Environmental and Social Compliance Audit Report (Appendixes)

Project No.: 52229-001
January 2019

AFG: Kandahar Solar Power Project

Prepared by Dynamic Vision for 77 Construction Contracting and Trading Company and the Asian Development Bank.

Appendix 1.1. October Safety Meeting Notes

AS PURCHASER: DA AFGHANISTAN BRESHNA SHERKAT

77 Construction Company

Kabul Office
Address : Industrial State(Park Hay Sanaati) Street No 5
Kabul / AFGHANISTAN
Email : info@77construction.com

AS SELLER: 77 CONSTRUCTION COMPANY

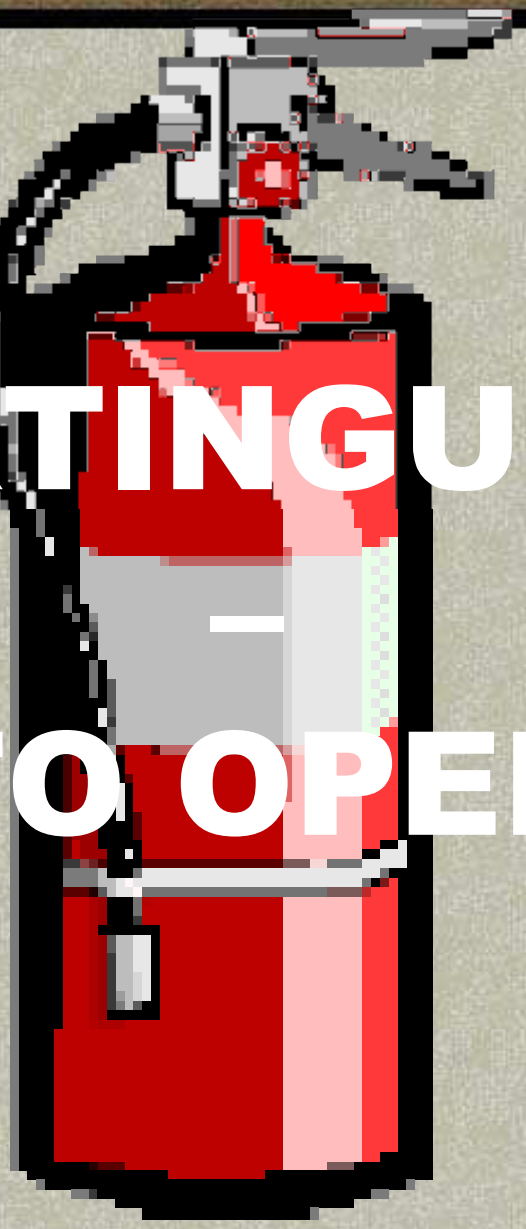
CONTRACT: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Contract Date: 18 February 2018

Monthly Safety Meeting / OCTOBER 2018

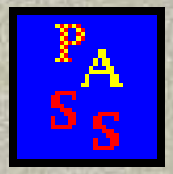
Topic: Use of Fire Extinguishers

FIRE EXTINGUISHERS



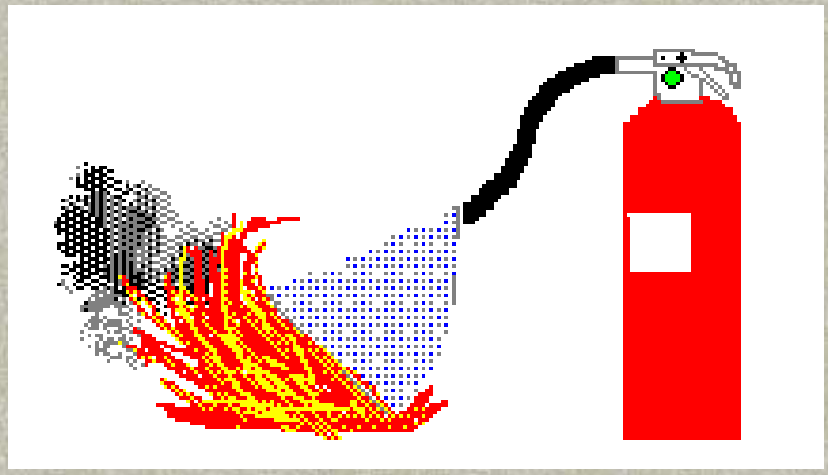
HOW TO OPERATE?

How to Use a Fire Extinguisher



It's easy to remember how to use a fire extinguisher if you remember the **PASS**:

- **P**ull
- **A**im
- **S**queeze
- **S**weep



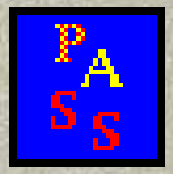
Health & Safety Department
77 Insaat ve Taah A.S.
Dahla Dam Improvement Project - Phase 1
Kandahar Province - Afghanistan

PULL - AIM - SQUEEZE - SWEEP

P	PULL THE PIN	
	PİMİ ÇIKARIN	
	پین سینجک (ګوتي) یې را وکاږئ	
A	AIM THE EXTINGUISHER NOZZLE or (HOSE) AT THE BASE OF THE FIRE	
	YANGIN SÖNDÜRÜCÜ HORTUM UCUNU ALEVİN DİBİNE DOĞRULTUN	
	د اور د وژنې د پایپ خولې په اور باندې ونیسئ	
S	SQUEEZE THE LEVER ABOVE THE HANDLE	
	YANGIN TÜPÜNÜN TETİĞİNE SONUNA KADAR BASIN	
	د اور د وژنې د ډبې لاستي ته تر اخیره فشار (زور) ورکړئ	
S	SWEEP FROM SIDE TO SIDE MOVING CAREFULLY TOWARD THE FIRE	
	PÜSKÜREN TOZU YANAN YÜZEYE GEZDİRİN	
	اور وژنې پوډر په خورا دیقت او منظم ډول سره په اور باندې وپاشئ	

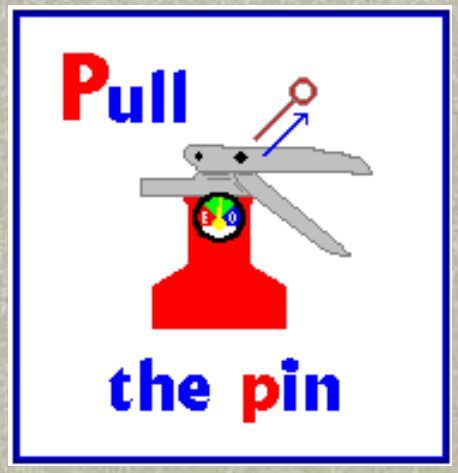
Originator : Health & Safety Department-77 DHLA-KP-AFN

How to Use a Fire Extinguisher

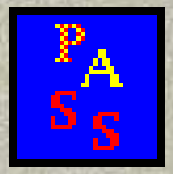


Pull the pin…

This will allow you to discharge the extinguisher



How to Use a Fire Extinguisher



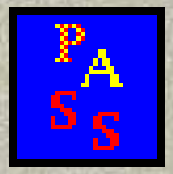
Aim at the base of the fire…

Hit the fuel.

If you aim at the flames…

…the extinguishing agent will fly right through and do no good.

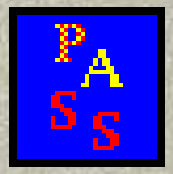
How to Use a Fire Extinguisher



Squeeze the top handle…

This depresses a button that releases the pressurized extinguishing agent.

How to Use a Fire Extinguisher



Sweep from side to side…

.. until the fire is completely out.

Start using the extinguisher from a safe distance away, then slowly move forward.

Once the fire is out, keep an eye on the area in case it re-ignites.

Rules for Fighting Fires

The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire.

In case the extinguisher malfunctions, or something unexpected happens, you need to be able to get out quickly. You don't want to become trapped.

?

Questions will be Highly Appreciated

JOIN YOUR FAMILY WITHOUT ANY INJURY –
LENİZE KAZASIZ DÖNMENİZ DİLEĞİMİZLE

THANK YOU

HAVE A SAFE DAY

77 Construction Company

Project Title: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Kandahar Province - Afghanistan

SAFETY TALK

ATTENDANCE SHEET

01-Oct-2018

Topic: Use of fire Extinguishers

Location: Construction Site | Time Started: 08:00 AM | Time Ended:

#	NAME	DESIGNATION	SIGNATURE
	Meteban Yordan	PM	
	mehmet AYGUN	civil Eng	
	JAFFAR AHMED	Electrical Engg	
	AG Muhammad	Quality Controller	
	MOHD. ASIF	LABOUR.	
	Abdul Rauf	Surveyor	
	Hamayon	Labour	
	Samiullah	Labour	
	Amanullah		
	Yilmaz Arslan	Safe Supervisor	
	Mohammad	Driver	
	Azizullah	Flamber	

	Sandat Acheksay		
	Qurban Morad	Electreation	
	Abdul Rasel	Loader Operator	
	Sayed Nezamuddin	Mechanic	
	abdal khaliq	stil Fixer	
	Abdul Qadir	Mechanic	
	Abdal Majed	Carpenter	
	Norullah	Carpenter	
	Abdul Selim	stil Fixer	
	Bezmullah	Rack installer	
	Abdul Razzak	Rack installer	
	Gul Ahmet	Labour	
	Ali Ahmet	Labour	
	Dil Mohammad	Labour	
	M. Nasim	Jcb. Oporator	
	Mohsen	Sarveyar Helper	
	Sher Jan	Electreation	
	Hashim	Electreation	
	Fazil Mohammad	Labour	
	Neyazi Bash	carpenter	
	M. Awaz	Labour	
	Nasrullah	Labour	
	M. salim	Car Penter	
	Narullah	Carpenter. Rackinsta	
	Khaludolin	Rack installer	
	M. Azim	Rack installer	
	Mohammadullah	Rack installer	

	Savaş KARA	Operatör	
	M. Shaa	Rack installer	
	Haci Mesed	Carpenter	
	ismatullah	Labour	
	Hamidullah	Labour	
	Soma gul	Labour	
	Rahman Nazar	Mason	
	Enayatullah	Labour	
	Azizullah	Labour	
	Abdul Samad	Labour	
	Sardar Mohemad	Labour	
	Nematullah	Labour	
	Abdul Hay	Rack installer	
	Hekmatullah	Labour	
	Nematullah	Rack installer	
	Yusuf	Mechanic	
	Rustam	HSE officer	

Appendix 1.2. November Safety Meeting Notes

AS PURCHASER: DA AFGHANISTAN BRESHNA SHERKAT

77 Construction Company

Kabul Office
Address : Industrial State(Park Hay Sanaati) Street No 5
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AS SELLER: 77 CONSTRUCTION COMPANY

CONTRACT: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Contract Date: 18 February 2018

Monthly Safety Meeting / NOVEMBER 2018

Topic: Manual Lifting and Handling Techniques

SWITCH OFF

OR

SILENT MODE

Manual Lifting and Handling Technics

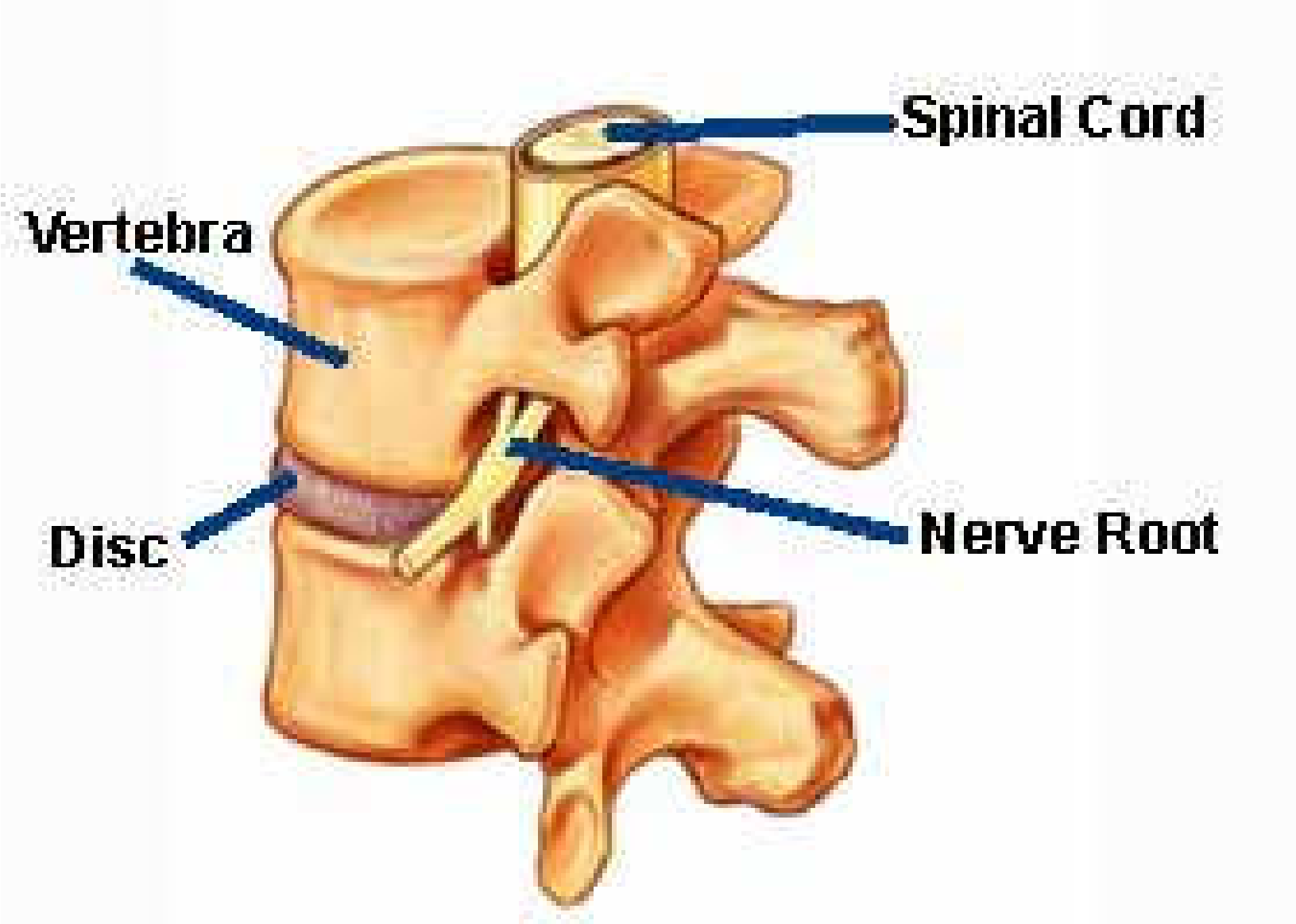
Goal and Objective

Preventing Back Injury

- **Lifting something incorrectly can cause disc pressure to rise to several hundred pounds per square inch!**

- **Result is……**

Disc Problems



- **Problems may develop suddenly or gradually over weeks or months.**

.....is the most common work-related medical problem.

.....Back Pain

Proper Lifting

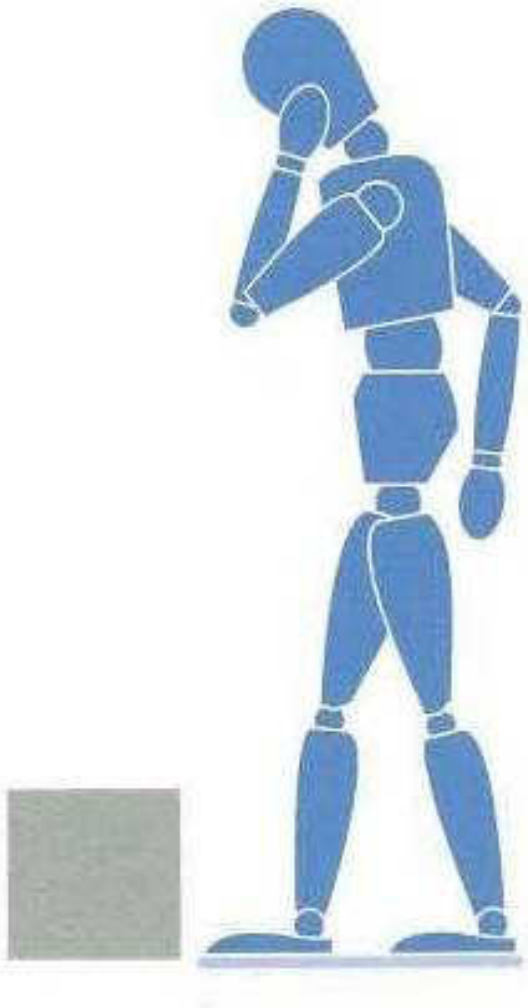
- **There is one final important point:**

Remember, in lifting, you are the major cause of your injuries; therefore, you have the major responsibility for preventing them.

