxic Vapor release		Confined Space
	Explosion		Hazardous Material Release /Spill		Equipment Failure
	Structural Collapse		Natural Disaster	X	other
	Flammable vapor Release		Search/Rescue		

Description of the Scenario:
(Provide a detailed description of Units /equipment involved as well as possible effect on them, on personnel, on other units/equipment outside the fence, etc.)
• One worker suddenly felt dizziness and start vomiting due to over exposure to direct sunlight. • Supervisor immediately called the assigned first aider to assess the status of the IP. • Supervisor, upon the instruction of the first aider, immediately called the emergency hotline number to report the incident. • The Medical Team, upon arrival at the location, immediately rushed to the incident scene, and started to stabilize the IP, load to the ambulance and transported to the nearest hospital.

Possible Causes:
(List all possible causes: this will help in identifying preventive measures.)
• Over exposure to direct sunlight. • Lack of fluid intake.

Expected size and Duration :
(Provide estimates of the size the area affected, and duration of the Emergency.)
• Minor injuries • Emergency duration: 15 minutes

Effected on Operations:
(List all possible effect of involved operation (including up& downstream) that may be affected.)
• Project construction progress

Location –specific /Equipment –specific Notes:
(Identify specific location and equipment involved and provide information on items that may intensify the situation and information that may need to be known by responders (restricted access: types, quantities, and location of hazardous materials stored in the affected area etc.)
• Temporary facility site preparation work area

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Preventive measures:
(Identify existing preventive measures in place and determine additional measures (engineering controls, etc.) that might be put into effect.)
• Ensure that all workers attended the Heat Stress Training. • Develop heat stress program. • Implement flagging system as per Saudi Aramco CSM I-13 (Heat Stress) • Provide drinking water stations (e.g., coolers with chilled or ice water) for workers and remind them to drink plenty of water even if not thirsty. Minimizing work time in direct sunlight as much as possible. • Not allowing employees to work alone. • Scheduling work/rest rotations for workers according to the current • heat index, which is based on temperature and relative humidity • Provide designated shaded and cool areas for periodic "cool down" breaks and recovery from minor heat-related illness. Where possible, these areas are to be air conditioned. • Provide Emergency Contact Number signage - Tanajib Clinic (TBA) - Al Naeriyah Hospital (TBA)

Comments	Recommendations
	Ensure adherence to the requirement set in Heat Stress Program
	Comply to the ratio of first aider to worker (1:50)

Initial Response	
Required Actions: (Add all required initial response action.) *Actions simultaneous	Call Hotline Number First aid treatment to the IP Response from Medical Team Evacuated the IP to the nearest hospital
Pre incident plan:	
(Response and support organization shall provide required personnel to develop and execute pre incident plan. development shall include identification of all human and materials resources required, as well as those available). And provide recommendation for upgrade as required.	
• Define the roles of all concerned parties in the ERP to provide continuity, control, and coordinated action during and after an emergency. • Conduct Drills/Exercises based on the identified credible scenarios. • State the strategies and tactics to deal with the identified hazards. • Ensure that all the required resources are listed and made available.	

Available Resource	Required Resource
First Aid Kit Dedicated standby vehicle as first aid station	Ensure trained first aider are available at the workplace

Procedure
• In case of Heat Stress related injury Contractor shall immediately called the medical team to respond to the incident scene

- Provide First Aid treatment and Evacuate the casualties from the incident scene based on triage

Affected , Response , and support organization Review:
(Add all organization review the scenario Analysis Worksheet commend for /input on items A-H and for identification of needed response.)
• SAPMT • Contractor Safety Department

Evaluation and Ranking :		
(Assess risk {likelihood and severity of occurrence} and assign a ranking to priorities scenario.)		
Likelihood (5=most likely:1=least likely)	Severity (5=most severe: 1=least severe	Ranking (Likelihood x severity)
3	3	9

Attachment 4 – DRILL DEBRIEFING LOG

DRILL DEBRIEFING LOG		
DRILL: _____ NAME: _____ DATE: ___/___/____		
PROBLEM SUMMARY	RECOMMENDED ACTION	RESPONSIBLE ORGANIZATION

Attachment 5 – DRILL CRITIQUE QUESTIONNAIRE

Please take a few minutes to fill out this form.
Your opinions and suggestions will help us prepare better drills in the future.

