Occupational Safety and Health Practices in Construction Industry in Punjab 2021

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Under ADP Scheme Capacity Building of Occupational Safety and Health (OSH) Regime to Promote Safer Working Conditions at Workplaces)
Centre for the Improvement of Working Conditions & Environment
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Labour & Human Resource Department Government of the Punjab

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1. Introduction

Construction work is dynamic, diverse, and constantly changing. This poses a significant challenge in protecting our environment and the health and safety of construction workers. Workers at construction sites are exposed to various health and safety hazards that may lead to injury, illness, disability, or even death.

According to International Labour Organization (ILO), globally, an estimated 2 million work-related fatalities and 330 million work-related accidents still occur each year. Moreover, 7% of the world's labour is occupied in the construction industry, and the rate of deaths occurring in the construction industry is 30-40% of total fatalities. However significant difference exists between developed and developing countries related to these statistics [1].

According to the annual report of the Pakistan Bureau of Statistics, 7.4% (~4.4 million) of the total labour force (~60 million) are associated with the construction industry. The construction sector contributes 2.82 % to countries GDP, and in the last few years, this sector has shown a consistent growth of 9% [2].

Developing countries are exposed to more than 80% of global occupational hazards. For example, according to World Bank's study, a worker in Pakistan is eight times more likely to be killed at the workplace than a worker in Europe. Worldwide, the highest rates of occupational deaths occur in agriculture, forestry, mining, and construction sectors [3].

From 2013 to 2018, approximately 2,836 fatal incident cases were reported in Pakistan, which is just a 0.005% representation of the total labour force of Pakistan (~60 million labour force). The construction sector is just 7.4% of the entire labour force, i.e., 4.4 million labours are associated with the construction sector, reflecting that the reporting of accidents to the concerned authorities is deficient in Pakistan. This may be attributed to the construction companies being unwilling to share the complete information about accident(s) with their management and the concerned government authorities, i.e., Labour & Human Resource Department, Government of The Punjab [4].

2. Background

In developing countries, work-related ailments are regularly increasing. Work-related diseases seem to be miscalculated, according to recent studies. Most of the construction companies in Pakistan follow a responsive strategy instead of a pre-emptive strategy. That means the construction companies take mitigation steps after the occurrence of accidents on their project sites [5].

Pakistan, having a literacy rate of just 59% and due to the absence of strong legislation, is considered a country that lacks a safety culture. Additionally, high occupational fatalities indicate that further efforts are required to reduce occupational accidents and injuries in Pakistan. Most construction companies consider occupational safety and health a liability or an obstacle for attaining their project goals and timeline schedule. Moreover, the site workers feel uncomfortable and think of their reduced daily work efficiency while wearing personnel protective equipment (PPE) during work activities at the construction site [6].

The construction sector is considered very complex and dynamic due to the work activities involved during the project execution phase. There are several phases in construction which primarily include designing, planning, execution, demolition, handing over, etc. Similarly, plumbing, electrical, finishing, carpentry works, etc., are also linked with construction during project execution. Moreover, various contractors and sub-contractors have different work and working protocols at the same workplace. Due to the fact mentioned above, the construction sector is considered the toughest when implementing health, safety, and environmental policies [7].

The currently available legislation related to Occupational Health and Safety (OHS) in Pakistan has many discrepancies as it does not cover specifically the construction sector. Other factors like bribery or corruption, exploitation, etc., also play a role in implementing OSH policies on project sites. Personnel does not perform their job honestly. Organizations do exploit this to keep themselves away from spending money on safety measures rather than spending some money as bribery. Also, the investors from developed countries move to underdeveloped countries and exploit them for cheap labour, long working hours, and working in bad workplace conditions [8,9]

Moreover, the construction practices are not sustainable in Pakistan. The construction methods practised in Pakistan have high energy and water consumption and produce a large amount of raw and waste material. The machinery and vehicles used in the construction sector are not environmentally fit and consume more gasoline and release a lot of smoke. In Pakistan, there is a limited concept of using pre-fabricated materials. Even today, the majority of building components are produced at work sites. All this eventually increases cost and time. Arrangements for complete in-site facilities require uninterrupted water and energy supply [10].

The construction industry is one of the major consumers of the world's water resources as water is the primary ingredient of concrete. The construction industry is linked with high carbon dioxide emissions due to diesel generators and heavy machinery. Most of the building projects lack alternative energy options like solar or wind, and in case of power shutdown, activities on these project sites come to a halt [11].

Based on these facts, it is paramount to follow HSE guidelines and standards to provide a safe working platform for labours on the project site. Furthermore, equal consideration is required to protect our

environment during construction activities in Punjab. Therefore, visits to different project sites within the Punjab region were conducted to perform detailed hazard analysis, risk assessment, and training awareness programs as described in subsequent sections.

3. Objectives

The main objectives to carry out this study program were as follows:

- To perform a risk assessment of construction site activities and educate workers on occupational health and safety for sustainable construction works in Punjab.
- To conduct various on-site testing to evaluate workers' occupational health and workplace condition.

4. COVID-19 Impact on Construction Industry in Punjab

The construction sector is badly affected due to the COVID-19 lockdown as announced on March 23, 2020, by the Government of Punjab via notification SO(IS-II)1-1/2004 dated March 23, 2020. During the COVID-19 lockdown, The Government of Pakistan had declared the construction sector as an Industry to create more employment opportunities. Accordingly, the government introduced a relief package for the construction industry as briefed below:

- Subsidy grant of 30 billion rupees for Naya Pakistan Housing Scheme
- Investors and developers will not be questioned about their source of income.
- Exemption of Withholding Tax in the purchase of building materials except for steel and cement.
- No Capital Gains Tax while seller sells their property.
- A Construction Industry Development Board would be established to promote this sector.

The construction sector is one of the riskiest sectors due to occupational hazards and on-site accidents. Therefore, an awareness program is much needed to create employment opportunities, and the construction activities must be hazard-free for the worker's safety and health.

5. Site Visits & Methodology

Field visits to various construction projects were planned for hazard identification and risk assessment work. In addition, different on-site testings were performed, mainly covering spirometry, audiometry, noise, and dust monitoring to evaluate workers' occupational health and workplace condition.

The purpose of carrying out such activities was to perform Capacity Building of Occupational Safety & Health (CBOSH) Regime to Promote Safer Working Condition at Workplace under Annual

Development Programme (ADP), The Government of Punjab. ADP represents a key policy instrument for achieving the government's development vision through strategic resource allocation having social and economic impacts. ADP interventions are the prime features of the Punjab Government vision for equitable and sustained economic growth.

6. Hazards Identification & Risk Assessment

Field visits to various construction sites were conducted to identify multiple construction hazards and perform a detailed risk assessment to achieve said objectives. **(Annexure-I, Photo-I).**

A risk assessment checklist for the construction sector is prepared and utilized for hazard identification purposes. The English and Urdu versions of the Risk Assessment Checklist for the Construction Industry are enclosed in **Annexure-I and Annexure-II,** respectively.

The brief of different identified hazards and their control measures are summarized below:

- Workers were not using a fall protection system (safety harness) while doing shuttering work to pour slab concrete. In addition, workers were frequently using cell phones during this activity. This may cause serious injury to workers or even fatality if they accidentally fall from this working height **(Annexure-I, Photo-II).**

- Inappropriate and damaged tools were in use on a construction site. For example, a flexible plumbing pipe was fixed with a hammer which can break while cutting steel rebars. This may cause serious injury to workers during this activity **(Annexure-I, Photo-III).**

- The construction material (steel rebars, formwork, shuttering, sand and aggregate, etc.) was randomly scattered at the workplace, obstructing workers and vehicle movement and may cause harm to the workforce, equipment, and property damage. In addition, sufficient safety signboards were not posted at workplaces.

- Regular inspection records were not available for some construction equipment and lifting gears. In reference to the "Factories Act, 1934" Section-33(A): Every part of the crane, including the lifting gear, must be of adequate strength, properly maintained, thoroughly examined by a competent person at least once in twelve months period. In addition, a safe working load must be marked, and a safety latch of crane hook must be installed.

  Moreover, the electrical cables were passing close to the gantry crane. Refer to the "Factories Act, 1934" Section-33(C): the crane should not approach within twenty feet (20 feet) from live electrical lines. Therefore, these cables must be re-routed or encapsulated with PVC pipes **(Annexure-I, Photo-IV).**

- A high noise level was observed close to the concrete batching plant, grinder machine, and near heavy construction machinery, which may cause hearing problems to workers at the workplace. Therefore, appropriate hearing protection must be used, and workers in high noise areas must be rotated during their shift. In addition, proper and timely maintenance of equipment through lubrication, repair, and replacement of parts must be conducted.
- The worker's rest and welfare areas were flooded with rainwater. Workers were preparing food in an open space that may cause serious health issues and cause dengue in stagnant water. In addition, the worker may slip and fall in a muddy area.
- Some workers were not wearing required PPE's during routine site activities since PPE's are the first line of defence at any construction site. This can cause serious injury to workers while performing construction tasks.
- An open trench was present adjacent to the under-construction building, which was not properly barricaded. As a result, the workers or equipment may fall into and cause serious injury to workers' health and property damage.
- Some floor tiles were damaged. Floor tiles need to be repaired (where required) to avoid slip/fall hazards.
- Front wall tiles (cladding) were damaged and occasionally fell on the ground. These need to be reinstated on an immediate basis to avoid any head injury.