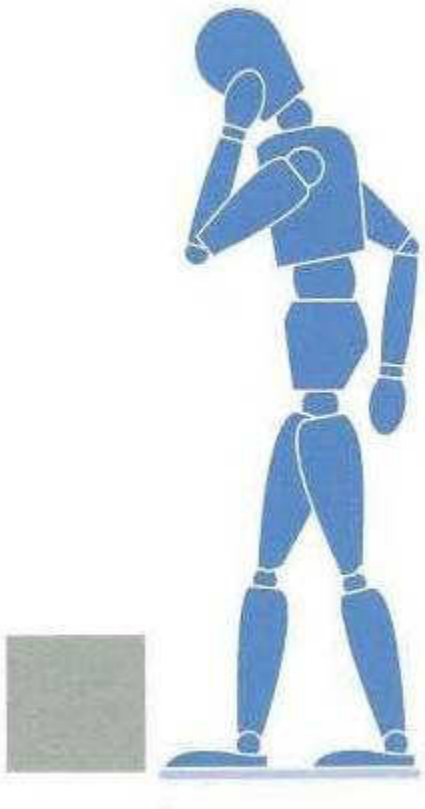
"THINK BEFORE YOU LIFT"

1. STOP AND THINK

- Plan the Lift.
- Where is the Load placed?
- The load is too heavy? Is it a two-person job? Need help?
- Get Help if Needed. (Seek assistance on awkward lifting)
- Don't Try To Lift It Alone. Find someone who can help carry it, or if possible, break the load into two smaller, more manageable loads



- Any appropriate handling aids? (mechanical aids or assistance)
- Wet/Slippery surface?
- Remove obstructions
- One foot should be in front and the other foot for balance



Wheelbarrow

Pallet Trucks / Jacks

Platform Trucks

2. ADOPT A GOOD POSITION

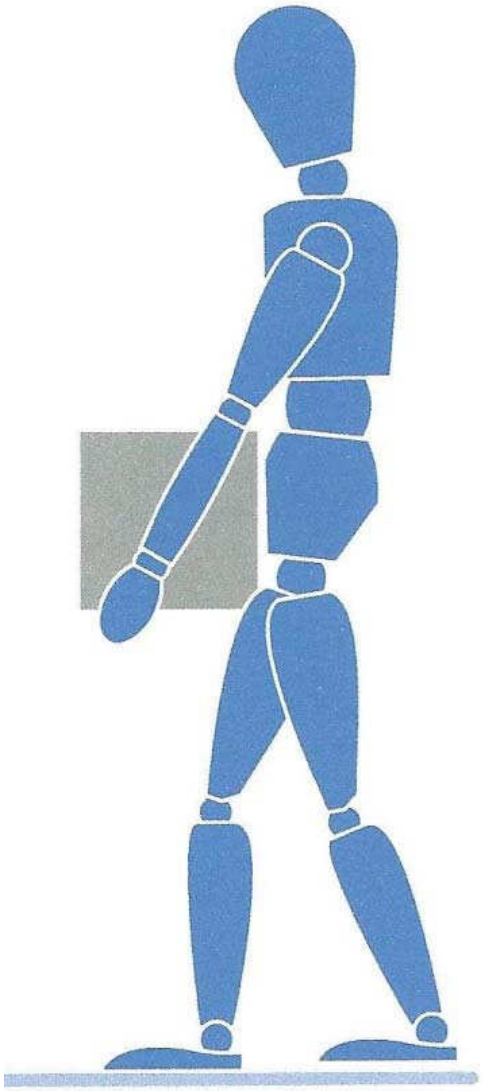
- When lifting from a low level Bend your knees and use your legs to lift!

3. GET A FIRM GRIP

- **Lift With the Legs -- NOT THE BACK.**
- Leg muscles are stronger than back muscles
- Never Bend, Lift, and Twist at the same time!

4. Proper Lifting

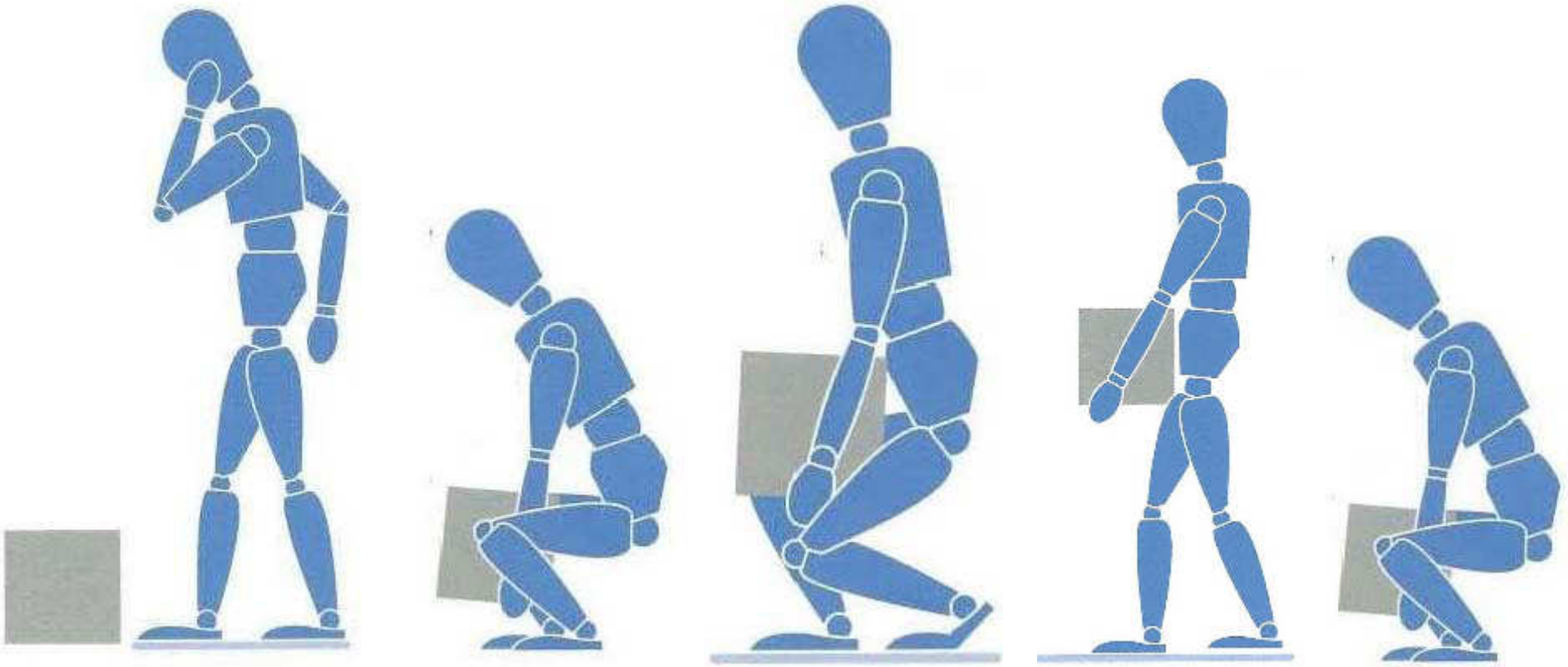
- Use both hands, grasp the object firmly and pull it as close as possible to your body.



5. SET THE LOAD DOWN

- If the load is going to set on the floor, bend the knees and position the load in front of you. If the load is to go at table height, set it down and keep in contact with the load until it is secure on the table.

PROPER LIFTING



Question ?

- What do you do if you have a load that is too heavy to lift on your own?

1. Leave it for someone else ⊘
2. Break up the load, if possible ✓
3. Get someone to help you ✓
4. Use a mechanical aid ✓

Water and food is precious

Poverty

Humanity-Tear

Touching your heart

Poverty

Drinking water?

?

Questions will be Highly Appreciated

- JOIN YOUR FAMILY WITHOUT ANY INJURY –

AiLENiZE KAZASIZ DÖNMENiZ DiLEĞiMiZLE

THANK YOU

HAVE A SAFE DAY

77 Construction Company

Project Title: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Kandahar Province - Afghanistan

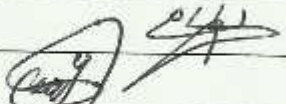
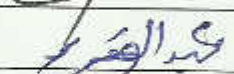
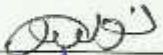
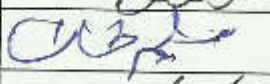
SAFETY TALK

ATTENDANCE SHEET

Topic: Manual Lifting and Handling Technique — 01-Nov-2013

Location: Construction Site | **Time Started:** 08:00 AM | **Time Ended:**

#	NAME	DESIGNATION	SIGNATURE
	Metehan Yorulcim	PM.	
	Mehmet AYGÜN	CIVIL Eng	
	JAFFAR AHMED	Electrical Engg	
	Aq Muhammad	Quality Controller	
	Mohd. Aziz	Labour	
	Abdul Rauf	Surveyor	
	Hamayon	Labour	
	Samiullah	Labour	
	Amanullah	Mason	
	Ulum Dorbin	Sit Supervisor	
	Mohammad	Driver	
	Azizullah	Flamber	

	Jamdat Achekzay		
	Qurban Morad	Electrealion	
	Abdul Rasol	Loader OPerator	
	Sayed Nezamuldin	Mechanic	
	Abdul Khaliq	stil Fixer	
	Abdul Qadir	Mechanic	
	Abdul Majed	Carpenter	
	Narullah	Carpenter	
	Abdul Selim	stil fixer	
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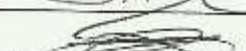
	Abdul Razzak	Rack installer	
	Gul Ahmet	Labour	
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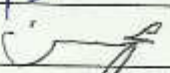
	Mohsen	Sarvayar Helper	
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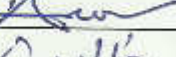
	Khaluddin	Rack installer	
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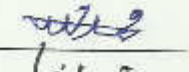
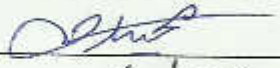
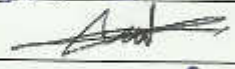
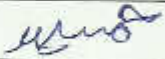
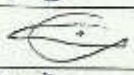
	M. Azim	Rackinstaller	

	Savaş Kara	Rok oPorator	
	M. Shaa		
	Haci Majed	Carpenter	
	ismatullah	Labour	
	Hamidullah	Labour	
	Joma Gul		
	Rahman Nazar	Masson	
	Enayatullah	Labour	
	Azizullah	Labour	
	Abdul Samet		
	Sardar Mohamoed	Labour	
	Nematullah	Labour	
	Abdul Hay	Rock installer	
	Hekmatullah		
	Nematullah	Rock installer	
	Yusuf	Mechanic	
	Rustam	Hse officer	

Appendix 1.3. December Safety Meeting Notes

AS PURCHASER: DA AFGHANISTAN BRESHNA SHERKAT

77 Construction Company

Kabul Office
Address : Industrial State(Park Hay Sanaati) Street No 5
Kabul / AFGHANISTAN
Email : info@77construction.com

AS SELLER: 77 CONSTRUCTION COMPANY

CONTRACT: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Contract Date: 18 February 2018

Monthly Safety Meeting / DECEMBER 2018

Topic: Safe Heavy Equipment Operations

SWITCH OFF

OR

SILENT MODE

TODAY'S SUBJECT

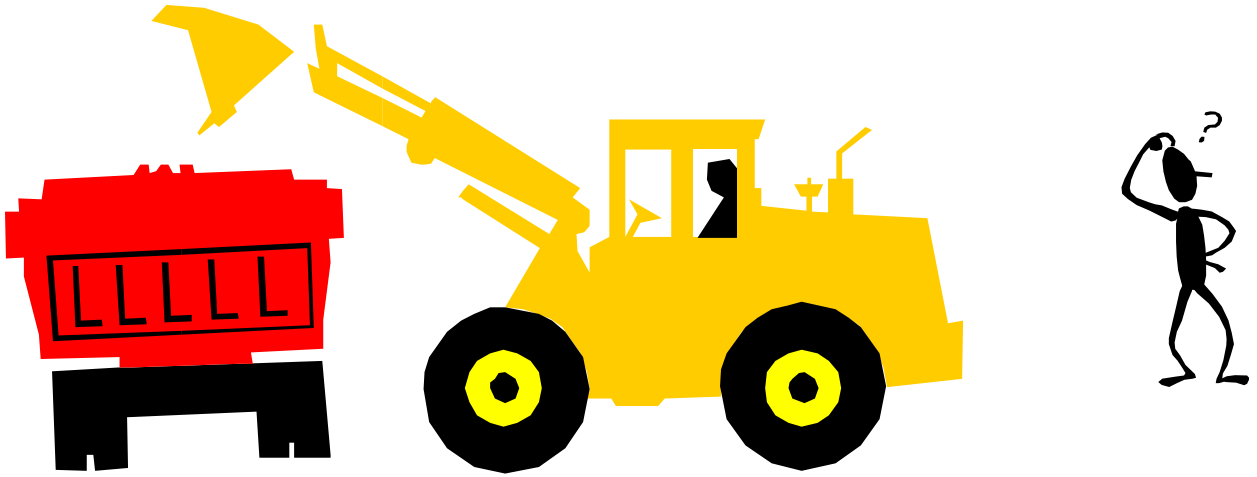
Safe Heavy Equipment Operation

&

Previous week site safety observation

SAFETY FACTORS

- YOU HAVE A CONGESTED CONSTRUCTION SITE WITH PERSONNEL ON FOOT, AND MOBILE MACHINES WORKING IN THE SAME AREA, AT THE SAME TIME!



Goal and Objective

- PREVENT WORKPLACE ACCIDENTS!
- PREVENT PERSONAL INJURIES BETWEEN MOVING EQUIPMENT AND THOSE WORKERS WHO ARE ON FOOT.

HAZARD PREVENTION and CONTROLS

- Perimeter Fencing, signs.
- Spotters / Banks man / Ground guide
- Keep safe distance – equipment / personnel
- Proper Job Planning
- Be Alert; Hear Warnings.
- Read and obey warning signs
- Respect safety Barricades.

PROPER EQUIPMENT MAINTENANCE

- Machine in Proper Working Order.
- Back-up Alarm, Horn, Lights, Mirrors.
- Cab Glass not Cracked or Broken.
- Machine Windows, Mirrors, kept Clean.
- Prompt Repair of Any Noted Deficiencies!

EQUIPMENT OPERATOR RESPONSIBILITIES

- **GENERAL GUIDELINES**:
- Safety Features On Equipment, Know How They Operate, and Use Them Properly.
- Systematic Maintenance and Repair.
- Trained Operators.
- Trained Repair Personnel.
- Review Manufacturer's Operating Manual.
- Pre-Operational Inspection of Equipment.

EQUIPMENT OPERATOR RESPONSIBILITIES

- The Most Dangerous Movement is Backing!
- Look For People on Foot Around You.
- STOP! When Signaled; Or If You Are In Doubt….
- Maintain a Safe Operating Speed.

EQUIPMENT OPERATOR RESPONSIBILITIES

- Keep Machine Under Control at all Times.
- Take Machine “Out of Service”, if it is Unsafe to Operate.
- Make Sure You Are Familiar with the Operating system of your Machine.
- Report Unsafe condition to Your supervisor/safety officer
- Look Behind Machine Before Backing.

EQUIPMENT OPERATOR RESPONSIBILITIES

- Do Not Attempt Repairs or Maintenance that You Do Not Understand.
- Clear all Personnel from the Machine and the Area.
- Have a Signalman Present when Moving In or Out of a Building (or structure).
- Learn and Follow Safe Work Practices!