1. Did the drill effectively simulate the emergency environment and emergency preparedness/management activities? YES ☐ NO ☐
   If no, briefly explain why: _____
   _____
   _____

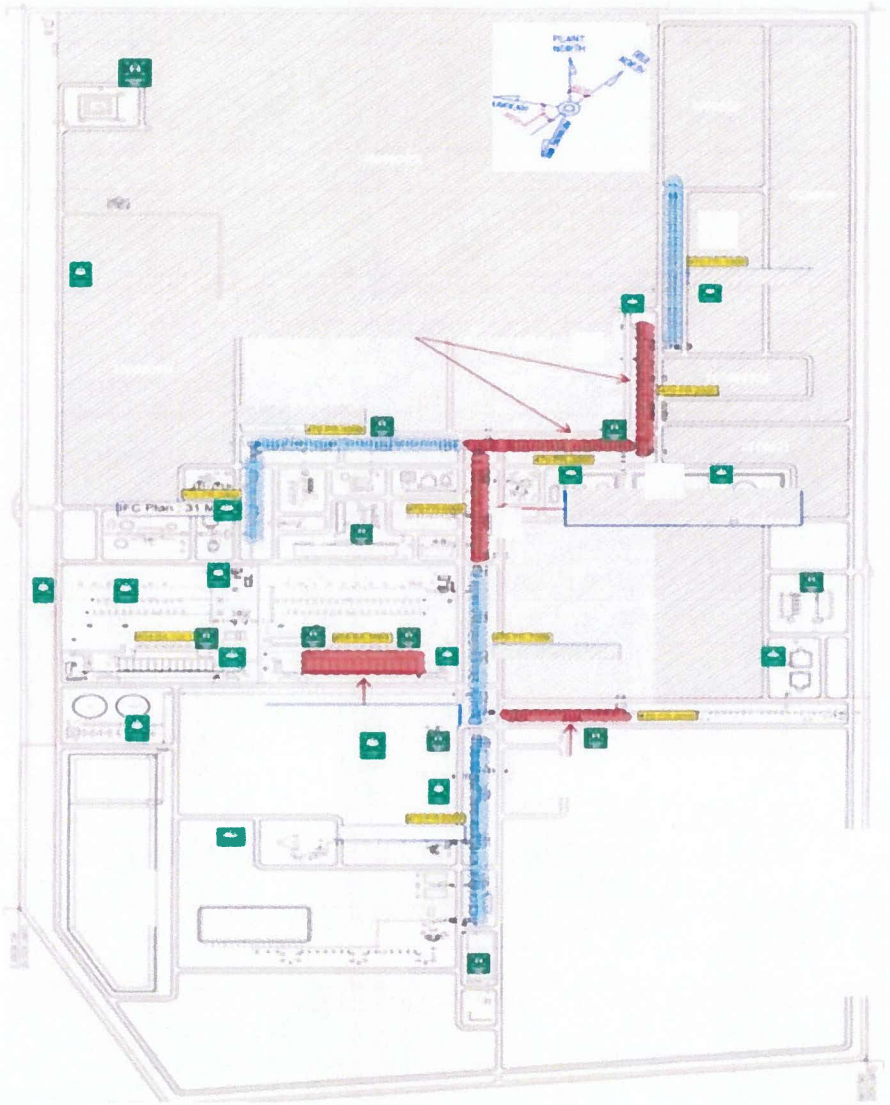
2. Did the problems present in the drill adequately test readiness and capability to implement the emergency response plan? YES ☐ NO ☐
   If no, briefly explain why: _____
   _____
   _____

