CNT RECORDS

Community :	SEDRA	**Project/Phase :**	00103 - Phase 3
From :	Branch of China Harbour Engineering Co Ltd.	**To :**	East Consulting Engineering Center
Category :	PLN-Plan	**Scope :**	PO-RRE-1642-Rough grading and infrastructure works for SEDRA Phases 3, 4 and 5
Stage Gate :	SG4		
Ref No. :	00103-CHE-PLN-HSE-000005	**Record Date :**	21-NOV-2023
Document Status :	Draft	**Submitted Date :**	
Subject :	Nightshift Work Plan (Phase 3)		

DOCUMENTS ATTACHED

SR.#	DOCUMENT NAME	REV	DESCRIPTION	NOTES/REMARKS	In PMWeb Viewer

ENGINEER COMMENTS :

FINAL DOCUMENT STATUS :

☐ A - Approved ☐ B - Approved as Noted ☐ C - Revise & Resubmit ☐ D - Rejected

Stamp :		Stamp :	
Signature :		**Signature :**	
Submitted By:	**Submission Date :**	**Received By :**	**Date :**

Infrastructure works for
Riyadh SEDRA3,4& 5 Project

00103-CHE-PLN-HSE-000005
Rev. 00

20 November 2023

Nightshift Work Plan

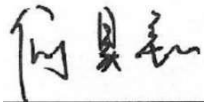
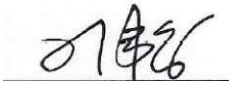
(Phase 3)

فرع شركة شاينا هاربور إنجنيرنج كمبني ليمتد
BRANCH OF CHINA HARBOUR ENGINEERING CO., LTD.
中国港湾工程有限责任公司沙特分公司

Infrastructure works for Riyadh
SEDRA 3, 4 & 5 Project

00105-CHE-PLN-ERP-000003
Rev. 00
20 Nov 2023

Nightshift Work Plan
Phase 3

00	20 Nov 2023				Issued For Approval
Rev No.	**Date**	**Prepared By**	**Reviewed By**	**Approved By**	**Remarks**
Name		**He Haoxiang**	**Asad Raza**	**Liu Tao**	
Position		**HSE Assistant M**	**HSE.M**	**HSE.D**	

فرع شركة شاينا هاربور إنجينيرنج كمبني ليمتد
BRANCH OF CHINA HARBOUR ENGINEERING CO., LTD.
中国港湾工程有限责任公司沙特分公司

Contents

1. PURPOSE

The purpose of the Night Work Plan is to specify the procedures in night activities of the construction of SEDRA Project.

2. SCOPE

This plan will cover details about the activities, during night works.

The following activities shall be carried out in the night shift.

- Earthmoving Work
- Stone Crushing
- Placement and Compaction of Embankment and Sub-grade by Layers
- Concrete Pouring
- Tranportation of Material
- Critical crane lifting operations shall not be carried out at night time in principle.