- The Hazard of a Water Cooler Mounted on a piece of Equipment.
- Storing Crew Lunch Boxes on Equipment.
- **Window Curtain**


CAT
CAT
Chance for collapse


UNSAFE CONDITION
KOMATSU
2014. 4. 3


05 04 2014


SAFE DISTANCE
2014


PC
300
TEMSA
SAFE DISTANCE REQUIRED

ROCK BREAKING

DON'T SIT ON TOP OF THE ROLLER DRUM

MOVING PLATFORM


05 04 2014


IMMEDIATE ACTION REQUIRED
2014. 4. 3


SAFE DISTANCE ?
LADDER?
SLIPPING HAZARD


You need to move - inform to SO


77 Insaat ve Taah A.S.
KING AREA
PARK ALANI
د پارکینگ
77
CO
01 04 2014

PAINTING / DESIGN - PPE


NOT TOUCH ANY DESERTED
/ UNCLAIMED ITEMS


SMOKING POLICY
AT SITE

SMOKING BOOTH

?

uestions will be Highly Appreciated

JOIN YOUR FAMILY WITHOUT ANY INJURY –
ENİZE KAZASIZ DÖNMENİZ DİLEĞİMİZLE

THANK YOU

HAVE A SAFE DAY

77 Construction Company

Project Title: 15 MW of Solar Power Generation Facility located at Kandahar, Afghanistan

Kandahar Province - Afghanistan

SAFETY TALK

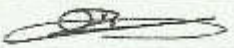
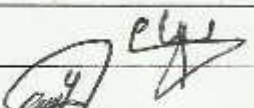
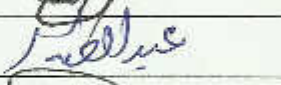
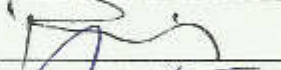
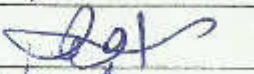
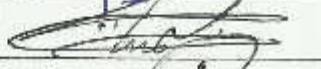
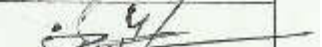
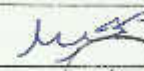
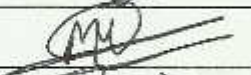
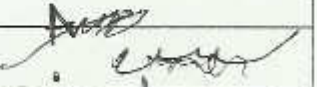
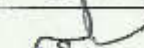
ATTENDANCE SHEET

01-Dec-2018

Topic: Safe Heavy Equipment operations

Location: Construction Site | **Time Started:** 08:00 AM | **Time Ended:**

#	NAME	DESIGNATION	SIGNATURE
	Metehan Yardim	Civil Eng / PM	
	Mehmet AYGÜN	Civil Eng.	
	JAFFAR Ahmad	Electrical Engg	
	Aq Muhammad	Quality Controller	
M	ASIF	LABOUR	
	Abdul Rauf	Surveyor	
	Abdul Rasol	Loader Operator.	
	Hamayon	Labour	
	Samiullah	Labour	
	Amanullah	Messon	
	Yilmaz Dorlar	Sit supervisor	
	Mohammad	Driver	

	Azizullah	Flamber	
	Jandat Achekzay		
	Qurban Morad	Electreation	
	Sayed Nezamudin	Mechanic	
	Abdul khaliq	Stil Fixer	
	Abdul Qadir	Mechanic	
	Robin ÖZTÜRK	Electreation Engineer	
	Abdul Majed	Carpenter	
	Norullah	Carpenter	
	Abdul Selim	Stil Fixer	
	Besmullah	Rack installer	
	Abdul Razzak	Rack installer	
	Gul Ahmet	Labour	
	Ali Ahmet	Labour	
	Dil Mohammad	Labour	
	M. Nasim	Jcb. oPorator	
	Mohsen	sarveyar Helper	
	Abdul Majed	Flamber	
	Sher Jan	Electreation	
	Hashim	Electreation	
	Fazil Mohammad	Labour	
	Neyazi Bash	Carpenter	
	M. Awez	Laboeur	
	Nasrullah	Labour	
	M. salim	stil carpenter	
	Nurullah	Carpenter Rack-installer	
	Khaluddin	Rack installer	

M. Azim	Rack installer	
Saroz KARA	Roofer	
M. Shaa	Rack installer	
Haci Majed	Carpenter	
ismatullah	Labour	
M. Tahir	Panel installation	
Sali Mohammad	Panel installer	
ALi Shekir	Panel installer supervisor	
Hamidullah	Labour	
Joma gul	Labour	
Rahman Nazar	Masson	
Enayatullah	Labour	
Azizullah	Labour	
Abdul Samet	Labour	
Sardar Mohammad	Labour	
Nematullah	Labour	
Abdul Hay	Rack installer	
Ibrahim	Panel installer	
Ibrahim torab	Panel installer	
Mehmet	Panel installer	
Hamit	Panel installer	
Hekmatullah	Labour	
Nematullah	Rack installer	
M. Asif	Panel installer	
Samiullah	Panel installer	
Yusuf	Mechanic	
Jamil Ahmad	Rack installer	

Norsobhan	Panel installer	
Sha Mahmud	Panel installer	
Sobghatullah	Panel installer	
Shaber Ahmad	Panel installer	
M. Shafiq	Panel installer	
Sadiqullah	Panel installer	
Rustam		

Appendix 1.4. Daily Safety Report

DABS

DA AFGHANISTAN BRESHNA SHERKAT

AS PURCHASER DA AFGHANISTAN BRESHNA SHERKAT

77 CONSTRUCTION COMPANY

Kabul Office
Address: Industrial Street (Par Hay Sanaati)
Street No 5 Kabul / Afghanistan
Email: info@77construction.com

AS SELLER: 77 CONSTRUCTION COMPANY

DAILY SAFETY REPORT

CONTRACT: 15 MW OF SOLAR POWER GENERATION FACILITY LOCATED AT KANDAHAR, AFGHANISTAN

HS Audit	**Project:** **77CC Solar Power Plant Kandahar**
Location: **Kandahar, Kandahar Province, Afghanistan**	Contract: **15 MW OF SOLAR POWER GENERATION FACILITY LOCATED AT KANDAHAR, AFGHANISTAN**
Inspection Date**:** **03-Mar-2019**	Status: **Work on going**
Weather: **Max:17 Min:4**	

PRESENTED BY

77 Construction Company

AS SELLER: 77 CONSTRUCTION COMPANY Contract No. 15 MW OF SOLAR POWER GENERATION FACILITY LOCATED AT KANDAHAR, AFGHANISTAN

Prepared by:
ADIL KIYANI
HSE Supervisor

Approved by:
Metehan Yardim
Project manager

EXECUTIVE SUMMARY

The goal of this project is to construct and complete the installation and commissioning of the 15 MW Solar Project at the Kandahar, Afghanistan.

The Health and Safety (H&S) Inspector from 77 Construction Company (77CC/Seller), Afghanistan is working daily at the Kandahar Solar Power Station in order to evaluate and control the Health and Safety (H&S) situation of the ongoing construction activities.

In general, although the 77CC Inspector found the site health and safety conditions satisfactory and to be better and improved due to 77CC Regular H&S in sections, yet the worker need to work for the H&S of the project.

1.0 INTRODUCTION

The 15 Mw solar power generation is located in the Kandahar province, Afghanistan.

The project construction activities are included; solar power generation control and protection systems and all other work necessary for turn-key installation and commissioning of the Kandahar solar power generation in conjunction with equipment, materials, and services supplied by the seller The work comprises the field erection (including all associated civil works), testing, commissioning, and placing into successful operation.

77CC provides Quality Assurance (QA) Monitoring and Evaluation Services for the construction, installation and commissioning of the 15 MW Solar at the SPP Kandahar, which includes oversight of health and safety (H&S).

2.0 SITE VISIT

The Health and Safety (H&S) Inspector from 77 Construction Company (77CC), Afghanistan is working daily at the Kandahar Solar Power Station in order to evaluate and control the Health and Safety (H&S) situation of the ongoing construction activities. Findings of this site inspection and evaluation are documented in this report, including photographs provided in the Pictorial View of the events and checklists in the attached Annexure.

3.0 SITE VISIT DETAILS

During the inspection, the following findings:

1) **General and Welfare**

- Daily toolbox talk has been conducted for 77CC personnel;
- Inspection of laydown yard has been done, no observable issues to be reported.
- The noise level has been checked, by a decibel meter and it found in normal range.
- Mineral water is available for the workers on the project site.
- Hand and power tools were inspected and it's meet all requirement of EHS Policy.
- All heavy machineries have been inspected prior to start the work and its fitness meet the all requirement of safety norms.
- Life line and full body harnesses were inspected and found it good condition.
- Safety barricades and signs were provided as per requirement all around the working area.

- Flag man is assigned to control and monitor movement of heavy machineries at the project premises.
- Full time safety officer is also assigned for monitoring of overall safety requirement during jobs, hence site is running under safe manner.
- Safety barricade and signs, general works and housekeeping were observed, no observable issues to be reported.
- Toilets are provided with good condition for workers and all other staff 77cc accommodation area).

2) Safety Trainings and Records

- Toolbox talk has been progressed prior to start of work on a daily basis with attendance sheet for record.

3) Emergency Arrangements and Response

- Radio is using for internal communication, first aid clinic is available at the project site, for any Serious injury or illness patients will transfer by Ambulance to Kandahar province for treatment.

4) Excavations

- Excavation activity at the job site in progress.

5) Personal Protective Equipment (PPE)

- Employees were observed that they were working properly at the job site with required PPE, no incident or accident to report.

6) Heavy Machinery

- Inspection of All heavy equipment by competent person on daily basis before work is being started and before each shift.
- Charged Fire extinguisher provided for all heavy machinery (type ABCE Powder 6KG).
- Flag man is assigned for controlling the heavy equipment vehicle operation / movement.

7) Transportation, Handling and Storage

- Job site is not so far from accommodation area.
- Employees are trained by SSHO to use safe lifting techniques.
- Required PPE has been provided for employees during handling and storage of materials.

8) Sanitation and Cleaning

- Proper sanitation system established and maintained for workers and all staff.
- Employee's accommodations are clean and regular cleaning is scheduled to maintain safe and sanitary condition in the living area.

9) Hazardous Materials

- Hazardous materials (fuel, cement, paints) properly stored in a separate container, 77CC provided MSDS and fire extinguisher.

10) Risk Assessment and Method Statement (RAMS)

- Communication to workers is up to date

11) Waste Management and Segregation

- 77 CC provided trash point for waste material in their accommodation area and also on the job site,

12) Fuel/oil/chemical Storage

- Special location is selected for storage and refuelling of Vehicles and construction machinery with safe condition.
- Fire extinguisher also provided for storage and refuelling area.

13) Drainage, dewatering, spillage control

Drainage is done and in good state.

14) Ecology, Archaeology and Heritage

- N/A

15) Dust and mud

- The site is primarily gravelled and sanded, so little or no mud potential exists.

16) Odour and Air Emissions

- There is no odour and air emission observed.

17) Noise and Vibration

- The noise level is periodically being checked. Through the use of decibel meter.
- There is minimal identified noise and vibration on the site.
- As a result, no added noise mitigation measures are in place for communities that may be in the area, since they are not considered to be affected.
- Double hearing protection is used when required by employees on site.
- Employees rotate out regularly on using machines that provide significant vibrations, such as compactors or grinders.

18) Internal Security

- The security is tight on the job site and camp area the security personnel are alerted 24/7.

19) Community Interface

The Neighbourhood near the project site are in good communication state with the job site.

Environmental Monitoring Work Coordination

The environmental monitoring work coordination is managed by DABS. The responsible specialist reviews the IEEs, site specific EMP and Bi-AEMRs relating to the project and performs monitoring of compliance of the seller performance. The environmental monitoring in the field is carried out by seller H&S Staff in line with the framework from the PMO.

Considered Health & Safety Checklist

(A)	Safety Training/Activities	From Start	For the Daily	To Date (Cumulative)
1.	a) Safety Induction	00	00	81
	b) Daily Tool Box Talk	00	00	229
	c) Weekly Safety Meeting	00	00	39
2.	Safety Correction Action Reports	00	00	00
3.	Monthly safety meeting	00	00	06
4.	Safety Violations	00	00	00

(B)	Incident/Accident/Injury	From 2-5-2018	For the Day	To Date (Cumulative)
4	Near misses	00	00	00
2.	First Aid cases (FAC)	00	00	7
3.	Medical treatment case (MTC) (Non work related)	00	00	10
4.	Restricted work case (RWC)	00	00	00
5.	Lost work day case (LWDC)	00	00	00
6.	Permanent partial disability (PPD)	00	00	00
7.	Permanent total disability (PTD)	00	00	00
8.	Fatality (F)	00	00	00
9.	Lost time injury (LTI)	00	00	00

(C)	Operation		
1.	77 Construction		
TOTAL			

Safety is equal to production and quality

(D)

GENERAL SAFETY INSPECTION CHECKLIST

	PREPARATORY PHASE (PLANNING):	Yes	No	N/a
1.	Pre-Start Briefing performed by Field Superintendent/SSHO and documented?	X		
2.	Is the submitted Site Safety Plan on site and in use?	X		
3.	Hazardous materials program in place with MSDS available & maintained for easy reference?	X		
4.	Latest edition of EM 385-1-1 available on the site?	X		
5.	Weekly safety meeting conducted and documented?	X		
	OFFICE TRAILER:	Yes	No	N/A
6.	Are emergency name points of contact posted?	X		
7.	First aid kit available at the jobsite and log maintained? No & no.	X		
8.	Toilet facilities available and maintain clean?	X		
9.	Signage posted at the jobsite “HARD HAT AREA”, “CONSTRUCTION AREA, etc. as required?	X		
10.	Jobsite cleaned daily?	X		
11.	Is construction debris being dump at the landfill?	X		
12.	Is traffic control around site adequate?	X		
	PERSONAL PROTECTIVE EQUIPMENT:	Yes	No	N/A
13.	Workers wearing steel-toed shoes, long pants and sleeve shirt?	X		
14.	Safety glasses or goggles being worn?	X		
15.	Reflective vest or Traffic vest being worn.	X		
16.	Hearing protection being worn where appropriate?	X		
17.	Respirators being worn by qualified personnel where appropriate?	X		
		Yes	No	N/a
18.	Are fire extinguishers available, fully charged and easily visible within 75 feet for low hazard area?	X		

19	Is fuel stored in a proper container with proper labeling?	X		
20.	Are hot work permits being obtained prior to start hot work job?	X		
21	Are dedicated fire watches provided?	X		
22	Are gas cylinders stored upright and secured with a chain or rope to a building structure or approved cart?	X		
		Yes	**No**	**N/a**
23	Are ladders inspected and in good condition prior to use?	X		
24	3 points of contact maintained when ascending and descending a ladder (2 hands, foot or 2 feet & a hand)?	X		
25	Are tools and materials elevated by rope or handed by a second party?	X		
26	Are ladders, used for temporary access, extended at least 3 feet above landing surface & properly secured?	X		
27	Are the extension ladders base distance from the structure at ¼ of the height of the building (Total working length of a ladder ÷ 4)?	X		
28	Are electricians using portable non-conductive ladders?	X		
29	Are stairways provided on all structures over 20 feet during construction and supplied w/ guardrail?	X		
30	Are portable ladders properly used?	X		
	SCAFFOLDING	**Yes**	**No**	**N/a**
31	Is scaffolding erected to the manufacturer's recommendation?	X		
32	Are daily scaffolding inspections performed and checklist filled-out?	X		
33	Is tubing pinned properly and all cross bracing in place?	X		
34	Is scaffolding equipped with a safe access or provided with safe access to each working level?	X		
35.	Is scaffolding tied to a building structure if the scaffolding height is 4X the smallest base dimension?	X		
36.	Are scaffolding systems plumb and level?	X		
37.	Are scaffolding and components overloaded?	X		
38.	Are working levels of platforms fully planked or decked? No cracks and splits?	X		
39.	Are guardrails and toe boards installed when work platform height reach six (6) feet or greater?	X		
40.	Are Personal Fall Arrest System used if guardrails are not feasible?	X		
FALL PROTECTION:		**Yes**	**No**	**N/a**
41.	Is Personal Fall Arrest System used where applicable by workers (Fall hazard 6 ft or greater)?	X		
42	Is Fall protection equipment properly checked before each use?	X		
43.	Is system tied off at all times to structural elements capable of supporting 5,000 lbs./per person 100%?	X		
44.	Are all employees trained for personal fall arrest system in use?	X		
45.	Have standard guardrails been provided where needed?	X		
EXCAVATIONS:		**Yes**	**No**	**N/a**
46.	Are approved and updated digging permit on site prior to start excavation?	X		
47.	Proper slope or trench box/shoring has been provided for excavation 5 ft. in depth or greater or unstable soil?	X		
48.	Is excavated material at least 2 feet away from the trench edge?	X		
49.	Are barricades in place to prevent workers and public from falling into trench or hole?	X		
50.	Do excavations over 4 foot in depth have ladders provided every 25 feet and two means of exit?	X		
51.	In locations of known or suspected contamination, is excavation atmosphere monitored?	X		
ELECTRICAL:		**Yes**	**No**	**N/a**
52.	Are temporary panels and receptacles protected from weather?	X		
53.	Are temporary lights with covers rigged and secured?	X		
54.	Are GFCI's in use for power tools on site & are extension cables in good condition?	X		
55.	Is lockout/tag out program in effect?			
CRANES MOBILE:		**Yes**	**No**	**N/a**
56.	Crane inspection checklist filled up and submitted by the operator?	X		
57.	Has periodic inspection been performed prior to use on site IAW EM 385-1-1 Appendix H?	X		
58.	Are EM–385 -1-1 Appendix H daily start up inspection performed by operator?	X		
59.	Is crane operator qualified IAW EM 385-1-1 Appendix G, and is crane certification posted in cab?	X		
60.	Are workers protected from crane swing radius and prevented from passing under the load?	X		
61.	Near electric power sources, are rules followed for clearance/isolation in operating zone?	X		
CONFINED SPACES:		**Yes**	**No**	**N/a**
62.	Is there a Confined Space Plan prepared and approved by the Safety Manager and Project Manager?			X
63.	Is atmosphere tested and being monitored?			X
64.	Is space continuously ventilated?			X