3. The following problems should be deleted or revised:
   _____
   _____
   _____

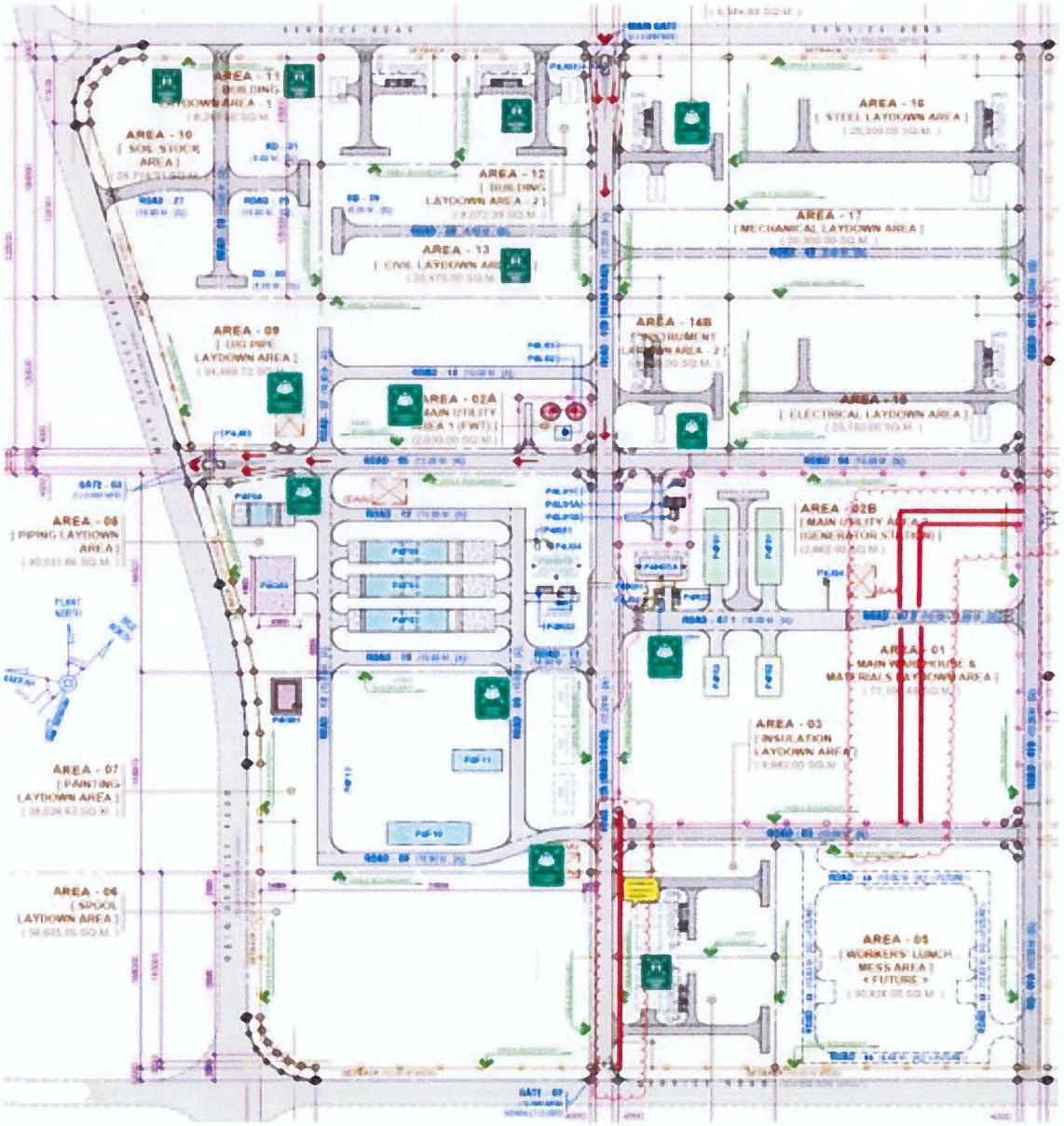
4. The following problems should be added for the next drill:
   _____
   _____
   _____