7. Data Collection & Interpretation

As per planned methodology, the field data of site workers was collected during site visits. For this purpose, various categories of site workers and administrative staff were selected from different sections of the construction site. Workers were interviewed, and a set of prescribed questionnaires were asked from each worker. This self-reported data by each worker was analyzed and presented in subsequent sections. In addition, field tests which mainly cover dust monitoring, spirometry, noise monitoring, audiometry and light monitoring, were carried out. The instruments used for data collection were calibrated before and after each use. This data was analyzed and interpreted to demonstrate the impact of measured parameters on worker's health and environment as described below.

7.1 Worker's Personnel Information

Refer to **Figure-1**, the worker's personnel information was recorded, representing different parameters like worker's age, body mass index (BMI), and family status. The graph indicates that the average worker age was 32 years, with a BMI of ~23.5. The average number of family members per worker

was 6 to 7, with 3 to 4 comprising of young members, while 1 to 2 members in each family were bread earners. Each worker, on average, had 2 to 3 children.

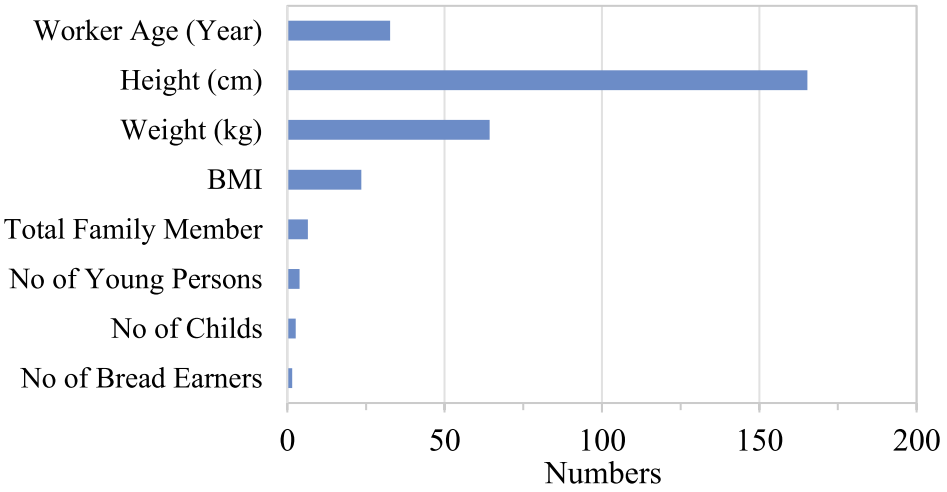

Figure 1 Worker's Personnel Information

7.2 Worker's Literacy Rate

The worker literacy rate was summarized in **Figure-2** as self-reported by site workers and administrative staff. 34% of workers had primary education, and 27% were middle, while ~6% were illiterate. However, the site office and administration staff had acquired matriculation, intermediate, and graduate qualification as 11%, 14%, 8%, respectively.

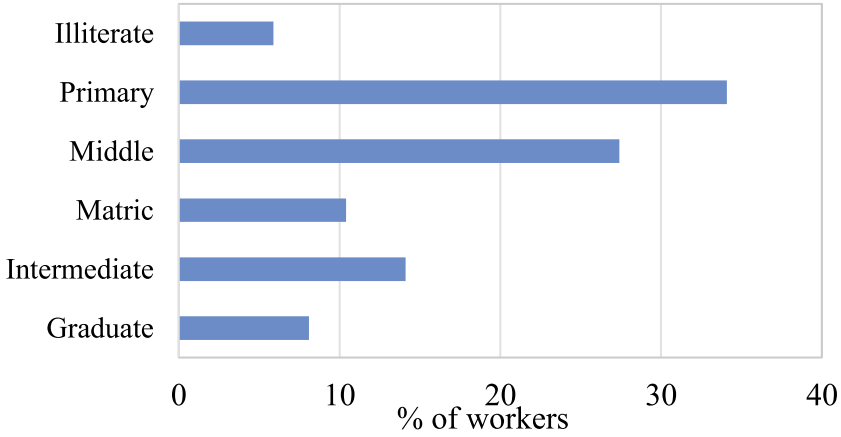

Figure 2 Worker's Literacy Rate

7.3 Worker's Job Work Status

The job status as reported by workers was summarized in **Figure-3** to find out the employment type. It was noted that ~41% of workers were temporary, and ~18% were on a contract basis. However, the administration staff were employed either permanently or part-time as ~35% and ~6%, respectively.

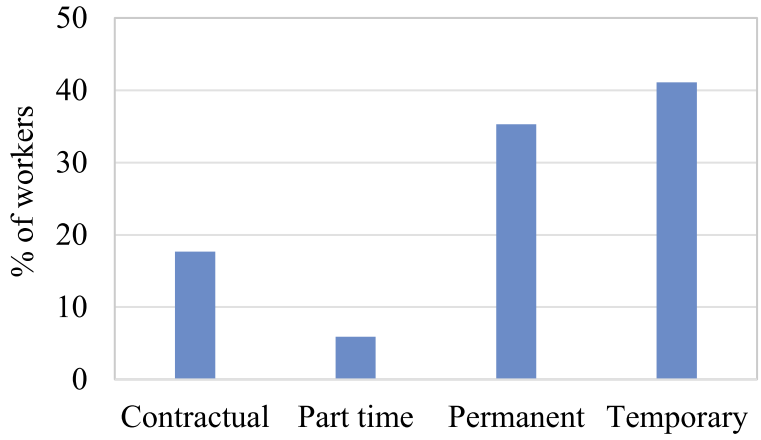

Figure 3 Workers Job Work Status

7.4 Worker's Minimum Wage

Data related to the minimum wage was collected from workers as presented in **Figure-4**. This data revealed that ~44% of the workforce got their wages in the range of Rs 17,500 to Rs 20,000, while ~56% were getting their monthly remuneration above > Rs 20,000, mainly including some site foremen and supervisors and site administrative staff.

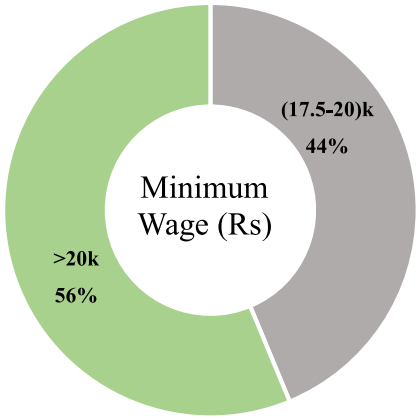

Figure 4 Worker's Minimum Wage

7.5 PPE's Compliance by Workers

Compliance with PPE's by workers at the worksite is mandatory to avoid any worksite accident. PPE's are considered as the first line of defence against any possible hazard(s). Therefore, the data related to PPE's compliance were collected and summarized in **Figure-5**. It was observed that 81% were compliant to PPE's while 19% were not adhering to or partially (which means using safety shoes/helmet while not wearing reflective jacket/goggles or vice versa) wearing PPE's at work site.

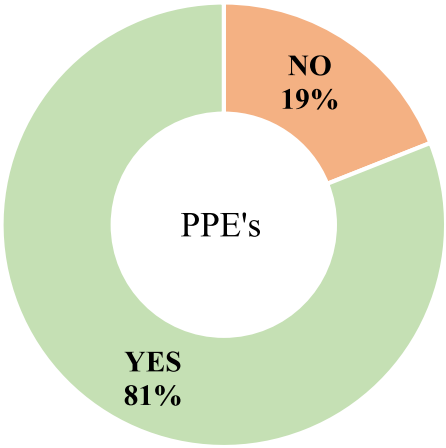

Figure 5 PPE's Compliance by Workers at Work Site

7.6 Effect of Dust, Smoking & Chemical Exposure on Worker's Health

Effects of site dust exposure, personnel smoking, and chemical exposure on workers' health were studied and summarized in **Figures 6 & 7**. Dust at construction sites was mainly produced during deep excavation, backfilling activities, heavy vehicle movement on uncarpeted site roads, fumes exhaust from operating heavy vehicles/machinery, and material handling to prepare the concrete mix. Personnel smoking (cigarette) also contributes to affect worker's health. Chemical exposure at the worksite was observed while workers handled paint material, waterproofing chemicals, or dealing with equipment maintenance/service.

Exposure monitoring of total dust (personnel exposure) was carried out at different spots of the construction site by using Casella personal dust sampler. The results are presented in **Figure 6** with a maximum concentration of dust as 2.8 mg/m^{3,} which was less than the threshold limit of 10mg/m^3 as per OSHA standards.