Safety is

	65.	Are entrants, attendants and entry supervisor properly trained?			X
	66.	Is rescue/retrieval system in place?			X
	67.	Are daily entry permits posted at point of entry and signed by entry supervisor?			X
	68.	Is point of entry posted with signage “DANGER CONFINED SPACE”?			X
	69.	Has blanking or locking out of systems taken place?			X
	EQUIPMENT:		**Yes**	**No**	**N/a**
	70.	Are heavy operators qualified through training at the site (certificate included in Safety Plan)?	X		
	71.	Mobile equipment equipped with rollover cages and backup alarms with moving parts adequately guarded?	X		
	72.	Are equipment operations maintaining safe clearances from electrical power lines?	X		
	73.	Modifications meet safety rating in accordance with manufacturer (i.e., lifting personnel w/ forklift)?	X		
	74.	Are workers clear of blind spots associated with mobile construction equipment?	X		
	75.	Do aerial lifts have basket/platform with guardrail?	X		
	76.	Workers not extending over guardrail of aerial lifts?	X		
	77.	Are articulating boom platforms used with PFAS attached to boom or basket?	X		

Safety is Equal to Production and Quality	**SUB CONTRACTOR LSA: Weekly inspection**		**Yes**	**No**	**N/a**
	78.	General cleanliness, is the area clean and tidy?	X		
	79.	Is the kitchen and food preparation area hygienic?	X		
	80.	Is the living area and accommodation neat and tidy?	X		
	81.	Are fire extinguishers correctly placed and in working order?	X		
	82.	Is proper housekeeping in effect?	X		
	83.	Are ablution facilities clean and hygienic?	X		
	84.	Is electrical equipment and cables insulated and safe?	X		
	85.	Are there smoke detectors in living area? Yes but no batteries	X		
	86.	Is there an emergency fire evacuation plan in place?	X		

Safety is Equal to Production And Quality	**77 Construction LSA: Weekly inspection**		**Yes**	**No**	**N/a**
	87.	General cleanliness, is the area clean and tidy?	X		
	88.	Is the office area neat and tidy?	X		
	89.	Is the living area and accommodation neat and tidy?	X		
	90.	Are fire extinguishers correctly placed and in working order?	X		
	91.	Is proper housekeeping in effect?	X		
	92.	Are ablution facilities clean and hygienic?	X		
	93.	Is electrical equipment and cables insulated and safe?	X		
	94.	Are there smoke detectors in living area?	X		
	95.	Is there an emergency fire evacuation plan in place?	X		

Photographs

Toolbox talk has been progressed prior to start of work

The noise level has been checked, by a decibel meter and it found in normal range

Transformer buildings floor tiles are in progress.

Distribution center building paint in progress

Appendix 2. Health and Safety & Environmental Plan

LOCUS

Project:

15 MW KANDAHAR SOLAR POWER PLANT
Afganhistan

Title:

Health and Safety & Enviromental Plan
Rev 00

Issue: 1
Date: 19.11.18

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LOCUS

O	19.11.18	First Issue	HSE Inspector	PM	Coordinato r
Rev .	***Date***	***Description***	***Prepared by***	***Reviewed by***	***Approved by***

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GENERAL PROVISIONS

Objective

The objective of this Health and Safety & Environment (HSE) Plan is to provide practical arrangements on a legal, administrative, technical and educational framework for safety&health and environment in **KANDAHAR SOLAR POWER PLANT** (hereinafter referred to as PROJECT) with a view to:

(a) Preventing accidents and diseases and harmful effects on the health of workers arising from employment in construction;
(b) Ensuring appropriate implementation of construction project;
(c) Providing means of analyzing from the point of view of safety, health & environment and working conditions, construction processes, activities, technologies and operations, and of taking appropriate measures of planning, control and enforcement.
(d) Ensuring continuous improvement of environmental performance, prevention and reduction of pollution derived from the construction activities, management of waste and of natural resources such as energy, water, etc.

Application

- This HSE Plan applies to:

Construction activities which cover: building (including excavation / concreting) and the construction / erection, of all types of works for buildings, structures, equipment in SOLAR POWER STATION of Kandahar.

This HSE Plan is in accordance with the provisions and arrangements mentioned in the contract between the **LOCUS ENERJI TIC VE MUH A.Ş.** (CONTRACTOR) and the **77 INSAAT ve TAAHHÜT A.Ş.** (CLIENT) as well as the Turkish Safety Legislation. Especially, regarding the Turkish Legislation the HSE Plan intents to cover all regulations concerning the Health and Safety.

The HSE Plan is developed in four levels (level O,1,2,3) with level O&1 being compiled into one (current document), level 2 for the HSE procedures and level 3 for the HSE work instructions.

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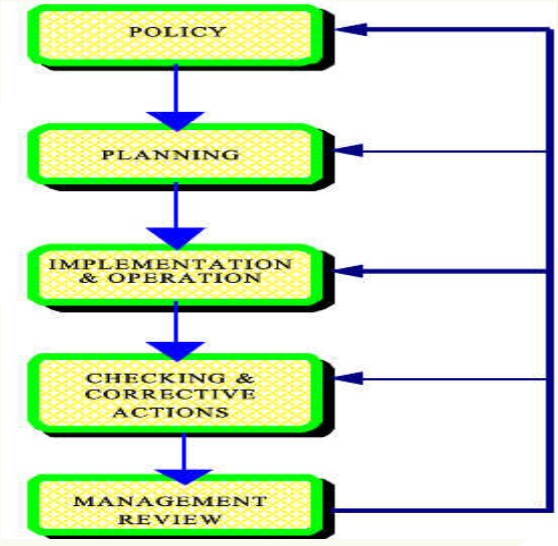
Level O&1 outlines the minimum HSE provisions and requirements, defining policies, planning, and implementation, checking, controlling and reviewing requirements for all involved entities. It also includes HSE requirement for the Contractor and the Contractor Members Subcontractors.

Level 2 will include the project HSE procedures as well as the minimum requirements for the HSE procedures from the Subcontractor's side. Subcontractors shall adopt the HSE Plan entirely, providing that they fully satisfied their legal and contractual obligations.

Level 3 will include the minimum HSE requirements for all major works to be undertaken. Subcontractors and their subcontractors, based on the specific methodology for the works they will execute, they will develop Work Specific HSE Method Statements including the associated risk assessment (Work Specific Risk Assessment) and submit them for review and acceptance prior to commence construction activities, to Contractor and, as applicable to the Client.

The basic key elements of OHSAS18001 (identical to ISO14001 standard) arrangements are (see picture 1):

- HSE Policy
- Planning for HSE including organization and responsibilities
- Implementation and operation
- Checking and Corrective Actions
- Management review.



Picture 1: Key elements of HSE Plan (OHSAS18001 & ISO 14001)

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Definitions

The following definitions are used throughout the HSE Plan. If in discrepancy with General Terms and Conditions of the Contract, the latter supersede unless otherwise agreed.

TERM	DEFINITION
Incident	An unplanned event that may have a negative impact on the cost, time and eventually the quality of a project due to its sequence that might be: • Injury (ies) and death(s) of people engaged or not in the project • Damage or loss of project installations, project equipment, project, assets and project structures, or third party property, • Damage or contamination of the environment.
Audit	A systematic and detailed review of all Safety Management key elements and safety inspection of the construction.
CLIENT or OWNER	**77 INSAAT ve TAAHHÜT A.Ş.**
CONTRACT	The contract between the Contractor LOCUS ENERJİ TİC VE MUH A.Ş.AND 77 INSAAT VE TAAHHÜT A.Ş.
CONTRACTOR	**LOCUS ENERJI TİC VE MUH A.Ş.**
Contractors' personnel	All persons under the jurisdiction and direct instruction of the CONTRACTOR
Construction site	Any site at which any of the processes or operations described are carried on.
Employee	A person employed by an Employer.

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Employer	An entity (physical or legal person) that employees directly personnel (employees).
Environment	The surroundings and conditions in which a company operates or which it may affect, including living systems (human and other) therein.
Environmental Effect	A direct or indirect impingement of the activities, products and services of the company upon the environment, whether adverse or beneficial.
Hazard	The potential to cause harm, including ill health or injury; damage to property, plant, products or the environment; production losses
Health and Safety Plan	As defined by the Turkish Labour Act 4857 for safety and health in the mobile or temporary sites; a document with all necessary information, data and instruction to consider for the construction of a technical project. It aims at capturing all hazards and associated risks and providing effective and sufficient preventative measures and /or protection.
Health & Safety & Environment Engineer	As defined by the Turkish Labour Act 4857 for safety and health in the mobile or temporary sites; permenant person implementing safety and health matters on site during the construction phase.
Environment A Class Certificated Supervisor	As defined by the Turkish Labour Act 4857 as it has been implemented by the Turkish Regulations "Health and Safety Units and Common Helath and Safety Units" at 15.08.2009 for health and safety legal competent person coordinating safety and health matters on site periodically related to this regulations

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Subcontractor	Any constructor, fabricator, supplier, designer with a direct contract with the CONTRACTOR or any of the CONTRACTOR members. The Site erection activities for all three disciplines (Civil, Mechanical, and Electrical & I/C) are foreseen to be self-performed and/or subcontracted. The supervision of all subcontractors, if any, will be carried out by the engineers of CONTRACTOR.
Near Miss	An occurrence that could lead to an incident.
PROJECT	Kandahar Solar Power Plant, 15 MW, panel and electrical installation testing and commissioning and start up Project in Kandahar at the 77 INSAAT VE TAAHHÜT A.Ş.. existing place.
Project	Any part of the PROJECT awarded to a Subcontractor as defined in the specific contract documents.
Risk	The product of the chance that a specified undesired event will occur by the severity of the consequences of the event.

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LOCUS

HEALTH AND SAFETY & ENVIRONMNETAL POLICY

LOCUS ENERJİ TİC VE MUH A.Ş.(LE) is committed to achieving HSE excellence, and compliance with all locally aLElicable HSE regulatory requirements and, our Customer's HSE contractual requirements.

This commitment is a responsibility of Management and employees in all functions. LE will strive to provide a safe and healthy working environment and to avoid injury and adverse impact to the environment and the communities in which we do business. Our HSE programs will combine clear leadership and commitment by Management the participation of all employees and functions, and the use of aLEropriate technology in developing and distributing LE products and services.

This Project HSE Plan is aLElicable to, and it's provisions will be mandatory for, all persons working on or visiting the site, including: LE employees, Partner employees, LE Contractor/Subcontractors and lower tier Subcontractor employees, all vendors and suLEliers, Owner's personnel and all project site visitors.

It is the responsibility of each Contractor/Subcontractor to enforce the HSE requirements for its lower tier Subcontractor employees, as well as its own employees. Nothing in the Project HSE Plan shall be construed to diminish the employer/employee responsibilities, obligations, and relationship.

All Contractors/Subcontractors are required to ensure that they and their employees, lower tier Subcontractors, and suLEliers, while on the jobsite and in the conduct of contracts, comply with the provisions of this program. Failure to comply may result in removal of the Contractor/Subcontractor and/or its employees from the site.

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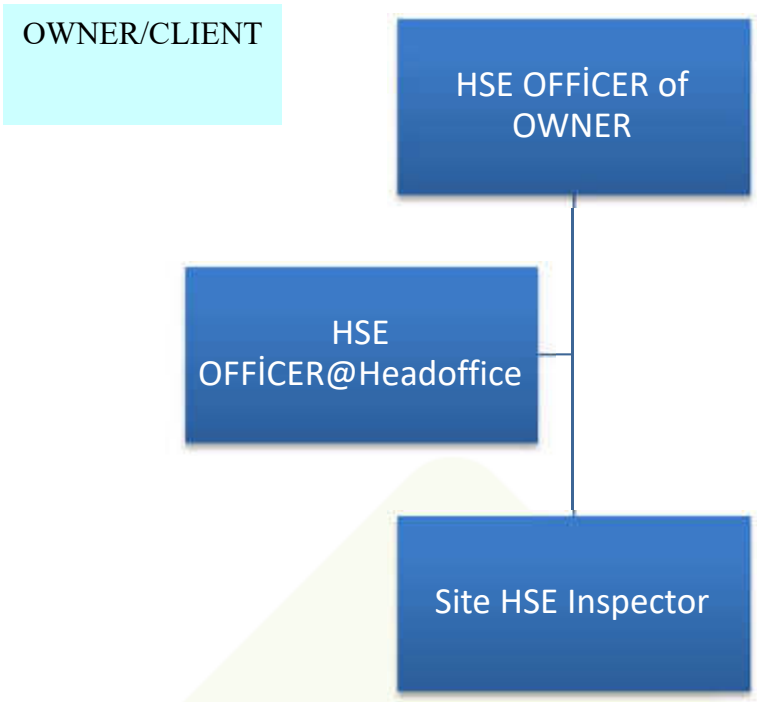
HSE ORGANIZATION CHART



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Statutory HSE Regulations

Contractor appoints a Site Manager for each own organisation. Contractor's Site Manager is responsible for the construction/erection activities, and has the ultimate responsibility for the Health, Safety & Environment of these activities on site.

Contractor appoints Headquarter HSE coordinating managers, responsible for the provision of support, auditing and application of the PROJECT. These coordinators have the ultimate responsibility for their Health, Safety & Environmental activities.

Contractor appoints a Health, Safety & Environment Engineer for the application / monitoring of the HSE Plan on a daily basis .This person undertakes the role of the Safety responcible for the Contractor's members and coordinates the health & safety responcible persons of all subcontractors. (In accordance to Turkish law when the number of employees reaches 50).

Contractor appoints a C class Health and Safety certificated engineer (AHSE) for the Health and Safety organization at headoffice.

Contractor appoints an occupational medicine doctor who shall be deployed when the employees number reach 50 and above, according to Turkish law which is issued at 15.08.2003 "Regulation Health and Safety Units and Common Health and Safety Units". Under this regulation the working period of the doctor is minimum 36 hours per month supervision of health and additional for each10 employees 90 minutes per year periodical examinations & trainings.

Contractor appoints also a number of Supervising Engineers to supervise construction/erection activities, plan these activities and supervise the Subcontractors performance and activities. Supervising Engineers are responsible to supervise the Health and Safety at their area of responsibility.

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Contractor arranges also for the first aids maintaining a first aid station to provide medical and first aids services any serious injures or ill health incidents will be forwarded to the local hospital in nearest places around Kandahar. Contact details shall be listed in the Emergency contact list. The list will be placed to all information site boards.

All Subcontractors have, similarly, to appoint a Site Manager who has the ultimate responsibility for Health and Safety of the works on site. This person is present at all times on site when the Subcontractor (or its subcontractors and self employed persons) performs activities. It is, as minimum, required to have/recieve induction training & planned training.

Subcontractors have to appoint a Health & Safety responsible person who is at all times on site when the Subcontractor (or its subcontractors) performs activities. This person is responsible for the day to day implementation of the safety requirements on all works executed by the Subcontractor, its subcontractors and self employed persons. HSE responsible to be experienced with a degree, having additionally certificated training in safety issues.

Subcontractors have also to appoint appropriate personnel (engineers, foremen, etc) in order to carry out the works under their responsibility. It is required to have/recieve induction training & planned training.