5. Please add any other comments or criticisms:
   _____
   _____
   _____
   _____

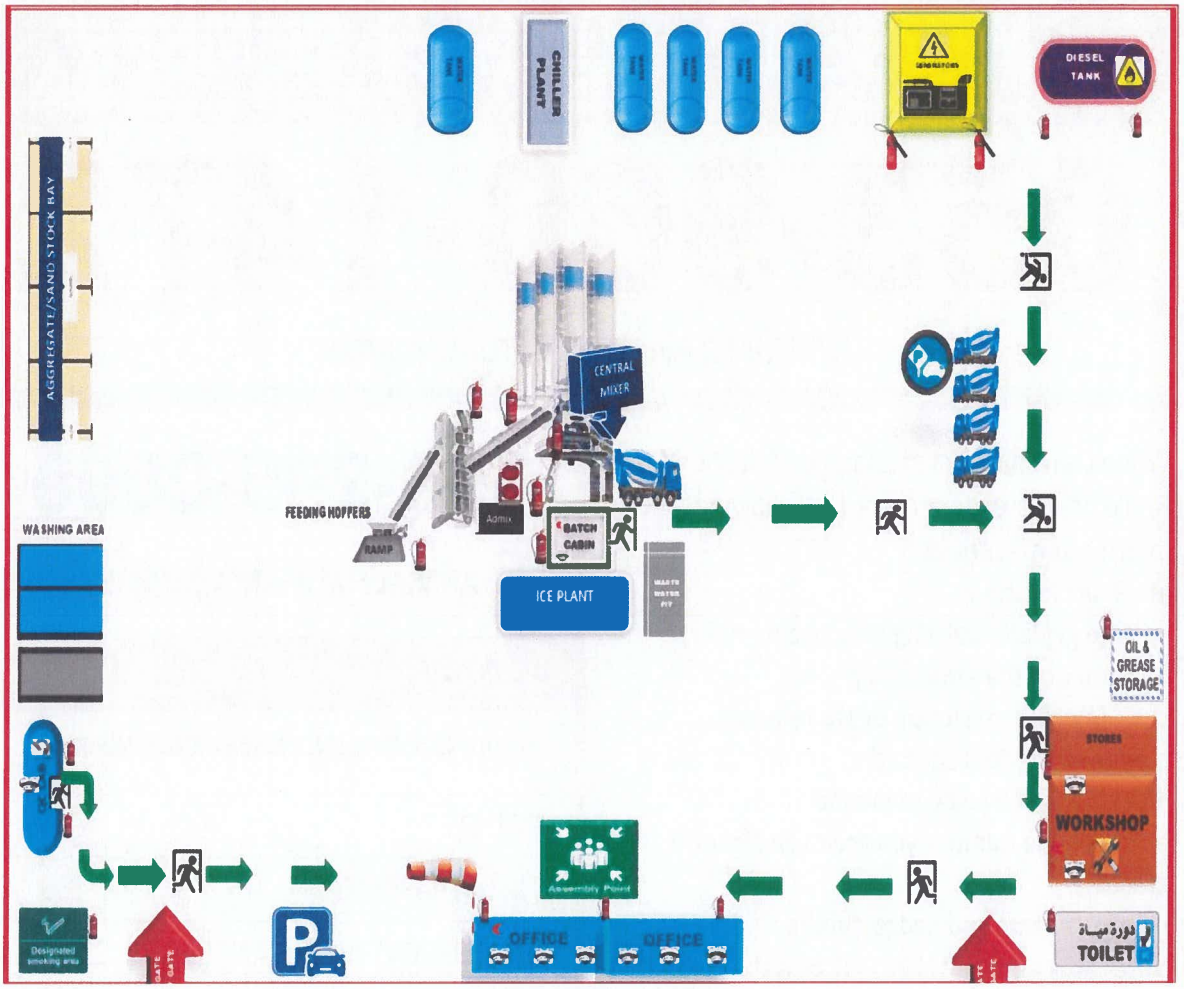
Attachment 6 – SITE LAYOUT (EMERGENCY ASSEMBLY AREA)



Attachment 7 – TCF LAYOUT (EMERGENCY ASSEMBLY AREA)



Attachment 8 – BATCHING PLANT LAYOUT (EMERGENCY ASSEMBLY AREA)



Attachment 9 – Emergency Contact number

EMERGENCY CONTACT NUMBER

053-960-1472

HYUNDAI EMERGENCY HOTLINE NUMBER

When transmitting a message by Telephone, Radio or messenger ensure the following information is provided:

a) Exact location
(e.g. plant, building or house number)
b) Nature of the emergency
(e.g. fire, explosion or gas release)
c) Type of service required
d) Number of injured personnel
e) Telephone number you are calling from, if available
f) Caller's name and badge number

Note: Stay on the TELEPHONE or RADIO until told to hang up

050-295-0800

AMIRAL EMERGENCY NUMBER

SAUDI GOVERNMENT EMERGENCY NUMBER

POLICE	999
FIRE DEPARTMENT	998
RED CRECENT AMBULANCE	997
MINISTRY OF HEALTH (MOH)	937

AMIRAL PROJECT PKG.1 Rev.01 HYUNDAI

Note: Detailed list of Emergency Contact Numbers will be provided and posted in various strategic locations on the project site.