2.1 Proposed Site Timing:

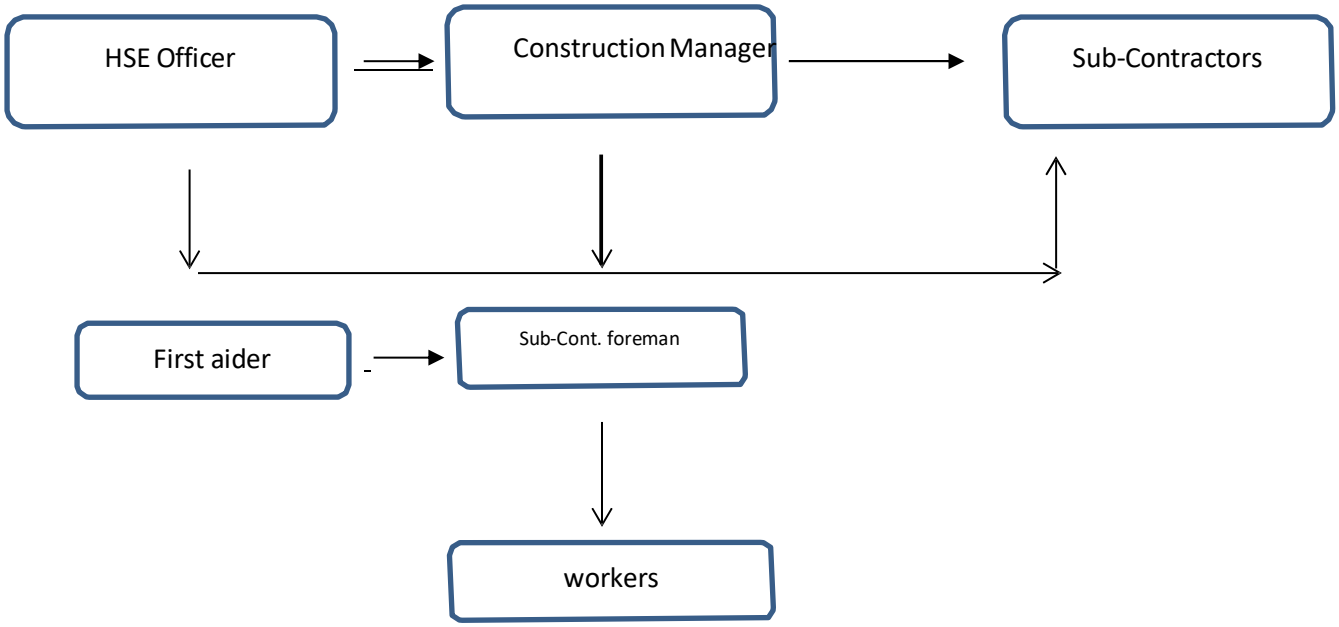
Midnight 08:00 PM to 06:00 AM

3. Supervision:

'Supervision' has a major part of night activities.

- Adequate supervision shall be available throughout the night shift,
- No activity is allowed to be carried out without the presence of supervisor.

4. Organization chart



5. Welfare Facilities:

Welfare facilities which are available at site will be used for the night shift personnel. The facilities are

- Adequate toilets.
- Eating / Rest Area with at least desert coolers or ventilation fans .
- Adequate Water Cooler with Drinking water.
- Designated Smoking Area for Staff and non-Staff.

During summer

- ORS(Oral Rehydration Salt solution) will be distributed to the nightshift personnel needed.
- Dedicated First Aider with required medicines and medical equipment and ambulance.
- Rest Area with Air Conditioners or Fans.
- Regular monitoring by HSE personnel for all provided facilities.

6. PPE Requirement:

CHEC will ensure all personnel working at night, shall wear the mandatory five-point PPE (Helmet, Hi – Vis Jacket, Hand Gloves, Safety Goggles, Safety Shoes) as per client regulation and all other PPE will be worn according to the activity.

7. Lighting:

In order to provide adequate lighting for the night activities, mobile tower lights shall be fixed at the desired location as per the requirement of work, All heavy equipment are equipped with warning, head, tail and indicator lights. Backup tower lights shall be available in case of any damage or failure to the existing lights.

The main entrance, office and parking areas, labour rest area, drinking water station, toilets area is provided with adequate lights.

Three categories are recommended below related to night-time lighting guidelines for work zones for construction and other works:

Level 1: Illumination is important in areas where the work crew is in motion, moving from spot to spot. This level of luminance is appropriate for tasks requiring low accuracy, involving slow moving equipment, and where there are large objects to be seen. The recommended average minimum-maintained luminance is 54 lux.

Level 2: Luminance is recommended for areas on or around construction equipment to provide a safer environment for the workers operating the equipment, allowing them to perform tasks that require a moderate level of accuracy. The recommended average minimum Luminance is 108 lux.

Level 3: Luminance is appropriate for those tasks that require a greater level of visibility or for tasks with a higher level of difficulty. The recommended average minimum Luminance is 215 lux.

With not limiting to above recommendation, Project Engineer to do required study to have appropriate and suitable illumination at such workplace to avoid glares and shadows and conduct work safely.

The following factors should be considered when selecting the types of lighting that are best suited for the work zone:

- Mobile work zone - the length of the work activity for one night may dictate either that the lighting plan be continuous for the length of the work zone or that a mobile system be used so that the lighting moves with the various work activities.
- Stationary work zones - work duration would determine the type of lighting in this situation. That is temporary movable fixtures or permanent fixtures if to be continued for long duration etc.
- Glare - glare from the lighting system should be minimized for both the workers and any adjacent motorist. Glare should be considered from each direction and on all approaching roadways and opposing lanes oftraffic.
- Shadow - shadow could affect the operator's visibility and workers movements and thus to be avoided. In-appropriate / insufficient lighting arrangements may result in shadows at work.

Assessment of lighting in the workplace should take account of the following aspects:

- The adequacy of artificial lighting, particularly where work equipment is in use.
- Procedure for measuring levels of illumination.
- The presence of glare in its various forms.
- The efficiency of light distribution.
- Lightning maintenance and cleaning arrangements; and
- Emergency lighting arrangements to the lay out requirement

.

8. HSE Responsibilities:

- HSE Officer has the authority to stop any activity or plant/equipment if any noncompliance noticed.
- Site HSE officer shall be available at site for the night shift, ensuring that the risk assessments and method statements are available and communicated to all workforces.
- HSE Officer shall be responsible for delivering induction training.
- HSE Officer will ensure that site personnel are given Toolbox Talk training on regular basis and the records are available.
- HSE Officer shall prepare the Observation / Site Instruction reports on regular basis.
- Incident report (if any) shall also be prepared by him.
- In case of any emergency HSE Officer shall act as the Incident Coordinator to ensure safe evacuation of all employees.