For the works, Subcontractors have to carry out a works specific risk assessment, based on the method statement that they intent to implement for the subject work. The method statement and the safe work method may be integrated into one document.

All equipment must be in good condition, properly maintained, certified and operated as provided by the Turkish Law (No 14765/11.1.1974 part 5 - Regulation on Occupational Health & Safety- No 25370/11.2.2004 ALE. 1&2

- Minimum requirements of using work equipment). As a minimum, all site equipment must have a valid license, be insured, have reverse alarm, national check certificate and a third party certificate if applicable. No equipment is allowed on site unless all above prerequisites are met.

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All personnel on site must undergo a safe pass procedure (or day pass procedure) and no one is allowed on site if not holding a proper safe pass or day pass. Subject to the successful completion of the Safe Pass procedure, a safe pass and a Site access card will be issued.

All scaffolds must be designed, constructed and inspected according to the Turkish law (No 25370/11.2.2004 ALE. 2). Scaffolds must be inspected by a competent/discipline engineer and the supervising engineer as applicable.
In all cases of working at heights the following, amongst others, should be analyzed and considered:

- Access and egress
- Working platforms - levels – continuous protection from fall
- Stability of auxiliary equipment
- Transfer of materials and store of materials
- Equipment associated with
- Assembling and dismantling of auxiliary equipment.

For the Temporary works the Supervising Engineers have the role to calculate any auxiliary structures, design any temporary facilities, plan the work in their area of responsibility and coordinate the Subcontractors in their area of responsibility, instruct accordingly their foremen and Subcontractors and supervise that all activities in their area of responsibility are executed according to the good practice and their foremen are in place and supervise/coordinate activities and guide their team. During their course of activity Supervising Engineers ensure that health and safety matters are fully regarded as appropriate by all above functions and entities as appropriate. They keep HSE Engineer informed for any HSE issue in their area of responsibility and consult with him/her when necessary.

Permanent underground utilities to be taken into consideration before finalizing position or temporary facilities in order to avoid to relocate the later when construction the former ones.

All excavations must comply with the excavation and geotechnical studies and be inspected regularly (by competent discipline engineer) to ensure “side stability”, as well as by the supervising engineer as applicable.

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All employees on site will use at all times their Personel Protective equipments (PPE) and an Overall. Other appropriate PPE will be used as per works specific risk assessment. Mandatory PPE are the helmet, safety shoes and reflective jacket. Other PPE per case.

Environmental controls for noise, dust, sewage and wastes will be imposed as per Turkish law (see level 2 list of Legal Obligations) and the Environmental Impact Study, as aLElicable. Contractor wherever necessary will monitor noise and air quality according to the Work Specific Risk assessment.

All electrical works, including commissioning will comply with Turkish law (No 14765/11.1.1974, part 5.4) as minimum. Contractor shall aLEoint an electrical engineer on site. Subcontractors performing electrical works on site shall aLEoint an electrical engineer on site.
All lifting equipment will have a valid test certificate for good and safe operation issued by a third party for good and safe operation. Any tower cranes have to be inspected after each erection and before operation.
Gas cylinders comply fully with Turkish law and as minimum, bottles are tested and certified, always are kept upright, stored in properly designed areas and all flexible hosed are equiLEed with both flame arrestors and non-return valve.

The safety method statements and the associated works specific risk assessment will be reviewed by the Contractor. For the key method statements & risk assessments will be reviewed as well by the Client. Though, this review does not alter, minimize or affect in any way the responsibility and/or the liability of the Subcontractor or Its subcontractor.

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LOCUS

GUIDANCE ON THE LABOR LAW OF THE TURKISH REPUBLIC

(25.08.1971)

Chapter 5

Article 73. Health and Safety Conditions

Every employer shall take all necessary measures in his undertaking for the protection of the workers occupational health and safety and shall ensure that the entire plant is adequately organised in this connection. The workers shall observe all such measure and follow the rules relating to health and safety.

Every employer shall, in an appropriate manner, inform the workers of possible safety hazards and preventive measures concerning the operation of machinery undertaking.
Every employer shall, within the following two days, inform in writing the relevant regional directorate of labor of any accident occurring in the undertaking.

Article 74 Health and Safety Regulations (States Obligation of Establishing Regulations related to Various Aspects of Health and Safety)

Regulation on Occupational Health and Safety

- Compulsory Health and Safety Conditions in the Workplaces
- Health and Safety Conditions of the Employees Rest Rooms and Other Extensions
- Precautions Against Epidemics
- Precautions Against Occupational Diseases
- Preacutions Against Occupational Diseases that Results From Chemical Agents
- Precautions Against Occupational Disease that Results From Dust
- Precautions Against Occupational Diseases that Results From Physical and Mechanical Reasons

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- Precautions Against Epidemical Occupational Diseases that results from raw material that is used in the workplace
- Compulsory First Aid and Treatment Equipment's that shall be available in the workplaces
- Safety Precautions Against Fire
- Safety Precautions at the Machines and Woırk –Benches
- Safety Precautions at the Couldrons, Pressurised Containers and Compressors
- Precautions at the Large Ovens and Furnaces
- Safety Precautions at the Electrical Installations
- Safety Precautions While Using Handtools
- Safety Precautions at the Lifting Equipments
- Safety Precautions at the Conveyors
- Safety Precautions at the Vehicles
- Safety Precautions at the Tube Installations
- Safety Precautions for Lifting, Carrying, Packing and Stocking of Equipments
- Safety Precautions for Repairing and Maintenance Works
- Personal Protective Equipments

Regulation for Heavy Duty and Dangerous Works

- Lists Heavy and Dangerous Works and describes at what kind of works can the womans and the childrens who are under 18 over 16 of age work.

Regulation for Precaution Methods to be Used in Work Place Where Inflammable, Explosive, Hazardous and Harmful Materials are Used

- Precaution methods which can be aLElied in work places where inflammable, explosive, hazardous and harmful materials are used
- Safety precautions about liquified petroleum gases
- Safety precautions about magnesium and similar inflammable substances or their alloys, nitrocellulose, celluloid, carbide, acetylene, etc..
- Safety precautions about flour, fodders, and similar substances
- Safety precautions about starch and similar substances

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- Precautions about volatile and flammable gun sprays,
- Precautions about hot or cold corrosive substances
- Precautions about toxic, irritative, and hazardous substances or materials
- Attachments showing the max. allowable indoor concentrations of certain chemical parameters
- ALElicable distances of the explosives, flammables stored places to the highways, railways and settlements.

Occupational Health and Safety in Construction Works

- Safety precautions to be taken during construction works
- Safety precautions to be taken during excavation works
- Safety precautions to be taken for structure gang-ways and ladders
- Precautions for wooden, steel-framed or suspension gang-ways,etc.
- Safety precautions for moulding works
- Safety precautions in demolition works
- Safety precautions for construction machinery and equipments

Rules and Regulation about Occupational Safety Commitees

- Workplaces in which such commitees shall be formed
- Establishment of such committees, their responsibilities and authorities, their work methodologies,
- Liabilities of employers or their representatives

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HEALTH, SAFETY & ENVIRONMENT COMMITTEE

Occupational health and safety board shall be established to deal with matters involving workers' health and safety. <The undertakings in which such boards are to be established and the constitution, powers, functions and procedures of the boards are laid down in the regulation issued by the Turkish Ministry of Labour (25426/07.04.2004 "Rules and Regulations for Occupational Safety Commitees")>.

Following organizational structure shall be provided conduct of the Occupational Health, Safety & Environment rules.

- Employer's representative (Site Manager of Contractor)
- Owner's representative
- Health & Safety responsible
- Work Place Doctor
- Foremen representative(s)
- Worker representative(s)
- Personel responsible(s)
- Subcontractor(s) responsible of HSE

Occupational Health & Safety Board shall meet at least once a month in every month.In case of any occupational accident the board shall meet immediately. An agenta shall be submitted to all participants prior to every meeting (for a typical agenda form see level 2). The recorded minutes at the board meeting will be agreed, recorded & announced.

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HSE MEETINGS

There is a kick-off HSE meeting with the Subcontractor before mobilization and a regular weekly HSE meeting.

The kick-off meeting is attended by the Contractor HSE Engineer and/or Contractor Site Manager, Subcontractor's HSE Responsibles and Client's representatives. The meeting will be minuted by HSE Engineer and minutes will be agreed by the participants.

The Weekly mandatory meeting is attended by the Contractor HSE Engineer and/or Contractor Site Manager, Subcontractor's HSE Responsible and Client's representatives. As it is required per case other functions and entities (e.g. security service, designers etc) may participate.

Prior to the weekly Project HSE meeting a HSE site tour will be conducted by the Contractor and the relevant Subcontractor(s).

The meeting will be minuted by the HSE Engineer and minutes will be agreed by the participants.

These weekly meetings can be compound with the site construction meetings with safety taken up first on the agenda.

Other HSE meetings might be called in by either Contractor or a Subcontractor subject to specific issues demanding special attention.

Preconstruction meetings concerning construction, erection etc of major parts of the plant e.g. Steel structure erection, gas turbine erection etc. will be held. During Preconstruction meetings HSE matters are discussed and the Subcontractor's method statement, safe work method and Works Specific Risk Assessment are explained and analyzed by the Subcontractor. These meetings are minuted by HSE Engineer and minutes are agreed by all participants. Subject to the meeting the Subcontractor may have to revise the method statement/safe work method/Works Specific Risk Assessment.

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GENERAL DUTIES

General Duties of Employers

- Employers shall provide adequate means and organisation and shall establish a suitable programme on the safety and health of workers consistent with national laws and regulations and shall comply with the prescribed safety and health measures at the workplace.
- Employers shall so provide and maintain workplaces, plant, equipment, tools and machinery and so organise construction work that as far as is reasonably practicable there is no risk of accident or injury to health of workers. In particular, construction work shall be so planned, prepared and undertaken that:

  (a) Dangers liable to arise at the workplace are prevented as soon as possible;

  (b) Excessively or unnecessarily strenuous work positions and movements are avoided;

  (c) Organisation of work takes into account the safety and health of workers;

  *(d)*Materials and products are used which are suitable from a safety and health point of view;

  (e) working methods are employed which protect workers against the harmful effects of chemical, physical and biological agents.
- Employers shall establish committees with representatives of workers and management or make other suitable arrangement consistent with national laws and regulations for the participation of workers in ensuring safe working conditions.
- Employers shall take all appropriate precautions to protect persons present at, or in the vicinity of, a construction site from all risks which may arise from such site.

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- Employers shall arrange for regular safety inspections by competent persons at suitable intervals of all buildings, plant, equipment, tools, machinery, workplaces and systems of work under the control of the employer at construction sites in accordance with national laws, regulations, standards or codes of practice. As appropriate, the competent person shall examine and test by type or individually to ascertain the safety of construction machinery and equipment.
- When acquiring plant, equipment or machinery, employers shall ensure that it takes account of ergonomic principles in its design and conforms to relevant national laws, regulations, standards or codes of practice and, if there are none, that it is so designed or protected that it can be operated safely and without risk to health.
- Employers shall provide such supervision as will ensure that workers perform their work with due regard to their safety and health.
- Employers shall assign workers only to employment for which they are suited by their age, physique, state of health and skill.
- Employers shall satisfy themselves that all workers are suitably instructed in the hazards connected with their work and environment and trained in the precautions necessary to avoid accidents and injury to health. Induction training and periodical training shall be given to the employers at site, see section 12, level O & 1. Daily inspections be the HSE Engineer and HSE Responsible persons shall ensure the results of the training.
- Employers shall take all practicable steps to ensure that workers are made aware of the relevant national or local laws, regulations, standards, codes of practice, instructions and advice relating to prevention of accidents and injuries to health.
- Buildings, plant, equipment, tools, machinery or workplaces in which a dangerous defect has been found shall not be used until the defect has been remedied.
- Where there is an imminent danger to the safety of workers, the employer shall take immediate steps to stop the operation and evacuate workers as appropriate.

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- On dispersed sites and where small groups of workers operate in isolation, employers shall establish a checking system by which it can be ascertained that all the members of a shift, including operators of mobile equipment, have returned to the camp or base at the close of work.
- Employers shall provide appropriate first aid, training and welfare facilities to workers and, whenever collective measures are not feasible or are insufficient, provide and maintain personal protective equipment and clothing. Employers shall also ensure access for workers to occupational health services.
- Information about the site welfare facilities will be prepared by the site management.

General Rights And Duties Of Workers

- Workers shall have the right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on working procedures adopted as they may affect safety and health.
- Workers shall have the right to obtain proper information from the employer regarding safety and health risks and safety and health measures related to the work processes. This information shall be presented in forms and languages which the workers easily understand.
- Workers shall have the right to remove themselves from danger when they have good reason to believe that there is an imminent and serious danger to their safety or health. They shall have the duty so to inform their supervisor immediately.
- In accordance with national legislation, workers shall:

  (a) Co-operate as closely as possible with their employer in the application of the prescribed safety and health measures;
  (b) Take reasonable care for their own safety and health and that of other persons who may be affected by their acts or omissions at work;

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(c) use and take care of personal protective equipment, protective clothing and facilities placed at their disposal and not misuse anything provided for their own protection or the protection of others;
(d) Report forthwith to their immediate supervisor, and to the workers' safety representative where one exists, any situation which they believe could present a risk and which they cannot properly deal with themselves;
(e) Comply with the prescribed safety and health measures;
(f) Participate in regular safety and health meetings.

- Except in an emergency, workers, unless duly authorised, shall not interfere with, remove, alter or displace any safety device or other appliance furnished for their protection or the protection of others, or interfere with any method or process adopted with a view to avoiding accidents and injury to health.
- Workers shall not operate or interfere with plant and equipment that they have not been duly authorised to operate, maintain or use.
- Workers shall not sleep or rest in dangerous places such as scaffolds, railway tracks, garages, or in the vicinity of fires, dangerous or toxic substances, running machines or vehicles and heavy equipment.

General Duties Of Designers, Engineers, Architects

- Those concerned with the design and planning of a construction Project shall integrate the safety and health of the construction workers into the design and planning process.
- Care shall be exercised by engineers, architects and other Professional persons, not to include anything in the design which would necessitate the use of dangerous structural or other procedures or materials hazardous to health or safety which could be avoided by design modifications or by substitute materials.
- Those designing buildings, structures or other construction projects shall take into account the safety problems associated with subsequent maintenance and upkeep where maintenance and upkeep would involve special hazards.

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- Facilities shall be included in the design for such work to be performed with the minimum risk.
- Special attention during design will be given to safety aspects that possible will have strongly influence at the erection or safe operation of the plant and/ or personnel safety; these aspects are taken into consideration during design so to be minimized or eliminated. Any remaining aspects shall be included either in the Erection Manuals, the Hazop Study and/ or in the O&M manuals.

Subcontractors

- Prevention of accidents, incidents and protection of safety, health and welfare of all subcontractors' employees.
- The prevention of hazards to the works, the environment, third parties (e.g. employees of Contractor, employees of the customer and other (sub)contractor's employees being present on site) for as far as these hazards are under the control or are related to the activities of the subcontractor.
- Appoint a Health & Safety coordinator for the duration of the activities.
- Maintain the validity of its employee's certificates.
- Inspect the work area and the working conditions on a daily bases.
- Report accidents, near misses, incidents and occupational diseases directly to the Contractor site supervisor or site manager.
- Verifies tidiness and safety at the end of each day and after completion of the activities.
- Prevents damage to the environment related to the activities.
- Organise toolbox meetings (daily safety instruction – generally conducted prior to commencing the activities).
- The Subcontractors have to follow Contractor's security procedure strictly. No person is allowed on site unless he or she produces a valid Site access card and/or Safe Pass. Similarly no equipment is allowed on site unless a permit to entry has been granted.

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- Subcontractors are fully responsible for their subcontractors and have to assure that they have appointed their HSE function on site, similarly to their ones as per the HSE Plan requirements which are specifically presented in the HSE Plan.
- All HSE documents shall be in English. Waiver may be given by the Contractor per case. If in English they shall be translated into Turkish as applicable.

General Duties Of Health and Safety & Environment Engineer

- HSE Engineer shall:

  (a) Co-ordinate or nominate a competent person to co-ordinate all activities relating to safety and health & environment on their construction projects;

  (b) Inform all contractors/subcontractor(s) on the project of special risks to health and safety of which the HSE Engineer are or shall be aware;

  (c) Require those submitting tenders to make provision for the cost of safety and health & environment measures during the construction process.