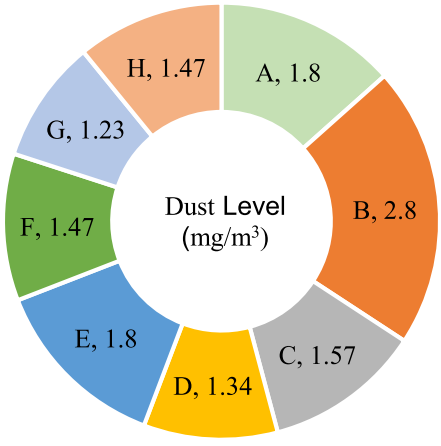

Figure 6. Total Dust (Personnel Exposure) Level

However, Spirometry testing was performed using MIR Spirodoc Spirometer to observe the effect of this dust level on the worker's respiratory system. Workers were randomly selected from different sections of the construction site to perform spirometry testing. The results were analyzed and presented in **Figure 7**, demonstrating that ~28% of the workers had normal spirometry, while ~61% had mild to moderate restriction, and ~11% were found with severe respiratory restriction. Therefore, a pulmonologist must properly check the workers with respiratory conditions for further medical treatment **(Annexure-III, Photo VI).**

During interaction with site workers, the data related to their occupational health was collected and presented in **Figure 7**. As self-reported by workers, it was noted that ~82% of the site workers were exposed to different concentration levels of dust at the construction site, and ~35% were addicted to smoking. In comparison, ~12% were exposed to various chemical exposures during their routine work activities. Based on these facts, it was found that ~7% of the workers were having cough while phlegm, wheezy condition, breathlessness during the walk, chest infection were recorded as ~6.3%, ~3.1%, ~1.9%, and ~2.1% of the workers respectively. However, the asthma condition was not conveyed by any of the site workers.

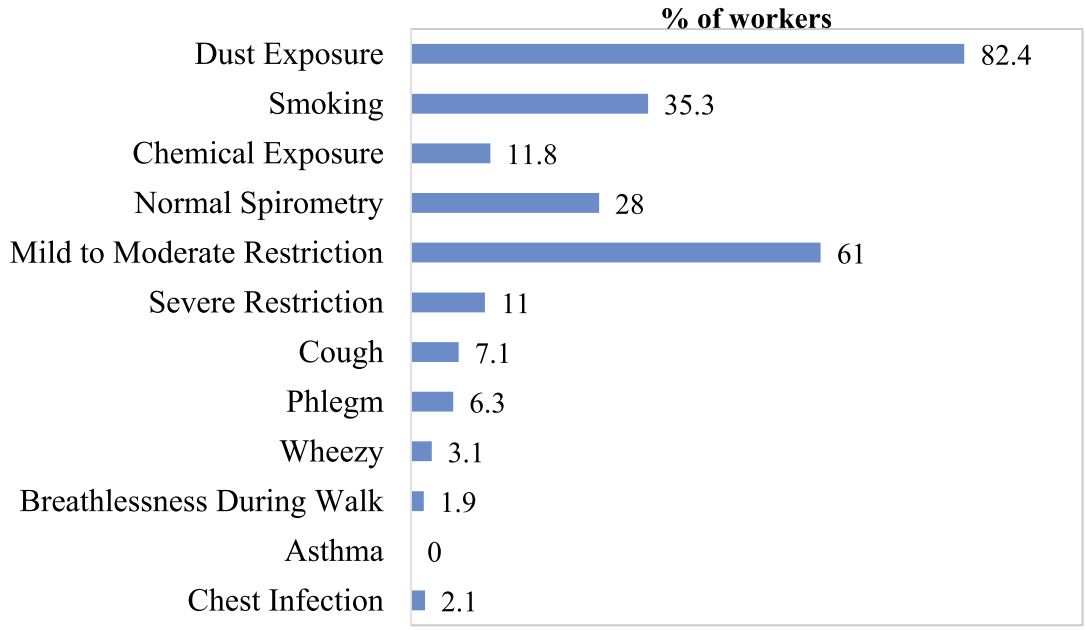

Figure 7. Effect of Dust, Smoking and Chemical Exposure on Worker's Health

7.7 Effect of Occupational Work Activities on Worker's Health

Data related to occupational site work activities' effect on workers' health was collected and graphically presented in **Figure 8**. As self-reported by workers, it was noted that musculoskeletal disorders (MSD) were observed in workers based on their activities. At construction sites, the workers

were engaged in shifting material from one place to another, including bricks, steel rebars, pipes, planks for shuttering and scaffolding pipes, unloading cement bags, carrying mortar, and frequent moving between floor levels, etc.

These activities seriously impact workers' health, which may cause body weakness, backache, difficulty in moving legs/arms, moving head, bending knees, squatting ground, climbing stairs, and back injury. These were recorded as ~7.6%, ~5.2%, ~6.1%, ~3.4%, ~2.6%, ~4.1%, ~2.2% and ~1.7% of the site workers respectively. Some administrative and engineering control measures must be in place at the worksite to avoid MSD. These measures must include material shifting using lifting cranes, material transportation using trolleys, and educate workers on how and how much weight they can carry if they have to shift material by hand.

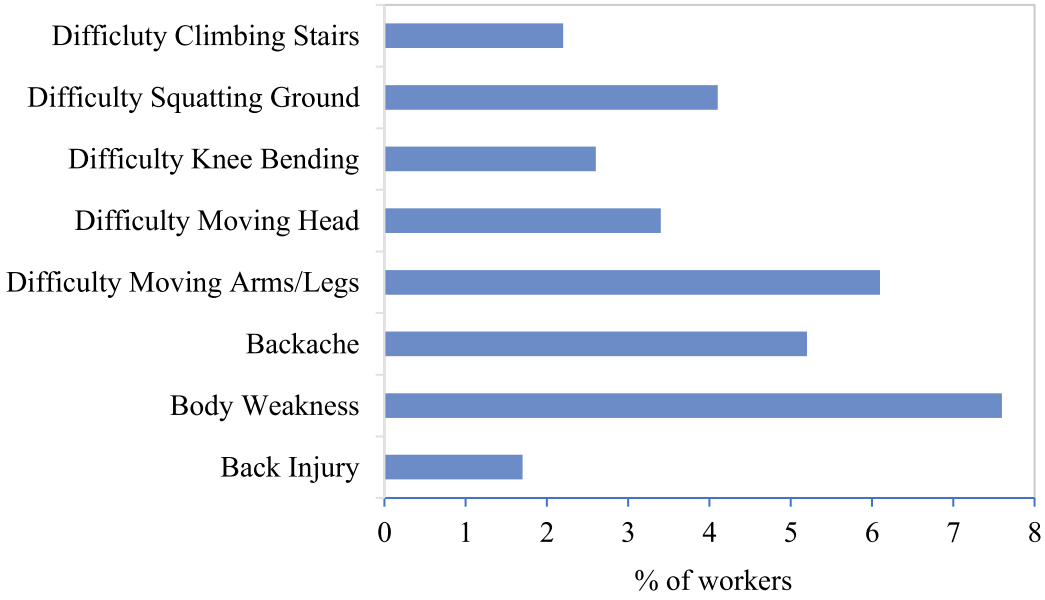

Figure 8. Effect of Occupational Work Activities on Worker's Health

7.8 Effect of High Noise Level on Worker's Health

The noise level monitoring was carried out to record noise levels at different sections of the construction site. Noise level measurements were carried out with Casella Precision Sound Level Meter-Type 2100. The measured values in decibel, dB(A), are presented in **Figure 9.** It was recorded that noise levels near Steel Cutting Area and Concrete Batching Plant were more than the permissible limit of 85 dB(A) per OSHA standards **(Annexure-III, Photo VII).**

The exposure of high noise levels on worker's hearing was evaluated using Sibelmed Audiometer. The percentage of workers as affected due to high noise exposure is summarized in **Figure 9,** which revealed that ~31% were having slight while ~69% had moderate hyperacusis. Hyperacusis is a functional deficit that arises when workers lose some degree of their auditory capacity. Therefore, a

medical doctor must properly check these workers for medical treatment. However, quick pre-emptive maintenance and lubricating machines and equipment must be adopted to stem unnecessary noises. Moreover, the workers in high noise areas must be rotated for at least half of their shift, and workers must adopt appropriate hearing protection. **(Annexure-III, Photo VIII).**