Depending on the level of the emergency event and its nature an Emergency Dispatcher shall notify the appropriate personnel when an emergency protocol is activated by the Incident Commander (HSE Manager) for Levels 1 & 3 and the Emergency Manager (Project Manager) for Level 3 to the notification. No one must call the external numbers (Saudi Government Emergency Numbers) except the AMIRAL Emergency Command Team.

Attachment 10 – Confined Space Entry Plan

HYUNDAI ENGINEERING & CONSTRUCTION	Confined Space Rescue Plan	ساتورب satorp

Reason for entry:

Work activity description: _____

Nature of work to be undertaken: _____

Confined space to be entered:

Description: _____

Location: _____

Potential hazards:

Entry Permit Supervisor Name:

Rescue Personnel:

Rescue team:

Name: ..... Employer: ..... Date: _____

Name: ..... Employer: ..... Date: _____

Name: ..... Employer: ..... Date: _____

Communication Controls:			
Minimum requirements will include:	Yes	No	Provide details as required:
One stand-by person			
Two/more stand-by personnel			
Rescue team			
Communication via voice/direct sight			
Communication via two way radio			
Communication via hand signals			
Communication via rope signal			
Mobile phone available to ring emergency services			
Rescue / Retrieval Considerations:			
Minimum provisions required:	Yes	No	Provide details – Specifically for Complex Scenarios:
Stand-by person to individually handle			
Safety harness/rescue kit in vicinity with competent user(s)			
Specific access platforms/scaffolding erected			
Specific fire fighting provisions			
First aid kit in vicinity			
Other:			
Personal Protective Equipment (PPE) Requirements & Other Precautions			
Minimum PPE / other items required:	Yes	No	Provide details as required:
Supplied air breathing apparatus			
Air purifying respirator			
Particulate mask			
Safety harness and lanyard/lifeline			
Head protection/Foot protection			
Face shield/goggles/safety glasses			
Ear muffs/plugs			
Gloves			
Warning notices / barricades required			
Specific lighting provisions required			
Specific hot work permit required			
Other:			
Attachments (other documents/plans prepared)			

Confined Space Rescue Plan

Methods of Rescue			
Requirements can include:	Yes	No	Provide details as required:
External (Retrieval)			
Internal:			
with SCBA			
without SCBA			
Anchorage:			
Tripod			
Beam			
Stairwell			
Support Strut/Column			
Overhead			

The atmosphere in the space is safe to enter:
☐ Without respiratory protection | ☐ With an air purifying device | ☐ With a supplied-air device

Rescue Equipment requirements			
Requirements can include:	Yes	No	Provide details as required:
Harnesses			
Tripod			
Rescue System			
Main Lines			
Safety Lines			
Carabiners			
Shock absorbers/Lanyards			
Gas Detector			
Other:			

Rescue Equipment inspected by (HDEC ERT LEAD):

Identified rescue equipment inspected by a competent person:
Name: ..... Employer: ..... Date: .....

Name: Employer: Date:

First Aid personnel:

First Aid personnel:
Name: ..... Employer: ..... Date: .....

Name: Employer: Date:

Principal Contractor's Authorization:

This Authorization signifies that the rescue plan component of the Confined Space entry has been completed and that confined space entry/work is authorized to commence in accordance with the Permit Request.

PREPARED BY:	VERIFIED BY: (HDEC ERT LEAD)	VERIFIED BY: (HDEC HSE SUP.)
NAME:	NAME:	NAME:
DATE:	DATE:	DATE:
SIGNATURE:	SIGNATURE:	SIGNATURE:

HYUNDAI ENGINEERING & CONSTRUCTION

Confined Space Rescue Plan

ساتورب satorp

Rescue Team Personnel

I, the undersigned, acknowledge that I understand my role, and the procedures, control measures, and precautions to be observed with the rescue plan for this confined space. I will comply with these requirements at all times and report any new/unforeseen hazard that presents a risk to the safety of all personnel involved with this task.