  (d) If a major hazard on site, immediately stop the job.

- In estimating the periods for completion of work stages and overall completion of the project, HSE Engineer shall take account of safety and health & environment requirements during the construction process.
- Providing done workplace Works according to Turkish and International Occupational Health & Safety Standarts (OHSAS 18001 & ISO 14001).
- Provide making and implementation risk assessment at the workplace.
- Preparing emergency plans and provide implemantation.
- Participate to meetings of Occupational Health & Safety Board
- Preparing reports about the occupational accident and injuries.
- Asisting in the selection of personal protectives and provide to use.
- Preparing training programs and provides implemantation.
- Informing the management about unsuitabilities and provide to eliminate

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General Duties of A Class Certification Engineer

- Supervision of the worksite periodically regarding HSE issues with the legal regulations.
- Supervision of CLIENT personnel be assigned in project and provision of informative support
- Monthly trainings of the employees within the training plan (as detailed in level 2)
- Risk evaluation works
- Consistent update of health and safety management plan
- Establishing accident research reports following prospective accidents
- Provision of periodical control of Personal Files of the employees and legal suLEort
- Control / preparation of Sub Contractor contracts
- Providing information about the changes made in the legislation

INSPECTIONS AND AUDITING

Contractor HSE Engineer is intending to carry out recortable **daily inspections** on site. These cannot be detailed and exhausted inspections. This is the responsibility of the Subcontractors. Though, contractor HSE Engineer will pay attention to and put a lot of effort for coordinating activities between the various Subcontractors and inspecting the common areas. Thus, contractor may intervene in common areas check the application of procedures / instructions and remove materials, equipment etc without any notice if these consist a hazard and/or their arrangement does not comply with the Site Master Plan. Any cost for removing, cleaning etc will be born by the subject Subcontractor. Subject Subcontractor has no right to raise any claim for materials or equipment removed by the contractor under the present clause.

A **Safety Tour will be taken every week** by Contractor's HSE Engineer or Site Manager, Subcontractor's HSE Responsible or Site manager and Client (subject to his convenience) prior to the weekly HSE meeting. Checklist results are recorded in the meeting MoM.

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Ad-hoc inspection may come out at any time, subject to occasional findings, warnings etc.
The Client and Contractor (subject to their discretion) can arrange comprehensive **Audits** of the site's situation at intervals of ~6 months. All such Audits shall be recorded and documented.

A safety audit will be conducted every 3 months by an independent Third Party, aiming at providing an overall management review and assessment of the effectiveness of the HSE plan and the safety performance of the Subcontractors.

If during an inspection a high-risk activity (potential for serious injury) is captured, then it lies upon Contractor or relatively upon Subcontractor discretion to stop the activity immediately. Any costs incurred will be fully born by the entity failed to comply with safety measures. Alternatively and subject to the circumstances other action might be taken to prevent an incident.

UNSUITABILITY/ NONCONFORMANCE MANAGEMENT

Unsuitability Notification Form will be used in nonconforming behavior, root causes will be investigated (for unsuitability form se level 2).
In addition, if the unsuitability creates a high risk, the work shall be stoLEed immediately and when the unsuitability is resolved the work will be continued. Required work safety will be reestablished and the staff that made the
unsuitability will be subjected to the disciplinary procedure as per Section 10" (HSE Plan, Level O&1).

WARNING AND DISCIPLINARY FOR WORKFORCE

Supplementary to the disciplinary procedure for HSE function, for all personnel on site not complying with the requirements of the HSE Plan and the accepted Subcontractor's HSE Plan, provided that both documents have been explained to the individual and were understood, the following disciplinary procedure is followed.

For first time the individual's Safe Pass is taken and the individual has to undergo a refreshing training.

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If the individual fails to comply for second time (not particularly the same violation) then subject to the violation he/she has to take a written warning letter from the HSE Engineer.In any case he/she is expelled permanently form site after a third violation.

INCIDENT ASSESSMENTS AND REPORTING

All kinds of incidents which cause injury, illness or equipment and materials loss as well as all possible dangers and environmental incidents shall be reported and filed by the HSE Engineer with the **Incident Report.**

Subcontractors are responsible to inform (verbally) immediately any incident involving subcontractor's personnel, equipment, materials or Environment to the Contractor's HSE Engineer.

Contractor's HSE Engineer immediately informs verbally the Contractor's site manager about the incident in the case that the incident resulted in an injury or damage. Client's representative shall be also informed by the Contractor's HSE Engineer and/ or Contractor's Site Manager.

Subcontractor's HSE responsible person will draft a report and submit it to the Contractors HSE Engineer for review and signing off. For fatal incidents report submissions to the authorities within the 48 hours, for other incidents a report will be prepared within 4 days. A copy of the incident report is submitted to the site manager and from him to the Client, another copy for the HSE File.
An accident investigation report shall move in the following order.

- To go to accident place without wasting time
- Receipt of name, address and expressions from the person involved in the accident.
- To Express the names and address of witnesses
- Evidence of identifying (if needed photography)
- To record the information obtained
- Determination of the accident cause or causes (root cause analysis)
- To specify corrective measures
- Accident report preparation

An incident register and incident statistics is maintained by the HSE Engineer in monthly periods. Incident register and incident statistics is available to Contractor and Client.

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INFORMATION AND TRAINING

The following trainings will be subjected to the employees during the conduct of Project.

- Orientation / Induction trainings for all workers and staff before to start work at site.
- In the conduct of work
    - Per job training
    - Toolbox training
    - Planned training (planned training will be provided by HSE A Class Engineer)
- Workers shall be adequately and suitably:

  (a) Informed of potential safety and health hazards to which they may be exposed at their workplace;

  (b) Instructed and trained in the measures available for the prevention and control, and protection against, those hazards (see bullet 2 aboove).
- No person shall be employed in any work at a construction site unless that person has received the necessary information, instruction and training so as to be able to do the work competently and safely. The competent authority (A-Class HS certified engineer) shall, in collaboration with employers, promote training programmes to enable all the workers to read and understand the information and instructions related to safety and health matters.
- The information, instruction and training shall be given in a language understood by the worker and written, oral, visual and participative approaches shall be used to ensure that the worker has assimilated the material.
- Every worker shall receive instruction and training regarding the general safety and health measures common to the construction site, which shall include:

  (a) General rights and duties of workers at the construction site;

  (b) Means of access and egress both during normal working and in an emergency;

  (c) Measures for good housekeeping;

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(d) Location and proper use of welfare amenities and first-aid facilities provided in pursuance of the relevant provisions of this plan;
(e) Proper use and care of the items of personal protective equipment and protective clothing provided to the worker;
(f) General measures for personal hygiene and health protection;
(g) Fire precautions to be taken;
(h) Action to be taken in case of an emergency;
(i) Requirements of relevant safety and health rules and regulations.

- Copies of the relevant safety and health rules, regulations and procedures shall be available to workers upon the commencement of and upon any change of employment (safety & health rules will be available to the workers during the Induction training. Procedures, regulations or other instructions will be available to the workers during the planned trainings).
- Specialised instruction and training shall be given by the subcontractors to:

  (a) Drivers and operators of lifting appliances, transport vehicles, earth-moving and
  Materials-handling equipment and plant, and machinery or equipment of a specialised or dangerous nature;
  (b) Workers engaged in the erection or dismantling of scaffolds;
  (c) Workers engaged in excavations deep enough to cause danger, or shafts, earthworks, underground works or tunnels;
  (d) Workers handling explosives or engaged in blasting operations;
  (e) Workers engaged in pile-driving;
  (f) Workers working in compressed air, cofferdams and caissons;
  (g) Workers engaged in the erection of prefabricated parts or steel structural frames and tall chimneys, and in concrete work, formwork and such other work;
  (h) Workers handling hazardous substances;
  (i) Workers working as signallers;
  (j) Other specialised categories of workers.

- As required by national law and regulation, only drivers, operators or attendants holding a certificate of proficiency or licence shall be employed

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- to operate particular vehicles, lifting appliances, boilers or other equipment (25370/11.02.2004 article 7 of "Health and Safety Requirements for using work equipments").

No person shall be employed in any subcontractors work at a construction site unless that person has received the necessary information, instruction and training (please see Safe Pass procedure in level 2).

SAFE PASS

All personnel on site assigned to work in different jobs have to undergo Safe Pass Procedure. All others 3rd persons (visitors) will undergo a day pass procedure

The Subcontractor has to apply/notify the Contractor for safe pass, following the relevant procedure (see relevant procedure in level 2). Subcontractor remains fully responsible for the safe pass provided, dissemination and proper use.

The Safe Pass is personal and not transferable. If stolen or lost must be reported. If borrowed, then both the borrower and the lender will not again be allowed on site.
The Safe Pass provides;

- Individiual basic data
- Safety rules
- Information about training date and title, LEE Provided, medical certificates

For 3th persons "Occupational Health and Safety Guidelines for Visitors" (information about basic site safety rules required LEE etc.) will be signed for the visitors coming to the site during the Project.

3th Persons;

- 3rd Persons will be informed about the General Site Occupational Health & Safety Rules before entering the site.
- After entering the site, they will not be alone
- Transport in the site will be provided by safe walkways.

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- 3rd Persons will use Personal Proteciton Equipment (helmet, reflection shirts etc) at construction site.
- In case of emergency, It will be explained to them how to move.

Site Equipment Pass

For a site equipment to be allowed on site an equipment pass has to be issued by Contractor. To issue an equipment pass the following procedure must be followed. Subcontractor submits all necessary documents to Contractor's HSE Engineer for checking. Documents include operation license, operator license, insurance certificate, national check certificate, as applicable. If HSE Engineer satisfied then a visual check might be conducted by the security at the gate. The Subcontractor's HSE Responsible must anyway perform the visual check. If both satisfied the equipment pass is released. If not, then Subcontractor has to arrange for any mishaps before a new request is made. To avoid delays Subcontractor shall ensure that all documents arrived on time to the security desk (at least 24 hours before equipment arrival).

PERMIT TO WORK

Some works specified in the Risk Assessment Plan will be executed under a permit to work system. Work permits and control forms will be applied for in Project risks which will encounter in the conduct of Project. Works will not be done without control forms and work permits.

According to the HSE Plan, some specific works have to be executed under a permit to work system. When the approval is clearly for the HSE Engineer, works will commence.

When permit to work required in the risk assessment, usually concerns following categories:

- Hot Work (during commissioning, for works near to sensitive equipment, or near to equipment or tubing including natural gas, near to equipment which include fuel, dangerous or under pressure liquids

and/or gas, near to activated or operative equipment : ex electric panels, driving or rotating units etc)
- Specific Excavations
- Confined Spaces
- Electrical works undervoltage

The permit to work has to include responsible person, the necessary HSE measures, correct application and duration.
No works will commence unless the HSE Engineer has checked and verified that personnel, equipment, materials, access, egress and working area are all in safe condition.

PERSONAL PROTECTIVE EQUIPMENT

Where adequate protection against the risk of accident or injury to health, including exposure to adverse conditions, cannot be ensured by other means, suitable personal protective equipment and protective clothing, having regard to the type of work and risks, shall be provided and maintained by the Contractor and Contractor's each subcontractors for their employees, without cost to the workers, as may be prescribed by national laws or regulations.

Subcontractors are responsible for to ensure LEE for subcontractor's employees. HSE Engineer checks and controls the using of LEE at site for different specific works. Personal protective equipment and protective clothing shall comply with standards set by the competent authority, taking into account as far as possible ergonomic principles.

Employers shall provide the workers with the appropriate means to enable them to use the individual protective equipment and shall require and ensure its proper use.

A competent person having a full understanding of the nature of the hazard and the type, range and performance of the protection required shall:

(a) Select suitable items of personal protective equipment and protective clothing;
(b) Arrange that they are properly stored, maintained, cleaned.

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Workers shall be required to make proper use of and to take good care of the personal protective equipment and protective clothing provided for their use. Workers shall be instructed in the use of personal protective equipment and protective clothing by the pre-job, informative and toolbox trainings.

For people not using LEE, though provided with, they will phase the penalty of exemption from site as per disciplinary procedure for the workforce.
A color code will be aLElied for helmets as follows:

White for Contractor and Subcontractor (engineers) and visitors
Grey for Security
Blue for Subcontractor's foremen
Red for Subcontractor's safety function
Yellow for Subcontractors personnel, including subcontractors personnel and self-employed

Note: However aLElicable at site colour code ystem to be agreed and announced (if different) by Site Manager.

There are diffirent types of using personal protective equipment.

Head Protection

Employees working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, shall be protected by protective helmets. Helmets for the protection of employees against impact and penetration of falling and flying objects.(EN397 Standards)

Eye and Face Protection

Employees shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents. (EN166, EN169, EN170, EN171, EN172, EN175, EN379 Standards)

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Safety Belts, Lifelines And Lanyards

Lifelines, safety belts, and lanyards shall be used only for employee safeguarding. Any lifeline, safety belt, or lanyard actually subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding (EN341, EN353, EN354, EN355, EN358, EN360, EN361, EN362, EN363, EN364, EN365, EN365 Standards)

Hand Protection

Employers shall select and require employees to use aLEropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes. (EN420, EN388, EN374, EN407, EN 511 Standards)

Foot Protection

The employer shall ensure that each affected employee wears protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects or objects piercing the sole. (EN344, EN345, EN347 Standards)
Despite entry made into the Safe Pass for LEE provided to the employees, for recording LEE provision when receiving or replacing LEE(s), personnel shall sign for receipt, try them on for comfort, acceptance and acknowledgment of training for LEE use. Nevertheless Subcontractors and their subcontractors may use their own system for controlling this process. HSE Engineer has to monitor this process and report accordingly to the Subcontractor's HSE Responsible or/and Subcontractor's Site manager. Records must be available for review by the Contractor.

Note: Mandatory LEE are safety helmet, high visibility vest or jacket and safety boots. Additional LEE in accordance to the specific work (e.g. gloves, glasses, flameproof overalls etc).

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HEALTH SURVEILLANCE

An occupational medicine doctor shall be deployed when the employees number reach 50 and above according to Turkish law which is issued at 15.08.2003 Regulations "Health and Safety Units and Common Health and Safety Units". Under this regulation doctor's working period is minimum 36 hours supervision of health and additional for each10 employees 90 minutes per year periodical examinations, trainings.

Contractor appoints an Occupational medicine doctor to supervise health of their employees. Occupational medicine doctor shall examine clinically, all employees. If further examinations are required, he/she shall notify Employer accordingly. If change of work position is required then he shall notify Employer accordingly.

Occupational medicine doctor will maintain medical files of the personnel on site and will treat all personal information with due care and confidentiality. No one can have access to the personnel medical file. Occupational medicine doctor shall verify that a person is suitable, healthy (mentally and physically), for a job given in order to proceed with the issuance of the person's safe pass. This piece of information is not considered to be classified under the personal data protection law.

All persons shall undergo a through medical examination (by a site external or internal doctor) according to the relevant provisions of the Turkish law and the judgment of the Occupational medicine doctor will be followed prior to the issuance of a Safe Pass Site ID.

An ambulance shall be available for accidents (as shown in the site information boards).

FIRST AID

Contractor shall insure the availability of medical personnel for advice and consultation on matters of occupational health. Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury. Contractor establishes full time manned firt aiders through ten percent of total employees at basic life suLEort level.

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Contractor and subcontractor(s) shall be responsible for ensuring that first aid, including the provision of trained personnel, is available. Arrangements shall be made for ensuring the removal for medical attention of workers who have suffered an accident or sudden illness.According to this Contractor and subcontractor(s) shall establishe full time manned first aiders through ten percent of total employees at basic life support level.

The manner in which first-aid facilities and personnel are to be provided are prescribed by Turkish law (No 24762/22.5.2002 First Aid Regulation) or regulations, and drawn up after consulting the competent health authority and the most representative organisations of employers and workers concerned.

Suitable rescue equipment, as required by the doctor who will use them, including stretchers shall be kept readily available at the infirmary.

First-aid kits or boxes, as appropriate, shall be provided at the workplaces, including isolated locations such as maintenance gangs, and on motor vehicles, equipment, and be protected against contamination by dust, moisture, etc.
First-aid kits and boxes should not contain anything besides material for first aid in emergencies. First-aid kits and boxes shall contain simple and clear instructions to be followed, be kept under the charge of a responsible person qualified to render first aid and be regularly inspected and kept properly stocked.