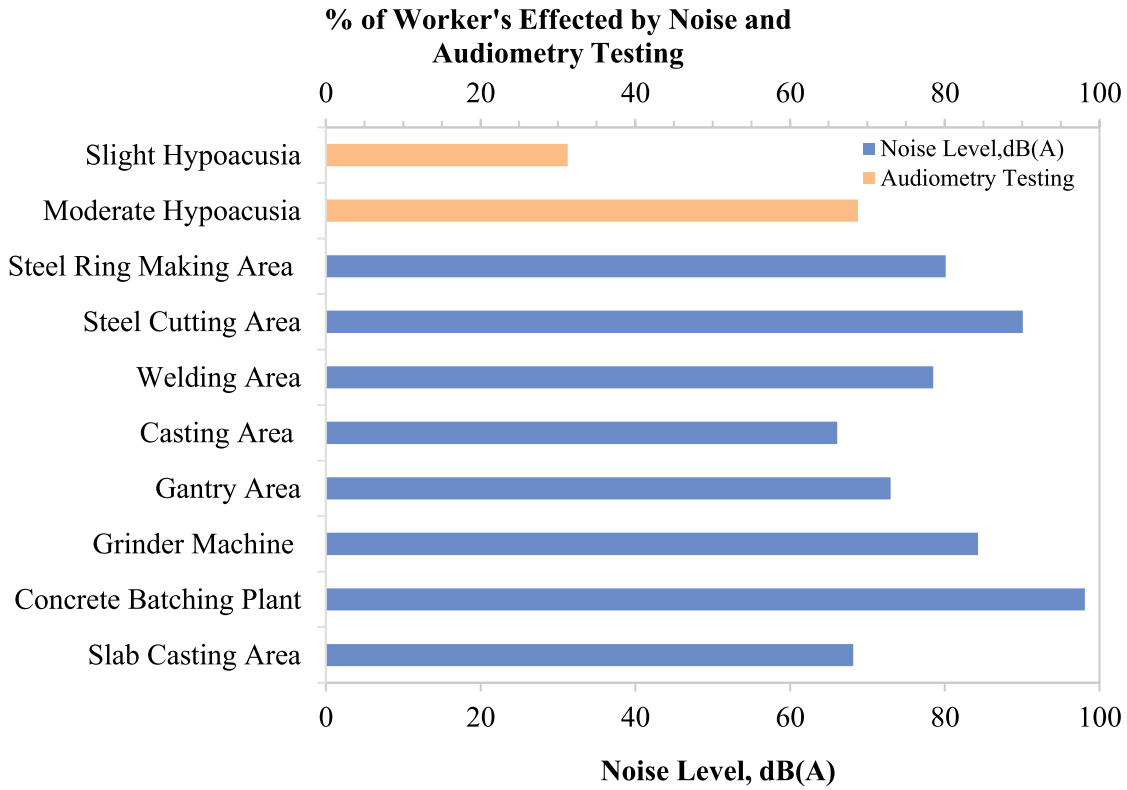

Figure 9. Effect of High Noise Level on Worker's Health

8. On-Site Training on Occupational Safety and Health

An on-site training session was conducted for awareness about occupational health, safety, and the environment at the workplace. Workers, including management staff from various sections of the construction site, actively participated in the training sessions. Multiple risks involved during routine work were highlighted and discussed. It was focused that preventions and control measures are mandatory to mitigate/minimize the risk factors.

During the training session, it was also emphasised that required PPEs, work permits, good housekeeping, periodical medical examination of the workers, etc., were mandatory to avoid any possible hazard/accident at the workplace(s) **(Annex-II, photo-V).**

9. Recommendations

Based on this study, some recommendations are summarized as narrated below:

- Follow proper guidelines, safety standards, and local laws to implement and establish a safe work environment for construction sites.
- Periodic training of workers is mandatory to spread continuous awareness about occupational health and safety.
- Regular maintenance and inspection of equipment are mandatory. Keep proper equipment maintenance records. Any alteration in the equipment must be as per equipment manufacturer guidelines to avoid any hazard.
- Work permits, lifting plans, risk assessment, night shift permits, approvals, etc., are required before starting any construction activity on site.
- Design for the deep excavation support system, scaffolding, shuttering, etc., must be done through a competent and authorize designer, and inspection must be done to carry out any further activity.
- The lux level checked during daytime was sufficient to carry out work activities. However, the Illumination level must be checked if site work is to be carried out at night to avoid worker's eye strain, headaches issues, and any work-related accident.
- Periodic medical health checkup is obligatory for all workers on a regular basis.
- Last but not least the safety at the workplace is everyone's responsibility, and a lot of room for continuous improvement always be there.

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Annexure-I

Risk Assessment Checklist for Construction Industry (English Version)

Name of Enterprise: _____ Date: _____

Sr#	Question	YES	NO	Remarks
1.	Are scaffolds and scaffold components capable of supporting, without failure, their own weight and at least four times the maximum intended load applied or transmitted to it?			
2.	Does the contractor ensure that scaffolding is tied properly?			
3.	Are all edges protected by guardrails during work at height?			
4.	Have all underground utility installations been located before starting excavation work?			
5.	Are workers using PPE's especially reflective jackets, while going in/out from deep excavation areas?			
6.	Is gas testing performed in deep excavated or trench areas to prevent exposure to hazardous atmospheres?			
7.	Is excavated material kept at least 2 feet away from the edge of the excavation?			
8.	Are site workers in excavation 4 to 5 feet deep or more protected by an adequate protective system?			
9.	Is reinforcing steel and other material at site kept in completely safe barrication?			
10.	Are site workers wearing safety shoes when handling concrete block/brick masonry and steel reinforcement works?			
11.	Is the end cap being placed on the edges of steel rebars?			
12.	Are safe means of access and egress provided while working underground or in confined spaces?			
13.	Are emergency evacuation plans and procedures made known to all workers?			
14.	Before turning off the crane, is the crawler crane/mobile crane boom securely fastened or lower down?			
15.	Are the sides and edges of the stairway provided with a guardrail system to avoid any falls?			
16.	Are belts, chains etc. are in good working condition and inspected on a regular basis?			

Name & Designation of Assessor: _____

Annexure-II

Risk Assessment Checklist for Construction Industry (Urdu Version)

(چیک لسٹ (خطرہ تشخیص) برائے تعمیراتی صنعت)

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا سکاؤفولڈز اور سہاروں کے اجزاء بغیر کسی ناکامی کے، اپنا وزن اور کم سے کم 4 گنا مطلوبہ بوجھ اٹھانے یا اس میں منتقل کرنے کے قابل ہیں؟			
.2	کیا ٹھیکیدار اس بات کو یقینی بناتا ہے کہ سہاروں کو آپس میں مضبوطی سے باندھا گیا ہے؟			
.3	کیا اونچائی پر کام کے دوران تمام کناروں کو حفاظتی جنگلوں سے محفوظ بنایا گیا ہے؟			
.4	کیا کھدائی شروع کرنے سے پہلے زیر زمین واقع تمام تنصیبات کی نشاندہی کر لی گئی ہے؟			
.5	کیا کارکن گہری کھدائی کے علاقے سے اندر/باہر آتے ہوئے حفاظتی جیکٹ (رفلیکٹو جیکٹ) کا استعمال کرتے ہیں؟			
.6	کیا گہری کھدائی یا کھائی والے علاقے میں زہریلی گیس کی جانچ کی جاتی ہے تاکہ خطرناک ماحول کا سامنا نہ ہو؟			
.7	کیا کھدائی کے مواد کو کھدائی کے کنارے سے کم از کم 2 فٹ دور رکھا گیا ہے؟			
.8	کیا سائٹ کارکن جو 4 سے 5 فٹ گہری کھدائی یا اس سے زیادہ میں کام کر رہے ہیں ایسے جائے کار کو کسی مناسب حفاظتی نظام کے ذریعے محفوظ کیا گیا ہے؟			
.9	کیا سائٹ پر موجود سٹیل اور دوسرے سامان کو مکمل حفاظتی حصار میں رکھا گیا ہے؟			
.10	کیا کنکریٹ بلاک/اینٹوں کی معماری اور سٹیل کا کام کرتے وقت کارکن سیفٹی بوٹ پہنتے ہیں؟			
.11	کیا سریہ کے کناروں پر اختتامی کیپ رکھی گئی ہے؟			
.12	کیا زیر زمین یا بند جگہوں پر کام کے دوران داخلی و خارجی راستوں کو مکمل محفوظ بنایا گیا ہے؟			
.13	کیا ایمرجنسی انخلاء کے منصوبے اور طریقہ کار تمام کارکنوں کو وضع کر دیے گئے ہے؟			
.14	کرین کو بند کرنے سے پہلے، کیا کرالر کرین/موبائل کرین کے بوم کو مضبوطی سے باندھا یا نیچے کر دیا گیا ہے؟			
.15	کیا سیڑھی کے پہلوؤں اور کناروں کو گارڈ سیل سسٹم فراہم کیا گیا ہے تاکہ گرنے سے محفوظ رہا جا سکے؟			
.16	کیا بیلٹ، چین وغیرہ اچھی حالت میں موجود ہیں اور ان کا باقاعدگی سے معائنہ کیا جاتا ہے؟			

نام آفیسر بمعہ عہدہ _____

Annexure-III

Glimpses During Risk Assessment and On-Site Testing

Photo I. Risk Assessment of site activities

Photo II. Shuttering work without safety measures

Photo III. Inappropriate tools in use

Photo IV. Electrical cables nearby to the crane

Annexure-III (Cont'd)

Glimpses During Risk Assessment and On-Site Testing

Photo V. Awareness training session on OSH

Photo VI. Spirometry testing

Photo VII. Noise level monitoring at the site

Photo VIII. Audiometry testing

ATS-DLD-78-A

ADULT QUESTIONNAIRE - SELF COMPLETION

(for those 13 years of age and older)

Thank you for your willingness to participate. You were selected by a scientific sampling procedure, and your cooperation is very important to the success of this study. This is a questionnaire you are asked to fill out. Please answer the questions as frankly and accurately as possible. ALL INFORMATION OBTAINED IN THE STUDY WILL BE KEPT CONFIDENTIAL AND USED FOR MEDICAL RESEARCH ONLY. Your personal physician will be informed about the test results if you desire.