9. Emergency Evacuation:

CHEC employees are trained to act safely in case of emergency.

- In case of any emergency employees will evacuate to assembly point and follow the incident controller and coordinator's instructions.
- A full time Male Nurse / First aider shall be available at site to deal with any type of injury cases; an emergency vehicle will also be available at site.
- Arrangements shall be in place to handle black out (backup generator or diesel driven tower lights).

10. Medical History of an Employee

There could be a pre-existing medical condition by which night work could affect adversely. Considering this, it is recommended to conduct medical interview of individual prior to assignment. The follow up assessments are a form of health surveillance in that they seek to determine if the night work is having a detrimental effect on the night worker's health.

11. General recommended practices:

In case of working in night and shift work, following risk controls measures may be exercised as applicable:

Avoid scheduling dangerous, demanding, monotonous and/or safety critical work during early morning, night or towards the end of long shifts or during other periods of low alertness.
Avoid workers on permanent night shift as feasible.
Workers may be asked of choice between rotating and regular shift schedule wherever practicable.
Wherever possible, arrange shifts start/end times to be convenient for public transport or consider providing transport for workers on shift.
Limit shifts to a maximum of twelve hours (including overtime) and consider the needs of vulnerable workers.
Limit night shifts or shifts where work is demanding monotonous, dangerous and/or safety critical to eight hours.
Consider if shifts of a variable length or flexible start/end times could offer a suitable compromise.

Avoid split shifts unless necessary for business needs.

Encourage and promote the benefits of regular breaks away from the workstation.

When switching from day to night shifts or vice versa, allow workers a minimum of two nights of full sleep.

12. Toolbox Talk Meetings:

Regular Toolbox Talk Meetings shall be conducted in the night shift as per the Toolbox training.

13. Risk Assessment:

All the risk involved, control measures and emergency response requirements in working at night-time shall be implemented and communicated to all employees as per the attached risk assessment.

Activity	Night Shift Work			Prepared by:	Mr. He Haoxiang
Location:	Phase 5			Reviewed by:	Mr. Liu Tao
Date:	Wednesday, 11 October, 2023	Revision No.:	00	Approved by:	

SN	Description of Activity	HAZARD	Probability	Severity	Risk	CONTROL MEASURES	Residual Risk			RISK ACCEPTABLE
							Probability	Seve	Risk	

1	Work at Nightshift	• Insufficient Lighting • Moving Equipment/Vehicles • Slip / Trip • Lifting operations • Lack of adequate Shift rotation and Rest days • Unplanned Overtime/Extended hours • Extreme cold/heat and other weather conditions • Lack of Inspection/maintenance of Lighting fixtures/Equipment/ Generators.	3	3	M	• Tower lights to be set up so the light beam shines downwards to avoid any nuisance to other stakeholders / offices • Drips tray will be provided to prevent oil spillage on the ground • Light Towers erected on firm/ level ground • An electrician will be available for electrical / maintenance work. • A Plumber will be available for any plumbing works • No lone working will be allowed • Awareness training provided to night shift workers	1	1	L	Yes

						• Night shift safety awareness signages posted on strategic Location • All the electrical lighting fixtures equipment will be inspected periodically to ensure safe use. • First Aiders and Fire Wardens are available on site • Metito will avoid workers on permanent night shift as feasible • Emergency contact numbers posted				

2	**Emergency Situations**	• Poor emergency response • Unforeseen situation	3	3	M	• Project specific emergency plan established • Emergency procedure included in induction and reiterated in briefings and Toolbox talks • All work locations to have clear signage for emergency exits/assembly • Emergency contact details posted on site notice boards and office bulletin boards • Emergency facilities on standby (fire points/clinic) • Trained First Aiders available throughout the site • Trained fire wardens available throughout the site • Fire points/first aid boxes available throughout the site	1	1	L	Yes

Risk Matrix

Score	P (Probability)	Score	S (Severity)	R (Risk) = P X S					
				0	1	2	3	4	5
1	**Very Unlikely** but possible under extreme circumstances	1	No injury, no health effect	**1**	1	2	3	4	5
2	**Unlikely** though	2	Slight health effect / first aid injury	**2**	2	4	6	8	10
3	**Possible** but unusual	3	Minor health effect / Medical treatment / restricted work case	**3**	3	6	9	12	15
4	**Likely** not	4	Major health effect/ >3 days away from work / Temporary or partial	**4**	4	8	12	16	20
5	**Very Likely** Certain (no doubt)	5	Permanent total Disability (PTD) /Single	**5**	5	10	15	20	25
Risk Level									

1-6	**Tolerable** Maintain systematic controls and aim to continuously improve
7-15	**Tolerable but As Low As Reasonably Practical (ALARP)** Should be demonstrated – Job hazards are unacceptable and must be controlled by Engineering, Administrative, or Personal Protective Equipment (PPE) method as soon as possible.