If a minimum number of workers as prescribed are employed in any shift, at least one suitably equipped first-aid room or station under the charge of qualified first-aid personnel or a nurse shall be provided at a readily accessible place for treatment of minor injuries and as a rest place for seriously sick or injured workers.

Also the First aid infirmary will provide consultation for sudden illness, minor wounds due to work etc. The infirmary will be supported by a doctor (the appointed occupational medicine doctor for the personnel of the Contractor and Subcontractor members), visiting the site regularly for reviewing, pharmacy, incidents book, medical stuff, providing training if necessary and reviewing infirmary performance.

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All visits to the infirmary are recorded first in a hard database. Doctorl is obliged to monitor the progress of all injured or ill health persons transferred to a hospital.
Infirmary will be manned at all working hours with a qualified nurse/health officer.

HOUSEKEEPING

All rubbish and wastes shall be put into proper waste containers. All these containers must be emptied in a regular basis to keep the site in a clean, safe and hygienic condition. Disposal of wastes will be done at a licensed landfill in accordance with the Turkish law (No 25755/14.3.2005). A waste disposal Subcontractor is appointed to collect, replace and transfer waste containers.

More than one Subcontractor may be awarded a waste management treatment. They shall all have valid license according to the Turkish law and for any transfer they shall issue a receipt/report.

Considerations shall be made for the following:

- Domestic wastes (food wastes and the alike) will be littered only in containers with a firm cover to avoid birds feeding or other animals on site.
- No refuel should be taken on site.
- To refuel small (portable) generators, care will be taken to avoid spills.
- Packaging materials will be binned same day of unpacked.
- Residuals, debris etc will be cleaned out regularly and littered appropriately.
- Scrap will be selected and stored separately. Scrap shall be removed periodically.
- Chemicals shall be disposed separately. The Subcontractor shall collect, transfer and dispose according to the Turkish law all wastes produced by its activities.
- For flash outs, wash outs etc waters will be collected and undergo a water treatment.
- For cement mixers specifically a wash out area is required.
- To leave the site, all equipment, trucks etc should have tires clean from mud. (Cleanliness maintenance, if needed, will be defined by Site Manager)

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The Site Layout Plan must be prepared by Contractor in cooperation with Subcontractors. To include all waste containers locations should Subcontractors' needs excess the capacity of this plan in either quantity or/and type of waste containers, it is the subcontractor's responsibility to provide and manage additional waste containers. All Subcontractors have to respect this plan.

Other arrangements regarding good Housekeeping include, but not limited to

- Materials and tools must be stored in designated areas or storehouses and they must never be left at other locations.
- Cars, equipment etc must be parked in designated areas only.
- Specifically the Environmental Impact Assessment study requirements will be addressed as applicable.
- Any materials stored in not designated areas may be relocated at Subcontractors cost by the Contractor.
- All chemicals, fragile materials etc and generally materials that may cause harm when in contact, inhaled or swallowed shall be properly stored providing adequately protection and signage.
- Pallets will be stored properly at leveled areas to avoid slip, collapse etc and any damage or injury.
- Subcontractors shall provide enough dressing up room.
- Subcontractors shall provide enough quantity of drinkable water and label the areas properly. These areas shall be hygienic.

EMERGENCY

The purpose of an Emergency Action Plan (see relevant emergency proedure in level 2) is to make an operational plan which is used at the beginning of an emergency. The Emergency Action Plan will be developed and maintained by the Contractor's HSE Engineer. All subcontractors have to contribute accordingly and comply with it.

The revised Emergency Action Plans will be issued during the course of the work to all employees. The following Emergency Action Plan will be declared at prior and will be revised during the project.

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- Fire Protection Action Plan
- Earthquake Action Plan
- Incident of personnel Action Plan
- Incident of vehicular Action Plan
- Leakage Action Plan

Subject to the associated risk for emergencies and the complication of the evacuation procedure, Emergency Drills will be performed. With the Project reaching the precommissioning tests, Emergency Action Plan has to be fully revised to capture the requirements of a plant ready to be commissioned and operated. Emergency Drills are scaled in 6 months its one in different emergency state.

FIRE PROTECTION AND PREVENTION

HSE Engineer maintains the Project Fire Plan (see relevant emergency proedure in level 2), as part of the Emergency Procedure in consultation with the Subcontractor's HSE Responsible. Project Fire Plan defines all fire safety arrangements at the time including:

- Areas of high fire risk
- Fire team
- List of fire extinguishers
- List of other fire fighting arrangements (e.g. local fire department authority own fire cars etc.)
- Inspections
- Proactive arrangements for fuels, fuelling, wastes, chemicals etc
- External services
- Training
- Drills
- Assembly points

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Emergency Response Teams

Emergency Response Teams shall be created under the title of Fire Fighting, Rescue, Safeguarding-Communication, First Aid, Energy Resources Conservation and Transportation. Fire Fighting and Rescue teams shall be created with minimum 3 person and Safeguarding and First Aid teams shall be minimum 2 person.

The Emergency Response Teams shall be created as the table below which are specialized and responsible for the work accident, fire, earthquake, leakage and sabotage.

Fire Fighting Team

The persons which are aLEointed under Emergency Response Team List to be charged with Fire Figting and Fire Fighting Emergency Plan. They are charged to perform extinguish action for possible fire.

Rescue Team

The persons which are aLEointed under Emergency Response Team List to be charged with Rescue, act to recovery of persons under danger .

Safeguarding-Communication Team

The persons which are aLEointed under Emergency Response Team List to be charged with Safeguarding-Communication, act to inform concerned persons which are listed in Emergency Phone List, provide environmental safety, allay panic and control evacuation of emergency area

First Aid Team

The persons which are apointed unter Emergency Response Team List to be charged with First Aid, act to inform medical establishment and aLEly first aid, up to profesional medical teams arrival.

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Transportation Team

The drivers which are aLEointed unter Emergency Response Team List to be charged with Transportation, act to transport injured people to the nearest hospital.

Emergency State Equipments

All Equipment which will be used at the emergency state have been defined under “Emergency Procedure”. All equipment are periodically checked by the HSE Engineer for maintenance and control.(E.g: Fire extinguisher, tube charge and eye wash bath control) These equipments are featured on “site layout” and declared to all personnel. (E.g: Alarm systems, fire extinguisher, eye wash bath, first aid kit, power resource, evocation roads) All fire extinguishers will be brought to the site charged. Therefore part of the fire extinguishers needs to be recharged during the Project period annually following the regulations. Weekly inspection will be achieved in the HSE Engineer Resposibility. Every person on site must be trained in basic fire-fighting rules and actions, in using of fire extinguishers and in the evacuating procedure. Subcontractors will offer part of the fire extinguishers needed for training. Machines, and vehicles are covered with apropriate fire extinguishers,.The electrical panels are supportedby a 6 kilos dry powder fire extinguisher. For hot works minimum two 6 kilos dry powder fire extinguishers at the area.

Training

All personel which is charged on Emergency responce teams have to be trained about that duty. This training must be revised every 6 month.
All persons which are in First Aid Team have to be certified.

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ELECTRICAL SAFETY

Electrical installations in shafts and tunnels shall comply with the relevant Turkish laws or regulations (see list in level 2).The site overall electrical safety is regarded by the Contractor. The Contractor assigns this task to a qualified electrical engineer who is responsible for:

- Arrangements from national power network to the site transformer(s)/substations;
- Supplieson site; and
- Review site's electrical plans (network lines, transformers, electrical boards).

He/she performs regular inspections of the electrical installations and for recording any finding and recommendations uses a check list.
Access to the electrical panels is restricted to authorized personnel only. Panels are kept locked at all times.

Before construction is commenced and during the progress thereof, adequate steps shall be taken to ascertain the presence of and to guard against danger to workers from any live electrical cable or apparatus which is under, over or on the site (see relevant excavation procedure in level 3).

The laying and maintenance of electrical cables and apparatus on construction site shall be governed by national laws and regulations (No 14765/11.1.1974, part 5.4.).

Adequate precautions shall be taken to prevent installations from receiving current at a higher voltage from other installations.

Suitable warnings shall be displayed at all places where contact with or proximity to electrical equipment can cause danger.

Electrical installations shall be inspected and tested and the results recorded in accordance with Turkish laws or regulations (No 14765/11.1.1974, part 5.4.).

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Extension cables must not be open connected to each other; the best practice is using proper extension rolls.

Earthling/grounding of the electric equipments/tools is very important.

Protection systems (breakers or similar) to be used at the electrical tools. Similarly Subcontractors subject to their scope of work, they have to appoint an electrical engineer/technician responsible for the Subcontractor's and their Subcontractors electrical installations and works.

For plant testing and start up a log out tag out (LoTo) procedure has to be in place under the control of the Commissioning Manager. The LoTo is subject to review by Contractor before testing starts. All Subcontractors involved in the said activities will be trained in the LoTo procedure as well as any other involved in activities affecting or affected by the LoTo procedure.

LIFTING OPERATIONS

All lifting equipment shall have a valid third party certificate and be operated by a competent person (operator).

For all lifting operations the following will be considered:

- Experienced and trained slingers will be used;
- Lifting equipment capacity is checked;
- Travel of load is identified and creates no risk to structures and/or load and/or lifting equipment and lifting gear;
- Lifting equipment and lifting gear is regularly inspected;
- Area of lifting and travel will be defined and no works will be carried out within it;
- Safety of nearby structures will be considered and ensure that load will not damage them;
- Lifting equipment is properly cited and no overturn risk exists.

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No lifting equipment is allowed on site or to start operation after being assembled unless:

1. all documents and certificates have been checked by HSE Engineer
2. equipment are inspected visually by the HSE Engineer
3. A competent operator is available on site.

For mobile lifting equipment checks are performed at the gate area before entering the site. For tower cranes a third party certificate is required after erection.

HSE Engineer review of documents is necessary. Visual inspection is upon HSE Engineer discretion.

For very specific cases such as heavy loads, very big loads, long travel, other operations in the area of lifting operations and in general any lifting operations other than routine ones and for all tower cranes a Crane Operations Plan is required. As well as appointment of a qualified and experienced supervisor responsible for lifting operations by each Subcontractor. Works Specific Risk assessment shall be included in the Crane Operations Plan.

For operations requiring coordination between subcontractors, the competent person can be the Subcontractor's HSE Responsible. For operations taken by the Subcontractors' personnel the competent person can be the Subcontractor's HSE responsible

In both cases, the crane supervisor may undertake the role of the competent person subject to instructions of the Subcontractor HSE responsible.

All lifting equipment must have thorough examinations annually and be monitored every 3 months. Slingers must be both trained and experienced. All lifting operations shall be planned by a qualified and experienced person and supervised by a trained and experienced Lift Supervisor.

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HSE INFO FROM THE SULELIERS OF HAZARDOUS MATERIALS (MSDS)

All suppliers shall provide all necessary HSE information such as MSDS, safety instructions for handling, storing, testing, operating of the materials they supply etc.

HSE Engineer will evaluate the HSE information and issue relevant instructions as appropriate. When in doubt he/she consults with the supplier.

MSDS form for all chemicals will be provided, also all chemicals needs to be stored in bounded area, and it should not have rain water in, well ventilated and with proper, classification of chemicals, labeling etc ...)
Pressurized bottles shall be stored in a designated fenced open area.

SITE LAYOUT PLAN

A Site Layout Plan incorporating all information of temporary facilities as well as construction areas and permanent installation will be developed and maintained by Contractor in consultation with Subcontractors. Subcontractors are responsible to provide all necessary information regarding their area of work with respect to their scope of works and comply with the Site Layout Plan. They shall explain it to their personnel and subcontractors. This plan is subject to changes according to the environmental plan.

The Site Layout Plan shall give information on:

- Site gates
- Security services
- Site offices
- Storage areas
- Evacuation master areas for emergencies (properly labeled)
- Traffic arrangements
- Parking areas
- Wastes containers
- WC and washing arrangements
- Canteen
- Change rooms
- Electrical panels

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- Tower cranes
- Networks (power, water, telephone)
- Sewage
- Lay down areas
- Fire systems
- Areas of particular risk/concern
- As sensibly areas etc....

The Site Layout Plan is a working document and must be kept updated. This is the responsibility of Contractor. The updated Site Layout Plan must be communicated and explained to Subcontractors and subcontractors' personnel.

Permanent underground utilities to be taken into consideration before finalizing position or temporary facilities in order to avoid to relocate the later when construction the former ones.

For traffic, speed limit is 20km/h (Signs will be provided). Violations lead to expel from the site immediately.

SECURITY

Contractor establishes a security service for the whole site. The security service operates under the provisions of the HSE Plan.
The security service is responsible for:

- Controlling entry to site.
- Operating the gates
- Keeping all operable gates manned at all times
- Patrolling the site regularly and every night twice all perimeter
- Performing checks at the gate
- Removing personnel from site upon HSC instruction or HSRP instruction.

At each shift security service will be managed by a shift manager who reports to the Contractor.

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RISK ASSESSMENT ALELICATION METHOD

A risk assessment is the systematic identification of potential hazards in the work place by personnel as a first step to controlling the possible risks involved. The risk assessment shall assess the risk that may be present in all work activities, and may identify particular areas for more detailed 'specific' assessments.

Risk assesment within the Work Flow Plan about the Project will be made before work begins and will be followed during the conduct of Works. The risks which arise during the conduct of Works, will be instantly analyzed and the risk assessment table updated.

Subcontractor has to prepare a method statement. Method statement has to be reviewed by the Subcontractor HSE Responsible to identify and assess the risks and define the safety measures and the safe work method.

Based on the findings and output of the risk assessment, hazards will be communicated to the personnel via induction and specific training. In fact this process has to be completed during the specific training and induction required for the safe pass.

Possibility:

5 Very-high	(it is expected to be formed. No control system), one a week/ each day
4 High	(it is possible to be formed. It is not for sure to check or limited control and insufficient), monthly
3 Medium	(it could be formed but unexpected. There is very minimum possibility to check), once a year or twice
2 Low	(it is thought that the possibility has been deminished. The control system is available), once for several years
1 Very Low	(it is not expected to be formed. The sufficient control has been provided), hardly ever.

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Effect (Magnitude):

5 Deadly serious	Death
4 Serious	Serious injury, dismemberment, job illnesses, sustained unemployment
3 Medium	Injuries which require the treatment, inpatient treatment, short time incapacity to work
2 Rare	The case which will be in need of first aid, outpatient treatment
1 Very rare	Does not cause any vacant lot and not require the first aid

Risk = Possibility x Effect (Magnitude)

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	EFFECT (MAGNITUDE)				
POSSIBILITY	1 (very slight)	2 (slight)	3 (medium)	4 (serious)	5 (deadly serious)
1 (very low)	1 Simple risks	2 Low	3 Low	4 Low	5 Medium
2 (low)	2 Low	4 Low	6 Medium	8 Medium	10 High
3 (medium)	3 Low	6 Medium	9 Medium	12 High	15 High
4 (High)	4 Low	8 Medium	12 High	16 Very high	20 Very high
5 (Very high)	5 Medium	10 High	15 High	20 Very High	25 Unbearable

I. Priority dangers	II. Priority dangers	III. Priority dangers	IV. Priority dangers
25, 20, 16	15, 12, 10	9, 8, 6, 5	4, 3, 2

According to the identified priority degree and the resources that will be allocated by the employer, the assessments of the primary risks among others shall be decided upon the following method:

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I. Primary Dangers:

As a result of the assessment, the subjects which have been graded as 16 (including) and more than 16:

- All applications shall be checked periodically and these shall be reported to the management.
- The danger shall be under control.
- The documented procedures/instructions shall be composed for checking inspection.
- The monitoring and measurement plan shall be prepared and recorded as well.
- The amendatory and preventive activities towards redevelopment shall be identified, documented and implemented as well as followed.
- It shall be targeted to reduce the primary dangers to the accepted level after checking inspection.
- If possible, the numeric tracking of the redevelopments shall be followed and recorded.
- The trainings which are essential for the staff shall be provided.
- All applications shall be checked periodically and these shall be reported to the management.
- The work shall be stopped immediately.

II. Primary Dangers:

As a result of the assessment, the subjects which have been graded over 9 and under 16:

- The danger shall be controlled.
- The documented procedures/instructions shall be composed for checking inspection.
- If possible, the monitoring and measurement activities shall be provided and records shall be kept.