IDENTIFICATION

IDENTIFICATION NUMBER: #####

NAME:_____ _____ ___
(Last) (First) (MI)

STREET _____

CITY _____ STATE _____ ZIP _____

PHONE NUMBER: ( ) _____-_____

INTERVIEWER: ###

DATE: _____
MO DAY YR

1. BIRTHDATE: _____ ____ _____
Month Day Year

2. Place of Birth: _____

3. Sex:
1. Male ____
2. Female ____

4. What is your marital status?
1. Single ____
2. Married ____
3. Widowed ____
4. Separated/Divorced ____

5. Race:
1. White ____
2. Black ____
3. Oriental ____
4. Other ____

6. What is the highest grade completed in school? _____
(For example: 12 years is completion of high school)

SYMPTOMS

These questions pertain mainly to your chest. Please answer yes or no if possible. If a question does not appear to be applicable to you, check the does not apply space. If you are in doubt about whether your answer is yes or no, record no.

COUGH

7A. Do you usually have a cough? 1. Yes ___ 2. No ___
(Count a cough with first smoke or on first going out-of-doors. Exclude clearing of throat.)[If no, skip to question 7C.]

B. Do you usually cough as much as 4 to 6 times a 1. Yes ___ 2. No ___

day, 4 or more days out of the week?

C. Do you usually cough at all on getting up, or first thing in the morning? — 1. Yes ___ 2. No ___

D. Do you usually cough at all during the rest of the day or at night? — 1. Yes ___ 2. No ___

IF YES TO ANY OF THE ABOVE(7A,7B,7C, OR 7D), ANSWER THE FOLLOWING:
IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 8A.

E. Do you usually cough like this on most days for 5 consecutive months or more during the year? — 1. Yes ___ 2. No ___
8. Does not apply __

F. For how many years have you had this cough? — _____ Number of years
88. Does not apply __

==========

PHLEGM

8A. Do you usually bring up phlegm from your chest? (Count phlegm with the first smoke or on first going out-of-doors. Exclude phlegm from the nose. Count swallowed phlegm) [If no, skip to 8C.] — 1. Yes ___ 2. No ___

B. Do you usually bring up phlegm like this as much as twice a day, 4 or more days out of the week? — 1. Yes ___ 2. No ___

C. Do you usually bring up phlegm at all on getting up or first thing in the morning? — 1. Yes ___ 2. No ___

D. Do you usually bring up phlegm at all during the rest of the day or at night? — 1. Yes ___ 2. No ___

IF YES TO ANY OF THE ABOVE (8A, B, C, OR D), ANSWER THE FOLLOWING:
IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 9A.

E. Do you bring up phlegm like this on most days for 3 consecutive months or more during the year? — 1. Yes ___ 2. No ___
8. Does not apply __

F. For how many years have you had trouble with phlegm? — _____ Number of years
88. Does not apply __

==========

EPISODES OF COUGH AND PHLEGM

9A. Have you had periods or episodes of (increased*) cough and phelgm lasting for 3 weeks or more each year? *(For individuals who usually have cough and/or phlegm) — 1. Yes ___ 2. No ___

IF YES TO 9A:

B. For how long have you had at least 1 such episode per year? — _____ Number of years
88. Does not apply __

==========

WHEEZING

10A. Does your chest ever sound wheezy or whistling:

1. When you have a cold?	1. Yes ___ 2. No ___
2. Occaisonally apart from colds?	1. Yes ___ 2. No ___
3. Most days or nights?	1. Yes ___ 2. No ___

IF YES TO 1, 2, OR 3 IN 10A:

B. For how many years has this been present? _____ Number of years
88. Does not apply __

11A. Have you ever had an ATTACK of wheezing that has made you feel short of breath? 1. Yes ___ 2. No ___

IF YES TO 11A:

B. How old were you when you had your first such attack? _____ Age in years
88. Does not apply __

C. Have you had 2 or more such episodes? 1. Yes ___ 2. No ___
8. Does not apply __

D. Have you ever required medicine or treatment for the(se) attack(s)? 1. Yes ___ 2. No ___
8. Does not apply __

==========

BREATHLESSNESS

12. If disabled from walking by any condition other than heart or lung disease, please describe and proceed to Question 14A.

Nature of condition(s):_____

13A. Are you troubled by shortness of breath when hurrying on the level or walking up a slight hill? 1. Yes ___ 2. No ___

IF YES TO 13A:

B. Do you have to walk slower than people of your age on level because of breathlessness? 1. Yes ___ 2. No ___
8. Does not apply __

C. Do you ever have to stop for breath when walking at your own pace on the level? 1. Yes ___ 2. No ___
8. Does not apply __

D. Do you ever have to stop for breath after walking about 100 yards(or after a few minutes) on the level? 1. Yes ___ 2. No ___
8. Does not apply __

E. Are you too breathless to leave the house or breathless on dressing or undressing? 1. Yes ___ 2. No ___
8. Does not apply __

==========

CHEST COLDS AND CHEST ILLNESSES

14A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time) 1. Yes ___ 2. No ___
8. Don't get colds__

15A. During the past 3 years, have you had any chest illnesses that have kept you off work, indoors at home, or in bed? 1. Yes ___ 2. No ___

IF YES TO 15A:

B. Did you produce phlegm with any of these chest illnesses? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. In the last 3 years, how many such illnesses, with (increased) phlegm, did you have which lasted a week or more? — _____Number of illnesses _____No such illnesses _____Does not apply

==========

PAST ILLNESSES

16. Did you have any lung trouble before the age of 16? — 1. Yes ___ 2. No ___

17. Have you ever had any of the following:
1A. Attacks of Bronchitis? — 1. Yes ___ 2. No ___

IF YES TO 1A:
B. Was it confirmed by a doctor? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. At what age was your first attack? — _____ Age in years 88. Does not apply __

2A. Pneumonia (include bronchopneumonia)? — 1. Yes ___ 2. No ___

IF YES TO 2A:
B. Was it confirmed by a doctor? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. At what age did you first have it? — _____ Age in years 88. Does not apply __

3A. Hayfever? — 1. Yes ___ 2. No ___

IF YES TO 3A:
B. Was it confirmed by a doctor? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. At what age did it start? — _____ Age in years 88. Does not apply __

18A. Have you ever had chronic bronchitis? — 1. Yes ___ 2. No ___

IF YES TO 18A:
B. Do you still have it? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. Was it confirmed by a doctor? — 1. Yes ___ 2. No ___ 8. Does not apply __

D. At what age did it start? — _____ Age in years 88. Does not apply __

19A. Have you ever had emphysema? — 1. Yes ___ 2. No ___

IF YES TO 19A:
B. Do you still have it? — 1. Yes ___ 2. No ___ 8. Does not apply __

C. Was it confirmed by a doctor? — 1. Yes ___ 2. No ___ 8. Does not apply __

D. At what age did it start? — _____ Age in years 88. Does not apply __

20A. Have you ever had asthma? — 1. Yes ___ 2. No ___

IF YES TO 20A:

B. Do you still have it? 1. Yes ___ 2. No ___
8. Does not apply __

C. Was it confirmed by a doctor? 1. Yes ___ 2. No ___
8. Does not apply __

D. At what age did it start? _____ Age in years
88. Does not apply __

E. If you no longer have it, at what age did it stop? _____ Age stopped
88. Does not apply __

21. Have you ever had:

A. Any other chest illnesses? 1. Yes ___ 2. No ___
If yes, please specify _____

B. Any chest operations? 1. Yes ___ 2. No ___
If yes, please specify _____

C. Any chest injuries? 1. Yes ___ 2. No ___
If yes, please specify _____

22A. Has doctor ever told you that you had heart trouble? 1. Yes ___ 2. No ___

IF YES to 22A:

B. Have you ever had treatment for heart trouble in the past 10 years? 1. Yes ___ 2. No ___
8. Does not apply __

23A. Has a doctor ever told you that you have high blood pressure? 1. Yes ___ 2. No ___

IF YES to 23A:

B. Have you had any treatment for high blood pressure (hypertension) in the past 10 years? 1. Yes ___ 2. No ___
8. Does not apply __

==========

OCCUPATIONAL HISTORY

24A. Have you ever worked full time (30 hours per week or more) for 6 months or more? 1. Yes ___ 2. No ___

IF YES to 24A:

B. Have you ever worked for a year or more in any dusty job? 1. Yes ___ 2. No ___
8. Does not apply __

Specify job/industry: _____ Total years worked __
Was dust exposure 1. Mild ___ 2. Moderate ___ 3. Severe ___ ?