Sign on				Sign Off		
Print Name (First & Last)	Date	Time	Signature	Date	Time	Signature

Description of Space

Include location of Entry Permit Supervisor and Stand by person:

Diagram of Space

Show locations of all personnel involved in task:

Confined Space Rescue Plan

ON-SITE RESCUE

The On-Site Rescue Plan is part of the Confined Space Entry Permit and is based on the assessment of hazards in the space.

Prior to entry and/or work in the Confined Space:

- The CSES will ensure that the on-site rescue plan for the confined space has been completed and that all the rescue equipment identified in the plan is available to effect a rescue in the confined space.
- The CSES will ensure that an adequate number of appropriately trained personnel (as documented in the rescue plan) are available for immediate implementation of the rescue if so required.
- The CSES will ensure that all personnel in the rescue team, understand and know their roles and responsibilities and have signed the rescue plan before any personnel entering the confined space. Ensure everyone is aware of the evacuation alarm.
- The Stand by person must establish communication with all workers (inside and outside of the confined space) using the means described in the rescue plan.

On entry and while working in the Confined Space:

- The Stand by person who is stationed outside and near the entrance to the confined space as shown in the rescue plan, remains in constant communication with all workers inside the confined space.
- The Stand by person must be notified immediately if an entrant recognizes:
  - Unusual action or behavior
  - An unexpected hazard
  - An unsafe act
  - Detects a condition prohibited by the permit
- Personnel must exit the confined space as quickly as possible, when:
  - An order to evacuate is given by the Entry Permit Supervisor or the Stand by person
  - An entrant recognizes a sign or symptom of exposure
  - An unacceptable condition arises
  - An evacuation alarm is activated

In the event of a confined space rescue:

- The CSES or the Stand-by person **does not** enter the confined space but immediately summons a rescue response from the on-site rescue team. A nominated person must inform emergency services immediately if required. If the injured person can be extracted, assess the person's injuries and provide assistance and first aid as necessary

Attachment 11 – Work at height rescue plan

HYUNDAI ENGINEERING & CONSTRUCTION

AMIRAL PROJECT PKG4

WORKING-AT-HEIGHT-RESCUE-PLAN

ساتورب satorp

1. Communication:

What communication systems will be used between the suspended worker and the supervisor/ rescue team?

Direct voice communication: ☐ Mobile Phone: ☐

Whistle: ☐ Two-way Radios / Headsets: ☐

Other; _____

2. Emergency Contact:

In the event of a fall from height, the supervisor will immediately alert the emergency rescue team (ERT), first aider, and Medical Team.

Name of area: _____ Area Supervisor: _____

First Aid Attendant(s): _____

Fall From Height RESCUE TEAM MEMBERS:

Names:_____

_____

3. EMERGENCY PHONE NUMBERS -

Contractor: _____ Amiral: _____ Civil Defense: _____

4. Safety of Rescuers:

Are ERT trained and competent to use rescue equipment? Yes ☐ No ☐

Are ERT Rescue training records current? Yes ☐ No ☐

Are there a sufficient number of rescuers available? Yes ☐ No ☐

Is rescue equipment appropriate for the nature of work? Yes ☐ No ☐

What obstructions are in the way of reaching the suspended Personnel? (Detail):

_____

_____

_____

Have assessments been made of anchor points, and are they acceptable? Yes ☐ No ☐

Has consideration been given to the method of attaching the casualty? (Detail): Yes ☐ No ☐

_____

_____

_____

5. How will rescuers get to the casualty?

Rescue ladder	☐	Suspended access equipment	☐
Crane manbasket	☐	Permanent Structure ladder	☐
Manlift	☐	Others	☐
Scissor lift	☐	(detail) _____	
Staircase access	☐		

6. What equipment is needed to ensure rescue within 5 minutes, to minimize suspension trauma?

Rescue ladder	☐	Low Height Rescue Kit	☐
Suspension Trauma	☐	Crane man basket	☐
Rescue Kit – Winch	☐	Descent Rescue Kit	☐
Suspended access equipment	☐	Stretcher	☐
Rescue Kit – Haul-up	☐	Elevated Work Platform	☐
Climbing / rope rescue system	☐	Aerial truck	☐