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- The amendatory and preventive activities towards redevelopment shall be identified, documented and implemented as well as followed.
- It shall be targeted to reduce the secondary dangers to the accepted level after checking inspection.
- The trainings, which are essential for the staff, shall be provided.
- All applications shall be checked periodically and these shall be reported to the management.

III.Primary Dangers:

As a result of the assessment, the subjects which have been graded as 9 (including) and more than 4:

The measurements have been defined in the implementation part and implementation controls have been made. The related trainings shall be provided to staff. It shall be targeted to reduce the third dangers to the accepted level after checking inspection.

IV.Primary Dangers :

As a result of the assessment, the subjects which have been graded as 4 and under 4 :

The measurements have been defined in the implementation part and implementation controls have been made.

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SAFETY SIGNS

Signs and symbols required by this subpart shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

Danger Signs

Danger signs shall be used only where an immediate hazard exists. Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording.

Caution Signs

Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices. Caution signs shall have yellow as the predominating color; black upper panel and borders: yellow lettering of "caution" on the black panel; and the lower yellow panel for additional sign wording. Black lettering shall be used for additional wording.

Exit Signs

Exit signs, when required, shall be lettered in legible red letters, not less than 6 inches high, on a white field and the principal stroke of the letters shall be at least three-fourths inch in width. Safety instruction signs, when used, shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign shall be black letters on the white background.

Directional Signs

Directional signs shall be white with a black panel and a white directional symbol. Any additional wording on the sign shall be black letters on the white background.

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Traffic signs

Construction areas shall be posted with legible traffic signs at points of hazard.

MOBILE PHONES and COMMUNICATIONS

In site Communication shall be provided with the wired and mobile phone conduct of the Project. Emergency contact numbers will be announced for all employees in the site. Dangerous areas information will be provided with the marking system.

No restrictions in use of mobile phones have been identified other than general ones such as no use of mobile phones when:

- operating an equipment;
- working at heights;
- refuelling;
- in the vicinity of electronic equipment;
- on a portable ladder;
- in confined spaces;
- working with gases;
- Driving;

It will be announced to all employees to not use mobile telephones while working as above, if anybody will be detected, discipline procedure shall be implemented.

MONTHLY HSE ACTIVITY REPORTS

Subcontractor must issue a monthly HSE report. Monthly HSE report shall incorporate the following information:

- Executive summary
- Major actions during the reporting period
- Areas of concern - proposals
- Objectives achieved
- Objectives not achieved and why
- Objectives for next period
- Statistics
- Other

Contractor issues a HSE monthly report to Client, incorporating all above fields.

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SAFETY OF WORKPLACES SUMMARY

All appropriate precautions shall be taken:
(a) to ensure that all workplaces are safe and without risk of injury to the safety and health of workers;
(b) to protect persons present at or in the vicinity of a construction site from all risks which may arise from such site.

All **openings** and other areas likely to pose danger to workers will be clearly indicated.

Adequate and safe means of access to and egress from all workplaces shall be provided, indicated where appropriate and maintained in a safe condition.

A suitable **housekeeping** programme shall be established and continuously implemented on construction site which shall include provisions for:

(a) the proper storage of materials and equipment;
(b) the removal of scrap, waste and debris at appropriate intervals.

Loose materials which are not required for use shall not be placed or allowed to accumulate on the site so as to obstruct means of access to and egress from workplaces and passageways.

Workplaces and passageways that are slippery owing to ice, snow, oil or other causes shall be cleaned up or strewn with sand, sawdust, ash or the like.

Adequate precautions shall be taken such as the provision of fencing, look-out men or barriers to protect any person who might be injured by the fall of materials, or tools or equipment being raised or lowered.

Where necessary to prevent danger, guys, stays or supports shall be used or other effective precautions shall be taken to prevent the collapse of structures or parts of structures that are being erected, maintained, repaired, dismantled or demolished.

All openings through which workers are liable to fall shall be kept effectively covered or fenced and indicated in the most appropriate manner.

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As far as practicable, guard-rails and toe-boards in accordance with national laws (No 14765/11.1.1974, art. 14 & 15.) and regulations shall be provided to protect workers from falling from elevated work places. Wherever the guard-rails and toe-boards cannot be provided:

(a) Adequate safety nets or safety sheets shall be erected and maintained; or

(b) Adequate safety harnesses shall be provided and used.

Construction site in built-up area and alongside vehicular and pedestrian traffic routes shall be fenced to prevent the entry of unauthorised persons.

Visitors shall not be allowed access to construction sites unless accompanied by or authorised by a competent person and provided with the appropriate protective equipment.

Where natural lighting is not adequate to ensure safe working conditions, adequate and suitable lighting, including portable lighting where appropriate, shall be provided at every workplace and any other place on the construction site where a worker may have to pass.

Artificial lighting should, as far as practicable, not produce glare or disturbing shadows. Where necessary to prevent danger, lamps shall be protected by suitable guards against accidental breakage.

The **cables** of portable electrical lighting equipment shall be of adequate size and characteristics for the power requirements and of adequate mechanical strength to withstand severe conditions in construction operations.

TRANSPORTATION

All Subcontractors and their suppliers have to use the national road network to transport any materials to or from the site. Transportation must be made with due care to avoid damages to the road network, the environment and adjacent properties.

With regard to vehicular accidents only national roads are to be used unless a permit has been given.

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WORKING AT HEIGHT

As a high risk activity, it is important that any height work operation is pre-planned. As falls are major causes of accidents, precautions must be taken, either to prevent a person from falling or, if that is not practicable, to prevent the fall from leading to serious injury.

Suitable equipment shall be provided to give safe access to high areas of work, for example:- ladders, tower scaffolds, independent scaffolds, mobile working platforms, etc.

Where it is necessary for a person to kneel or crouch near the edge of the high area, an intermediate guard-rail shall be provided unless other precautions, such as the use of a safety harness, are taken. On a large area, where work does not have to be carried out at or near the edge, a simple barrier, consisting of crossed scaffold tubes suLEorting a tubing guard-rail, may be used to limit the extent of the working area. Such barriers shall be positioned at least 2 m from the edge and work should be closely supervised to ensure that persons do not go outside of the designated area.

All openings in roofs shall be protected by guard-rails and toeboards, or by substantial covers which must either be fixed or suitably marked. It is strongly recommended that covers are both fixed and marked.

Barriers shall be high and strong enough to stop a person who is rolling or sliding down a roof slope. Platforms shall be positioned so that they will stop a fall from the roof. An intermediate guard-rail, or other barrier, will be needed where persons need to kneel or crouch near the edge. The need for a barrier at the gable edge shall also be considered. ALEropriate precautions against falls will be determined by the type of roof and the nature of the work to be carried out.

On most sloping roofs, suitable roof ladders or crawling boards are essential. Where work is of short duration and edge protection is not provided, roof ladders shall always be used. Roof ladders and crawling board shall be purpose made for the job on site. They shall be strong enough to suLEort persons when spanning across the suLEorts and be secured or so positioned as to prevent movement. The anchorage at the top of the ladder shall not rely

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on the ridge caLEing, which may break away from the ridge or, in case of half-round ridge tiles, prevent an anchor board from getting a good grip. The anchorage shall, whenever possible, bear on the oLEosite slope, or be secured by other means such as rope. Eaves gutters of the half round or orgee type, shall never be used as a footing, or to suLEort the roof ladder as they are not strong enough.

In some cases, a working platform, fitted with guard-rails and toeboards, situated on the roof, may be used as an alternative to a barrier or platform at the roof edge.

This aLElies particularly where the steepness of the slope or the type of surface could rise to an insecure foothold.

The aim shall always be to provide a safe place of work but, when working on roof areas, this may not always be practical, in such cases, the use of safety harnesses or belts shall be aLEropriate provided suitable anchorage points capable of withstanding any anticipated shock load are available.

The effect of adverse weather conditions must be anticipated and suitable precauations taken. Rain, ice or snow can obviously increase the risk of sliLEing and a roof shall be inspected for such hazards each day, before work is permitted to start. Windy conditions can also be dangerous.

Only persons who have been suitably trained and experineced are employed on such work.

Scaffolding shall only be erected/adjusted/dismantled by qualified competent Scaffolders. Any area of scaffolding which is not in good order, must be guarded off from areas required to be used and have 'Scaffolding incomplete – do not use' sign displayed on it.

Scaffolding shall be inspected daily by a competent person and after an adverse condition. All working platforms above 1,8 metres where it could be possible for material/equipment to fall must be fitted with toeboards to the outside edges and the ends of the platforms. The toeboard height should not be less than O.15 metres. Guard-rails are required to be fitted to all working

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platforms which are above the height of 1,8 metres where it could be possible for someone to fall. All ladders must be secured into position preventing them from sliLEing/moving. The ideal angle for a ladder is 4 (vertical) to1 (horizontal) ratio degrees. Safe opening must be provided in guard-rails and toeboards for unobstructed ladder access. Ladders must be extend at least 1.05 metres above the landing level for adequate handhold.
Damaged ladders must not be used.

WEATHER CONDITION

As weather conditions in Kandahar are severe during the winter period, Subcontractors must make the following arrangements, as minimum:

- Provide enough capacity of rest area with heating facilities;
- Provide enough number of pumps;
- Provide shaded areas for protection of material, equipment e.t.c;
- Ensure supervision of work areas after heavy rain;
- Make arrangements for work at low temperature
- Ensure appropriate drainage for rain water;
- Ensure appropriate temperatures for activities influenced by weather (e.g. welding, tie ins etc);
- Ensure appropriate temperatures for materials sensitive to low temperatures;
- Have in place a plan to commence activities after adverse weather.
- Provide functional personnel protective equipment related to weather conditions.

Above list is not exhausted and other arrangements might be required before, during or after the period of adverse weather.

ALCOHOL AND DRUGS

Alcohol is strictly forbidden on site at any time, either before/after work or during the working hours.
All kind of drugs are not allowed on site. Any medications taken under a doctor's prescription are allowed subject to registration with infirmary after a prescription check. The doctor of the Company might be consulted in case of contradictions between disease and work requirements. Smoking is forbidden on site. There will be designated areas for smoking (relevant signs will be provided and the smoking areas will be defined by Site Manager).

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HSE PROCEDURES

The HSE Plan provides the HSE procedures for the project. The minimum requirements for the HSE procedures are set out in the above paragraphs. Subcontractors may develop their own procedures fully satisfying the HSE Plan provisions or adopt the ones provided in the HSE Plan and apply them as applicable. The Subcontractors minimum requirements must be equivalent to, or better than,
the HSE Plan minimum requirements.

For all procedures herein below it is mentioned that:

- Either a formal written procedure is produced and it is already included in the level 2
- Or a formal written procedure will be produced and included in level 2 when all pending issues will be finalized

WORKING INSTRUCTIONS

For their activities on site, Subcontractors shall develop a detailed safe work method, based on the methodology of the work, the detailed works specific method statement and the associated risk assessment.
The safe work method comprises:

- a short description of the work, broken down in steps-tasks/subtasks
- The associated hazards and the control measures (based on risk assessment)
- Responsibilities (based on Subcontractor's organisation)
- The major points (in bullets-training material)
- The checklist. Checklist is mandatory and HSE Engineer shall conduct a checklist inspection per activity every week as minimum.

Attention must be paid to the following:

- Check all working area and materials are in place prior to work commencement

- Ensure all personnel involved in work activities recive the tool box instructions prior to work commencing

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- Ensure that vehicle and equipment are located such that escape routes are unimpeded/not blocked.
- Erect signs and barriers at work location
- Area has to be clear from non essential personnel not involved in activity

HSE Plan Level 3 will include these HSE works instructions based on the Project.

ENVIRONMENTAL PROTECTION

Contractor and his subcontractors are fully responsible for environmental protection and disciplinary procedures in case of incidents.
Contractor and his subcontractors have to take all the appropriate measures and provisions to prevent any soil and water contamination, air pollution or noise pollution during construction phase. An environmental Impact Assessment study has been executed and environmental terms have been defined and approved.

As minimum the following must be regarded by Contractor / Subcontractors:

- Training in general Environmental issues
- Manage of wastes
- Disposal of wastes in aLEroved areas (ALEroved by Republic of Turkey Ministry of Environment and Forests)
- No fuelling of equipment and vehicle on site (apart of portable generators and equipment)
- Site equipment complying with law requirements regarding noise

All subcontractors must make inventory for the environmental extent of their activities and this extent and impact to the environment (soil, air, water, noise pollution, etc.) have to be determined and documented.

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All Subcontractors are:

- Responsible for Waste planning,
- Responsible to train and inform employees in environmental issues,
- Responsible to manage hazardous and other waste,
- To comply with the law about environment (law, regulation, etc.)
- To take precautions about environmental accidents (leaking waste, Fuel suLEly, chemical handling, storage, etc.)
- To search out the alternative way of managing contaminated areas.

A soil and water investigation has been conducted. Any excavations and earth works will be performed in clean areas
Drinking water for the employees in site has to be analysed and the report will be recorded.

WASTE MANAGEMENT

Contractor shall keep all site wastes (paper - glass – plastic – wood - scrap) in predefined area(s), up to the moment of delivery away from site.

Contractor have to provide possible environmental spills - emergency intervention for emergency kits rash (materials absorbent, sand etc.)

Contractor have to create hazardous waste storage area which is stated in Turkish Republic Ministry of Environment and Foresty Hazardous waste control regulation. Hazardous Waste have to be saved in this waste storage area.

Hazardous Waste must be delivered to licensed disposal firm. They should pay attention to legal condition and they should save documents of delivering hazardous waste.

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ENVIRONMENTAL PERFORMANCE MONITORING AUDITS

Environmental incidents / accidents must be first notified, and then reported to Contractor and Client, in terms of its severity as immediate as urgent. Contractor shall enterprise "Pre-situation Determination" and Periodical Environmental Inspections at site.

- Field Inspection; All activities implemented in enterprise field are examined, solution methods are determined and reported to site manager.

- Inspection of Documentation; Control of required documents regarding Environmental Legislation is being maintained,

Legal Conformity Evaluations shall be made in the site and shall be reported to site manager.

Internal Inspection activities shall be implemented in the Site. Inspections shall be conducted within the scope of Internal Audits.

ENVIRONMENTAL MONITORING

According to the risk assessment carried out, environmental measurements and monitoring of noise and dust may be conducted if necessary. Monitoring and measurements will be performed by Subcontractors as aLElicable. Subcontractors might be requested by Contractor to carry out monitoring of other agents subject to:

- Materials
- Substances
- Equipment
- Method of work their employ.

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NOISE CONTROL

Subject to the works specific risk assessment, noise measurements and monitoring might be required. Measures will be taken to reduce noise on site and the site perimeter. If necessary hearing protection LEE will be used and specific signs will be placed to some areas.

DUST CONTROL

Subject to the period of the year, unpaved areas etc dust control might be required. Watering will be used to minimize dust from excavation and earth works as necessary. Safety masks might be required as necessary.

Subject to the works specific risk assessment, dust control measurement might be aLElied during the construction. Possible dust generating vehicles/dumper trucks should be covered.

AIR QUALITY

For any emissions from nearby plants, they shall inform of their measurements. When values given are higher than the national threshold limit appropriate measures shall be taken per case. Subject to the works specific risk assessment, measurements of air quality may take place from time to time.

CRISIS MANAGEMENT

Some emergencies may lead to a crisis. Crisis is the situation where the control of the situation cannot be ensured via the existing procedures and the situation has to be controlled and managed at high level (Client's, Contractor's & Subcontractor's Site Managers), in a systematic way and professional manure in order to minimize the consequences of the (initial) incident.

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Such cases might be:

- Any severe incident of personnel or third party as a result (direct or indirect) of the project activities. Indirect may involve activities in the area of other contractors or entities in general, physical phenomena etc.
- Vehicular accident
- Equipment overturn
- Structure collapse
- Fire
- Severely adverse weather

For all these cases, a Crisis Management consultation between Client's, Contractor's & Subcontractor's Site Managers) shall take place.

Major targets of the management of the crisis are:

1. Instruct, direct, support project people on spot to minimise the possibilities of an event or/and the consequences of an incident.
2. Support external services taking control of the situation on spot to minimise the possibilities of an event or/and the consequences of an incident.
3. Keep a flow of information to ensure Contractors and Clients management is adequately informed.
4. Keep any next of keen and the families of the involved persons informed and facilitate any request to travel to the site or wherever is applicable
5. Review the event and learn from it for future.

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