C. Have you ever been exposed to gas or chemical fumes in your work? 1. Yes ___ 2. No ___
8. Does not apply __

Specify job/industry: _____ Total years worked __
Was dust exposure 1. Mild ___ 2. Moderate ___ 3. Severe ___ ?

D. What has been your usual occupation or job -- the one you have worked at the longest?

1. Job-occupation: _____
2. Number of years employed in this occupation:_____
3. Position-job title: _____
4. Business, field, or industry: _____

TOBACCO SMOKING

25A. Have you ever smoked cigarettes? (NO means less than 20 packs of cigarettes or 12 oz. of tobacco in a lifetime or less than 1 cigarette a day for 1 year.

1. Yes ___ 2. No ___

IF YES to 25A:

B. Do you now smoke cigarettes (as of 1 month ago)?

1. Yes ___ 2. No ___
8. Does not apply __

C. How old were you when you first started regcigarette smoking?

____ Age in Years
88.Does not apply __

D. If you have stopped smoking cigarettes completely, how old were you when you stopped?

____ Age stopped
Check if still smoking ___
88.Does not apply __

E. How many cigarettes do you smoke per day now?

___ Cigarettes/day
88.Does not apply __

F. On the average of the entire time you smoked, how many cigarettes did you smoke per day?

___ Cigarettes/day
88.Does not apply __

G. Do or did you inhale the cigarette smoke?

1. Does not apply __
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

26A. Have you ever smoked a pipe regularly? (YES means more than 12 oz tobacco in a lifetime.)

1. Yes ___ 2. No ___

IF YES to 26A:

B1. How old were you when you started to smoke a pipe regularly?

____ Age

2. If you have stopped smoking a pipe completely, how old were you when you stopped?

____ Age stopped
Check if still smoking pipe ____
88.Does not apply __

C. On the average over the entire time you smoked a pipe, how much pipe tobacco did you smoke per week ?

____ oz per week (a standard pouch of tobacco contains 1 1/2 oz)
88.Does not apply __

D. How much pipe tobacco are you smoking now?

___ oz per week
88. Not currently smoking a pipe ___

E. Do or did you inhale the pipe smoke?

1. Never smoked ____
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

27A. Have you ever smoked cigars regularly? (Yes means more than 1 cigar a week for a year).

1. Yes ___ 2. No ___

IF YES to 27A:

B1. How old were you when you started smoking cigars regularly? ____ Age

2. If you have stopped smoking cigars completely, how old were you when you stopped? ____ Age stopped
Check if still smoking cigars___
88.Does not apply __

C. On the average over the entire time you smoked cigars, how many cigars did you smoke per week ? ___ Cigars per week
88.Does not apply __

D. How many cigars are you smoking per week now? ___ Cigars per week
88. Check if not smoking cigars currently __

E. Do or did you inhale the cigar smoke?
1. Never smoked ____
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

==========

FAMILY HISTORY

28. Were either of your natural parents ever told by a doctor that they had a chronic lung condition such as:

	FATHER			MOTHER		
	1. YES	2. NO	3. DON'T KNOW	1. YES	2. NO	3. DON'T KNOW
A. Chronic brochitis?	_____	_____	_____	_____	_____	_____
B. Emphysema?	_____	_____	_____	_____	_____	_____
C. Asthma?	_____	_____	_____	_____	_____	_____
D. Lung cancer?	_____	_____	_____	_____	_____	_____
E. Other chest conditions?	_____	_____	_____	_____	_____	_____

29A. Is parent currently alive?

_____	_____	_____	_____	_____	_____

B. Please Specify:

_____ Age if living	_____ Age if living
_____ Age at death	_____ Age at death
8. Don't know _____	8. Don't know _____

C. Please specify cause of death.

_____ _____

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چیک لسٹ (خطرہ تشخیص) برائے تعمیراتی صنعت

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا سکائو فولڈز اور سہاروں کے اجزاء بغیر کسی ناکامی کے، اپنا وزن اور کم سے کم 4 گنا مطلوبہ بوجھ اٹھانے یا اس میں منتقل کرنے کے قابل ہیں؟			
.2	کیا ٹھیکیدار اس بات کو یقینی بناتا ہے کہ سہاروں کو آپس میں مضبوطی سے باندھا گیا ہے؟			
.3	کیا اونچائی پر کام کے دوران تمام کناروں کو حفاظتی جنگلوں سے محفوظ بنایا گیا ہے؟			
.4	کیا کھدائی شروع کرنے سے پہلے زیر زمین واقع تمام تنصیبات کی نشاندہی کر لی گئی ہے؟			
.5	کیا کارکن گہری کھدائی کے علاقے سے اندر / باہر آتے ہوئے حفاظتی جیکٹ (رفلیکٹو جیکٹ) کا استعمال کرتے ہیں؟			
.6	کیا گہری کھدائی یا کھائی والے علاقے میں زہریلی گیس کی جانچ کی جاتی ہے تا کہ خطرناک ماحول کا سامنا نہ ہو؟			
.7	کیا کھدائی کے مواد کو کھدائی کے کنارے سے کم از کم 2 فٹ دور رکھا گیا ہے؟			
.8	کیا سائٹ کارکن جو 4 سے 5 فٹ گہری کھدائی یا اس سے زیادہ میں کام کر رہے ہیں ایسے جائے کار کو کسی مناسب حفاظتی نظام کے ذریعے محفوظ کیا گیا ہے؟			
.9	کیا سائٹ پر موجود سٹیل اور دوسرے سامان کو مکمل حفاظتی حصار میں رکھا گیا ہے؟			
.10	کیا کنکریٹ بلاک / اینٹوں کی معماری اور سٹیل کا کام کرتے وقت کارکن سیفٹی بوٹ پہنتے ہیں؟			

.11	کیا سریہ کے کناروں پر اختتامی کیپ رکھی گئی ہے؟			
.12	کیا زیر زمین یا بند جگہوں پر کام کے دوران داخلی و خارجی راستوں کو مکمل محفوظ بنایا گیا ہے؟			
.13	کیا ایمرجنسی انخلاء کے منصوبے اور طریقہ کار تمام کارکنوں کو وضع کر دیے گئے ہے؟			
.14	کرین کو بند کرنے سے پہلے، کیا کرالر کرین / موبائل کرین کے بوم کو مضبوطی سے باندھا یا نیچے کر دیا گیا ہے؟			
.15	کیا سیڑھی کے پہلوئوں اور کناروں کو گارڈ سیل سسٹم فراہم کیا گیا ہے تا کہ گرنے سے محفوظ رہا جا سکے؟			
.16	کیا بیلٹ، چین وغیرہ اچھی حالت میں موجود ہیں اور ان کا باقاعدگی سے معائنہ کیا جاتا ہے؟			

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے صنعتوں میں آگ

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا آپ نے جائے کار پر آگ لگانے والے تمام ممکنہ ذرائع کی نشاندہی کی ہے؟			
.2	کیا آپ نے جائے کار پر ایندھن کے تمام ممکنہ ذرائع کی نشاندہی کی ہے؟			
.3	کیا جائے کار پر موجود ایل پی جی اور آتش گیر کیمیائی مواد محفوظ طریقے سے رکھے گئے ہیں؟			
.4	کیا آپ نے حال ہی میں آگ سے بچنے کے لیے فائر ڈرل کی ہے؟			
.5	کیا بوائلر روم آتش گیر اور جلنے والے مواد سے پاک ہے؟			
.6	کیا جائے کار پر کچرا کم سے کم مقدار اور عمارتوں سے دور رکھا گیا ہے؟			
.7	کیا جائے کار پہ ایمرجنسی پلان مکمل تفصیل کے ساتھ موجود ہے؟			
.8	کیا جائے کار پہ پورٹیبل ہیٹر محفوظ طریقے اور مناسب ہوا کے گزران کے ساتھ رکھے گئے ہیں؟			
.9	کیا جائے کار پہ سگریٹ نوشی محفوظ متعین شدہ جگہ تک محدود ہے؟			
.10	کیا جائے کار پر باقائدگی کے ساتھ حفاظتی علامتوں اور آلات کی جانچ پڑتال کرتے ہیں؟			
.11	کیا آپ باقائدگی سے آتشی دروازوں، ہنگامی اخراج کے راستوں اور روشنی کی متعلقہ علامات کی جانچ پڑتال کرتے ہیں؟			
.12	کیا آگ کی شناخت کرنے والے آلات اپنی موزوں جگہ پر موجود ہیں؟			
.13	کیا جائے کار پر فائر آلارم بجانے کی صورت میں یقین دہانی کی گئی ہے کہ تمام ملازمین اس کو سننے اور سمجھنے کی صلاحیت رکھتے ہیں؟			