7. If Worker is injured

Can the casualty still be rescued within 5 minutes? Yes ☐ No ☐

Is a qualified first aider who understands suspension trauma present? Yes ☐ No ☐

Who will alert emergency services and the hospital? (Detail):

_____

_____

_____

8. How will others be protected?

Assign someone to direct traffic ☐ Set up barriers ☐

Other;

_____

_____

_____

9. How will the Accident scene be protected?

Prevent further injury or damage	☐	Set up barriers	☐
Preserve wreckage	☐	Take photographs	☐
Notify Employer	☐	Notify SATORP ERT	☐

10. Other Considerations:

Precautions for working alone (Detail):

Unusual features of building/structure (Detail):

Weather Conditions (Detail):

Proximity to emergency services/ hospital (Detail):

Language barriers (agency/contract staff) (Detail):

11. Approval of Work at Height Rescue Plan:

PREPARED BY:	VERIFIED BY: (HDEC ERT LEAD)	VERIFIED BY: (HDEC HSE SUP.)
NAME:	NAME:	NAME:
DATE:	DATE:	DATE:
SIGNATURE:	SIGNATURE:	SIGNATURE:

Attachment 12 – Fall Protection Plan

HYUNDAI ENGINEERING & CONSTRUCTION | AMIRAL PROJECT - PKG # 4 Contract No: 661000283 | satorp

FALL PROTECTION PLAN

Section 1 – Basic Information							
Company:				Date:			
Specific Activity							
Exact Working Location							
Section 2 – Means of Access							
Stair / Ladder		Scaffolding Access		Mobile Elevating Work Platform (Man lift / Scissor Lift)		Others: (Please Specify)	
Section 3 – Personnel							
Training		(Please Specify):					
Section 4 – Fall Protection Method (Including Protection of Falling Objects)							
Fall arrest		Fall restraints		Guardrail System and/or covering of openings		Safety nets/canopy	
The affected area below is barricaded with signage		Restraining rope and/or pouch for materials and tools		Others: (Please Specify)			
Section 5 – Anchorage point							
Lifeline (Horizontal / Vertical)		Connectors		Acceptable permanent structure		Others: (Please Specify)	
Section 6 – Fall Protection Equipment							
Full Body Harness & Shock absorbing Double Leg Lanyard (ANSI Z359.1)		Suspension Trauma Strap		Self retracting lanyard		Others: (Please Specify)	
Section 7 – Rescue and Emergency Equipment							
Rescue Rope and Carabineer		Stretcher		Man lift or Scissor Lift		Crane	
Ladder		Man basket		Manual Winch / Decelerating Device		Others: (Please Specify)	
Section 8 - Emergency Response Procedure							
1. Call the Emergency Hotline Number **(053-960-1472)**							
2. Secure the area or Clear the area							
3. Rescue Methodology **(See specific rescue details at the back)**:							
Self Rescue		Assistant Rescue		Equipment Rescue: Man lift / Scissor Lift		Crane / Man basket	Manual Rescue
4. Emergency Response Team (ERT) handover to Medical Team							
5. Load the injured person to the ambulance (if necessary)							
6. Transport the injured person to the Site Medical Clinic (if Necessary)							

Section 9 – Fall Protection Plan Authorization					
Signatories	**Name**	**Position**	**Badge #**	**Signature**	**Date**
Prepared by HSE Sup.					
Verified by: ERT Lead					
Verified by HDEC HSE Sup.					

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AMIRAL PROJECT - PKG # 4
Contract No: 661000283

IMPORTANT: To avoid suspension trauma, a suspended employee must be rescued as quickly as possible after a fall. The impact will be reduced if the employee can stand in the suspension trauma strap.

RESCUE METHODOLOGY

1. **SELF-RESCUE** – A suspended employee that can reach any structure for self-rescue or provided by Ladder.
   - Keep verbal communication with the employee
   - Employee will climb back up to the nearest structure/platform
   - The Emergency Response Team (ERT) will assist the employee
   - Employee will return to the elevated floor level or climb down to the ground

2. **ASSISTANT RESCUE** – Injured / Unconscious employee at the elevated area which requires fall protection equipment such as rope or winches to hoist up / down to the nearest safe working platform or directly on the ground.