.14	کیا آگ کی تشخیص اور بجھائو کا نظام بجلی سے چلتا ہے۔ تو بجلی کی معطلی کی صورت میں اس کا خود کار نظام موجود ہے؟				
.15	کیا کام جگہ پہ آگ بجھانے والے آلات مناسب جگہ پر موجود ہیں اور ملازمین خطرے کے بغیر ان تک رسائی رکھتے ہیں؟				
.16	کیا آگ بجھانے کے آلات مناسب اونچائی کے ساتھ اور بغیر کسی رکاوٹ کے لگائے گئے ہیں؟				
.17	کیا آپ ہنگامی اخراج کے راستے میں موجود تمام آلات کی جانچ پڑتال کرتے ہیں؟				
.18	جائے کار میں تمام لفٹ پر ہنگامی صورتحال میں لفٹ کو استعمال نہ کرنے کی حفاظتی علامت چسپاں ہے؟				
.19	کیا ملازمین کو ہنگامی اخراج کی اہمیت بارے تربیت دی گئی ہے؟				
.20	کیا جائے کار پہ ملازمین کے لیے ہنگامی صورتحال میں اسمبلی ایریا موجود ہے؟				

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے مشین سیفٹی

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا ملازمین کو مشین پر کام کے لیے محفوظ طریقوں سے آگاہی کیلئے کوئی تربیتی پروگرام بنایا گیا ہے؟			
.2	کیا ملازمین کو مشین چلانے کے محفوظ طریقہ کار پہ یقینی عمل پیرا ہونے کیلئے مناسب نگرانی مہیا کی گئی ہے؟			
.3	کیا مشینری اور آلات کے حفاظتی معائنہ کا باقاعدہ پروگرام بنایا گیا ہے؟			
.4	کیا تمام مشینری اور آلات صاف اور مناسب طریقے سے برقرار ہیں؟			
.5	کیا مشینوں کو چلانے و مرمت کے لیے سامان کو رکھنے اور کچرے کو ٹھکانے لگانے کیلئے مشینوں کے گرد اور ان کے درمیان مناسب فاصلہ ہے؟			
.6	کیا سامان اور مشینری کو محفوظ طریقہ سے اور اچھی طرح نصب کیا گیا ہے تاکہ گرنے یا دیگر نقل و حرکت کی صورت میں ملازمین کو چوٹ سے بچایا جاسکے؟			
.7	کیا ہر مشین پہ پاور شٹ آف سوئچ آپریٹر کی پہنچ میں ہے؟			
.8	کیا تمام پلیاں اور بیلٹ جو کہ سطح زمین سے سات فٹ کی بلندی تک ہیں' ان پر مناسب حفاظتی حصار لگائے گئے ہیں؟			
.9	کیا تمام متحرک زنجیریں' گراریاں' بیلٹ' فلائی ویل' پلیاں' شافٹیں' سپنڈل پر مناسب حفاظتی حصار لگائے گئے ہیں؟			
.10	ایسی مشینیں جن میں کولنٹ کا استعمال ہے کیا ان پہ اسپلیش گارڈ (حفاظتی شیلڈ) نصب ہے؟			

.11	کیا مشین ایریا میں آپریٹر اور دیگر ملازمین کو کام کے دوران پیدا ہونے والے خطرات' نپ پوائنٹس' گھومنے والے پرزے' اڑتے ذرات اور چنگاریوں سے بچاؤ کیلئے طریقے کار مہیا کئے گئے ہیں؟				
.12	کیا مشین گارڈ (حفاظتی حصار) محفوظ اور بہتر طریقے سے لگائے گئے ہیں؟				
.13	اگر مواد رکھنے اور ہٹانے کیلئے خصوصی دستی اوزار استعمال کئے جاتے ہیں تو کیا وہ آپریٹر کیلئے محفوظ ہیں؟				
.14	کیا بجلی کے اچانک بند ہونے یا شٹ ڈائون کے بعد بجلی بحال ہونے پر مشینوں کو خودکاری سے روکنے کیلئے بندوبست ہے؟				
.15	اگر مشینری کو کمپریسڈ ہوا سے صاف کیا جاتا ہے تو کیا کارکن اور اس کے ساتھیوں کو آنکھوں اور جسمانی چوٹ سے بچانے کے لئے خود حفاظتی آلات یا دیگر حفاظتی حصار استعمال کئے جاتے ہیں؟				
.16	کیا مشین کی سروس و مرمت کیلئے لاک آئوٹ / ٹیگ آئوٹ طریقہ کار کی پیروی کی جاتی ہے؟				
.17	کیا مشین کو چلانے و بند کرنے کے بٹن واضح طور پر نشان زدہ ہیں اور کارکن کی رسائی میں ہیں؟				
.18	اگر ایک سے زیادہ آپریٹر موجود ہیں تو کیا ان کو علیحدہ علیحدہ کنٹرول مہیا کئے گئے ہیں؟				
.19	کیا ایمرجنسی لائٹنگ لائق عمل ہے؟				
.20	کیا مشین کی تھرتھراہٹ قابو میں ہے؟				
.21	کیا اوزار' آلات اور مشینری کو اس طرح سے بنایا' رکھا یا استعمال کیا گیا ہے کہ کام کو آرام دہ طریقے سے سرانجام دیا جاسکے؟				

.22	جہاں اڑنے والے ذرات یا زنگ آلود مواد استعمال ہوں۔ کیا وہاں حفاظتی چشمہ یا فیس شیلڈ کا استعمال کیا جاتا ہے؟				
.23	کیا خراش، زخم، زنگ آلود مائعات اور کیمیکلز کے خطرات سے بچانے کیلئے حفاظتی دستانے، لباس، شیلڈ اور دوسرے حفاظتی آلات مہیا کئے گئے ہیں؟				
.24	جہاں گرنے والے چیزوں کا خطرہ ہو۔ کیا وہاں ملازمین کو حفاظتی ہیلمٹ مہیا کیا گیا ہے؟				
.25	کیا پائوں کی حفاظت کیلئے حفاظتی جوتے مہیا کئے گئے ہیں؟				

نام آفیسر بمعہ عہدہ_____

چیک لسٹ (خطرہ تشخیص) برائے (بائیولوجیکل)

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا جائے کار پر پھپھوندی اور فنگس کے اطلاق کے حالات موجود ہیں؟			
.2	کیا کام کی جگہ پر خون اور دیگر جسمانی رطوبتیں (بلغم، پسینہ، پیشاب وغیرہ) موجود ہے؟			
.3	کیا تمام کارکنوں کو حفظان صحت کا کارڈ مہیا کیا گیا ہے؟			
.4	کیا ملازمین کو حفاظتی ٹیکے لگائے جاتے ہیں؟			
.5	کیا جائے کار پر صاف اور گندے پانی کی نکاسی کا باقاعدہ نظام ہے؟			
.6	کیا ہوا میں موجود جراثیم جائے کار پر کارکنوں کے انفیکشن کا باعث بنتے ہیں؟			
.7	کیا کاٹنے والے زہریلے حشرات جائے کار پر موجود ہیں؟			
.8	کیا کیڑے مار ادویات کا باقاعدگی سے استعمال کیا جارہا ہے؟			
.9	کیا جائے کار پر خطرناک اور زہریلے نباتات موجود ہیں؟			
.10	کیا جائے کار پر جانوروں یا پرندوں کے باقیات یا بیٹ (droppings) موجود ہے؟			
.11	کیا جائے کار پر وبائی بیماری کے پھیلاؤ کے حالات موجود ہیں؟			

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے الیکٹریکل

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا کارکنوں / عملے نے بجلی کے خطرات' استعمال یا احتیاطی تدابیر کے بارے بنیادی تربیت یا معلومات حاصل کی ہیں؟			
.2	کیا وہ جانتے ہیں کہ بجلی کے غلط استعمال کے نتیجے میں یہ چیزیں واقع ہو سکتی ہیں: (a) صدمہ' جلد کا جلنا' چوٹ یا موت؟ (b) آگ اور دھماکے؟			
.3	کیا مین بجلی کی فراہمی ضرورت کے لیے کافی ہے؟			
.4	کیا تاروں سے گزرتی بجلی ان کی صلاحیت سے زیادہ ہے؟			
.5	کیا تاریں تانبے کے کنیکٹر کے ساتھ جڑی ہوئی ہیں؟			
.6	کیا بجلی کی تقسیم کا نظام (جیسے لائٹنگ' بجلی کی طاقت بشمول RCD پروٹیکشن وغیرہ) کام کے لیے موزوں ہے؟			
.7	کیا آئسولیٹنگ سوئچ واضح طور پر نشان زدہ ہیں؟			
.8	کیا سوئچ / فیوز بورڈ پر انتباہی نشانیاں واضح ہیں؟			
.9	کیا مناسب تعداد میں سوئچ ساکٹ ہیں؟			
	کیا تمام بجلی کا سامان			
.10	(a) مقصد کے لیے موزوں؟ (b) اچھی حالت میں؟ (c) کسی قابل شخص سے نصب اور تصدیق شدہ ہے؟ (d) باقاعدگی سے ٹھیک کیے جاتے ہیں؟			

.11	کیا برقی آلات پہ وولٹیج، کرنٹ، وغیرہ لکھی ہوئی ہے؟				
.12	کیا پلگ اور لیڈز کا معمول کے مطابق معائنہ کیا جاتا ہے؟				
.13	کیا تمام نقائص / خرابیاں رپورٹ اور ریکارڈ کی جاتی ہیں؟				
.14	کیا الیکٹریشن سے آلات اور سامان کی باقاعدگی سے دیکھ بھال کی جاتی ہیں؟				
.15	کیا برقی آلات سوئچز اور ٹرمینلز محفوظ طریقے سے جڑے ہوئے ہیں؟				
.16	کیا برقی آلات پر کام کرنے یا مرمت کے لیے درج ذیل احتیاطی تدابیر اختیار کی گئی ہیں؟ (a) کام کرنے کا اجازت نامہ؟ (b) لاک آئوٹ / ٹیگ آئوٹ؟				
.17	کیا فرش بکھری ہوئی تاروں سے پاک ہیں؟				
.18	کیا برقی آلات لگاتے یا اتارتے وقت برقی رو بند کر دی جاتی ہے؟				
.19	کیا تمام برقی آلات مناسب طریقے سے ارتھ کیے گئے ہیں؟				
.20	کیا ہر ۵ سال بعد وائرنگ انسولیشن کا معائنہ کیا جاتا ہے؟				
.21	کیا ہر سال ارتھ پٹس کو ارتھ ٹسٹر کے ذریعے چیک کیا جاتا ہے؟				

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے فعالیات پیمائی (ارگونامکس)

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا ارگونامکس کے متعلق خطرات کی نشاندہی اور تشخیص کروائی گئی ہے؟			
.2	کیا کارکنان کیلئے کرسیاں یا اسٹولز اور ورک سٹیشن مناسب اور دوران کام آسانی سے ایڈجسٹ ہوسکتے ہیں؟			
.3	کیا لوڈنگ اور اَن لوڈنگ سرگرمیاں دستی یا خودکار طریقے سے ہیں؟			
.4	کیا ایک ہی جگہ پر دہرائے جانے والے کام کے لیے لٹکے ہوئے (ہینگڈ) آلات موجود ہیں؟			
.5	کیا دستی آلات ایڈجسٹیبل ہیں؟ اور ان کی تھرتھراہٹ اور شور کم کرنے کے لیے مناسب حفاظت موجود ہے؟			
.6	کیا خاص کام کرنے کیلئے مخصوص آلات موجود ہیں؟			
.7	کیا کارکنان کو جائے کار پر وقتاً فوقتاً کام کے دوران کھڑا ہونے اور بیٹھ جانے کی اجازت ہے؟			
.8	کیا کمپیوٹر پر کام کیلئے ورک سٹیشن کی اونچائی میں ردوبدل کی سہولت موجود ہے؟			
.9	کیا ایسا کوئی طریقہ کار موجود ہے جس میں کارکنان وقتاً فوقتاً آرام دہ کمرہ میں اپنی تھکن دور کر سکیں؟			
.10	کیا جائے کار پر ایسا نظام موجود ہے جس میں کارکنان کی مہارت اور جسمانی صحت کو مدنظر رکھتے ہوئے کام دیا جائے؟			
.11	کیا جائے پر ایسی سہولیات اور سازوسامان میسر ہے۔ جو معذور افراد کے لیے مناسب ہو؟			
.12	کیا کارکنان پٹھوں کے مسائل سے واقف ہیں اور انہیں مناسب تربیت دی جاتی ہے؟			
.13	کیا دوران کار کارکنان کو جھکنا، گھومنا، گھٹنے ٹیکنا وغیرہ پڑتے ہیں؟			
.14	کیا جائے کار پر ڈرائیونگ کیبن اور گاڑیوں کی سیٹیں محفوظ اور آرام دہ ہیں؟			
.15	کیا کارکنان کو طبی معائنہ کی سہولت موجود ہے؟			

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے کیمیکلز

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا کیمیکلز کے بہاؤ اور ناگہانی اخراج کی صورت میں انہیں بحفاظت تلف کرنے کا انتظام موجود ہے؟			
.2	کیا کیمیکلز سے متعلق ہدایات پر مبنی چارٹ جائے کار پر آویزاں ہیں اور ورکروں کی رہنمائی کیلئے موجود ہیں؟			
.3	کیا ورکرز کیمیکلز کے استعمال دیکھ بھال اور بحفاظت ذخیرہ سے متعلق تربیت یافتہ ہیں؟			
.4	کیا ورکرز خطرناک کیمیکلز کے استعمال، دیکھ بھال وغیرہ سے متعلق پوشیدہ خطرات سے واقفیت رکھتے ہیں؟			
.5	کیا کیمیکلز کو ذخیرہ کرنے والے ڈرم پر لیبل چسپاں تھا جو ان کے متعلق تمام معلومات مہیا کرتا ہو؟			
.6	کیا تمام ورکرز خطرناک کیمیکلز کو استعمال کرتے ہوئے ذاتی حفاظت کے آلات استعمال کر رہے ہیں؟			
.7	استعمال نہ ہونے کی صورت میں کیا خطرناک کیمیکلز بند ڈرموں میں محفوظ طریقہ سے رکھے گئے ہیں؟			
.8	کیا کیمیکلز کی ترسیل کیلئے استعمال ہونے والی پائپ لائنوں کو مناسب طریقے سے ہدایات سے آویزاں کیا گیا ہے؟			
.9	کیا کام کرنے کا مناسب طریقہ کار (SOP) موجود تھا اور کیمیکلز بہہ جانے کی صورت میں کوئی طریقہ کار وضع کیا گیا ہے؟			
.10	کیا ایمرجنسی کی صورت میں آلات تنفس وافر مقدار میں موجود ہیں؟			
.11	کیا آلات تنفس کے استعمال سے متعلق کوئی تحریری دستاویز اور طریقہ کار موجود ہے؟			
.12	کیا ورکرز کو خطرناک کیمیکلز کے استعمال اور موجودگی والی جگہ پر کھانے سے منع کیا گیا ہے؟			

نام آفیسر بمعہ عہدہ _____

چیک لسٹ (خطرہ تشخیص) برائے طبعی خطرات

نام فیکٹری _____ تاریخ _____

نمبر شمار	سوال	ہاں	نہیں	عملی اقدامات
.1	کیا دھول، دھواں وغیرہ جائے کار پر موجود ہیں اور ان پر قابو پانے کے لیے مناسب اقدامات کیے گئے ہیں؟			
.2	کیا تمام کام کی جگہیں و کمرے صاف ستھرے اور منظم ہیں اور فاضل مادوں کو ٹھکانے لگانے کے لیے مئوثر اقدامات کیے گئے ہیں؟			
.3	کیا جائے کار پر ایسے مقامات ہیں۔ جہاں مسلسل آواز کی حد 85 ڈی بی (اے) سے زیادہ ہے؟			
.4	کیا شور کی شدت کو کم کرنے کے لیے تکنیکی و انتظامی کنٹرول کا استعمال کیا گیا ہے؟			
.5	کیا کارکنان کو جائے کار پر زیادہ درجہ حرارت / نمی کا سامنا ہے اور ہوا کے گزران کا مناسب انتظام ہے؟			
.6	کیا جائے کار پر کارکنان کو شدید گرمی / نمی سے بچاؤ کے لیے ٹھنڈے مشروبات اور سایہ دار جگہیں مہیا ہیں؟			
.7	کیا تمام کام کی جگہیں روشن ہیں۔ اور روشنی کام کی مناسبت سے موزوں ہے؟			
.8	کیا کارکنان کا ملازمت سے قبل سالانہ طبعی معائنہ تعلیم یافتہ معالج سے کروایا جاتا ہے؟			
.9	کیا کارکنان کو جائے کار پر ذاتی حفاظتی سامان میسر ہے اور ان کو اس کی مناسب استعمال اور دیکھ بھال کی تربیت دی گئی ہے؟			
.10	کیا کام سے متعلق حفاظتی ہدایات نافذ / آویزاں ہیں؟			
.11	کیا حادثات کی تحقیقات اور تفتیش کا نظام نافذ ہے؟			
.12	کیا خطرناک کام کرنے سے قبل اس کا اجازت نامہ (Workpermit) لینا ضروری ہے؟			
.13	کیا حفاظتی پوسٹر و سائن جائے کار پر آویزان ہیں؟			

نام آفیسر بمعہ عہدہ _____

Under ADP Scheme "Capacity Building of Occupational Safety and Health (OSH) Regime to Promote Safer Working Conditions at Workplaces"

Centre for the Improvement of Working Conditions & Environment

Directorate General Labour Welfare Punjab

Labour & Human Resource Department Government of the Punjab

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