2.1 SUSPENDED EMPLOYEE / WORKER
- Keep verbal communication with the employee
- Maintain verbal communication during the rescue
- Instruct to utilize the suspension trauma strap
- The Emergency Response Team (ERT) will arrange the rescue rope/winch and install it in the firm structure
- Connect the rope or winch hook from the D-ring of the employee's full-body harness. (Ensure that there is a positive connection / secure connection between the rope and the D ring)
- The Emergency Response Team (ERT) will raise or lower the employee to the nearest safe working platform or directly on the ground

2.2 UNCONSCIOUS AND / OR INJURED EMPLOYEE / WORKERS
- The Emergency Response Team (ERT) will bring the rescue basket stretcher to the elevated area
- The Emergency Response Team (ERT) will load the injured person onto the rescue stretcher
- Secure the injured person in the rescue basket stretcher
- Attached the sling of the rescue stretcher to the winch / decelerating device.
- Provide tag lines to the stretcher to control the rescue operation
- Rig down the rescue stretcher to the directly to the ground.

3. **EQUIPMENT RESCUE** – Use available equipment to lower the Injured / Suspended Person (IP).

3.1 **USE OF MANLIFT / SCISSOR LIFT**

3.1.1 a – IP ELEVATED WORKING PLATFORM
- Emergency Response Team (ERT) will bring the rescue stretcher at the elevated area
- Emergency Response Team (ERT) will load the injured person to the rescue stretcher
- Secure the injured person in the rescue stretcher
- Load the stretcher to the man lift / scissor lift basket and secure it by rope
- Maneuver the man lift/scissor lift to bring down the injured person

3.1.1 b – IP / UNCONCIOUS INSIDE MEWP PLATFORM
- Maintain verbal communication with the ground operator/basket operator during the rescue.
- Maneuver the man lift / scissor lift to bring down the injured person.

3.1.2 –IP SUSPENDED IN STEEL STRUCTURE / PERMANENT STRUCTURE
- Keep verbal communication with the employee
- Maintain verbal communication during the rescue
- Instruct to utilize the suspension trauma strap
- Maneuver the man lift to the location of the suspended employee and secure him inside the man lift.

3.2 **USE OF CRANE**

3.2.1 – IP ELEVATED WORKING PLATFORM
- Emergency Response Team (ERT) will bring the rescue stretcher at the elevated area
- Emergency Response Team (ERT) will load the injured person to the rescue stretcher
- Secure the injured person in the rescue basket stretcher
- Attached is the sling to the rescue basket stretcher lifting eye
- Provide tag lines to the basket stretcher to control the rigging rescue operation
- Rig down the rescue stretcher to the safe location

3.3 **CRANE AND MANBASKET (High Elevated Rescue (suspended or in the platform) which cannot be reached by Man lift)**
- Keep verbal communication with the employee.
- Maintain verbal communication during the rescue.
- Instruct to utilize the suspension trauma strap (If Suspended)
- ERT Team with SA certified Rigger will ride the man basket and to reach the suspended worker
- ERT Team will take the suspended/injured worker and secure him inside the man basket for rescue.

4. **MANUAL RESCUE** – Rescue at the elevated area with an available staircase and < 3m elevated working platform

4.1 WITH STAIRCASE
- The Emergency Response Team (ERT) will bring the rescue stretcher to the elevated area
- The Emergency Response Team (ERT) will load the injured person onto the rescue stretcher
- Secure the injured person in the rescue stretcher
- Lift the rescue stretcher with the injured person manually
- Bring down the rescue stretcher with the injured person using the staircase

4.2 < 3M WORKING PLATFORM
- The Emergency Response Team (ERT) will bring the rescue stretcher to the elevated area
- The Emergency Response Team (ERT) will load the injured person onto the rescue stretcher
- Secure the injured person in the rescue stretcher
- Lift manually the rescue stretcher with the injured person
- The ERT team will manually transfer the IP to the ERT member positioned on the ground.

Note: The Emergency Response Team (ERT) will handle and manage the rescue methodology applicable to site conditions.