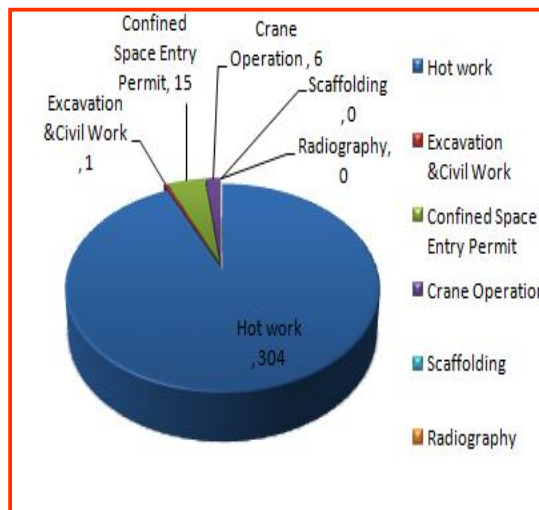
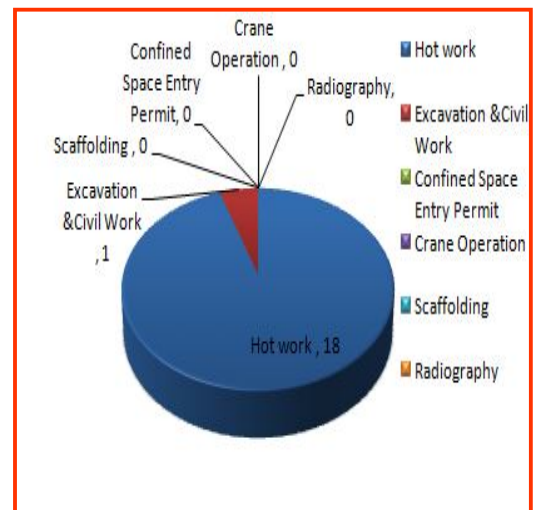


**Permit to Work System at NRL Korangi & K.T**

Permit is regarded as a written agreement between the person authorizing the work and the person receiving the permit to work. Following Permit to Work were issued in the Month of **February 2020** at Korangi & K.T.



Korangi Refinery



Keamari Terminal

**Safe Man Hours**

NRL Safety Board is updated by second week of every month. Safety Board shows the number of Safe Man-hours worked by NRL MPT and Non MPT Staff. By the Grace of Al Mighty Allah and joint efforts by all of us, we have achieved **33.23 millions** safe man-hours with out Lost Time Injury as on **29th Feb 2020**. Let us all give top priority towards safety, as there is no job, which cannot be done in a safer way.

**33.23 Million Safe man hours till 29th February**





**Practical training on use of Fire Extinguisher by Fire Protection Department**



**Practical training carried out on use of Fire Monitor, Hose handling, fog and jet nozzle**



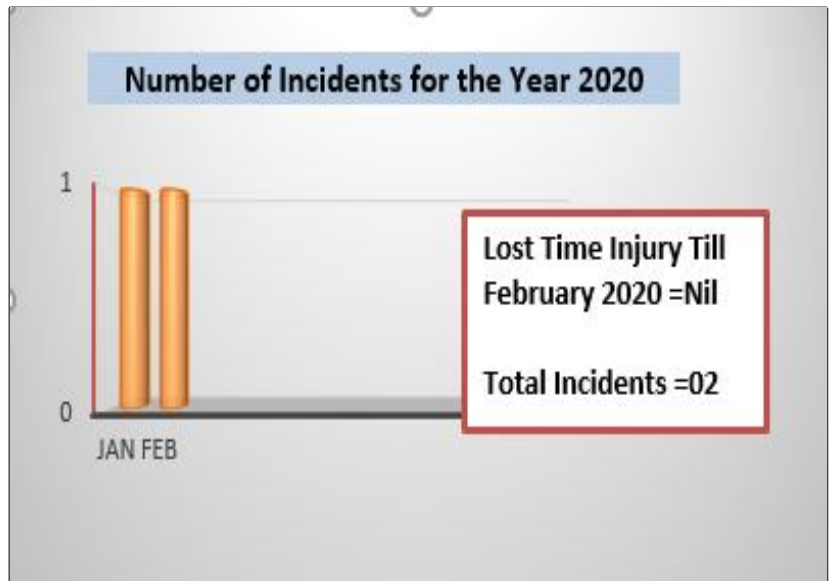


# OUR AIM: **NO** ACCIDENTS



## INCIDENT / ILL HEALTH AND LOSS TIME INJURY

|                               |                                                                                                                                                                                                      |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Incident</b>               | An incident is an unplanned, undesired event that adversely affects completion of a task.                                                                                                            |
| <b>Near miss</b>              | A near miss describes incident where no property was damaged and no personal injury sustained, but when given a slight shift in time or position, damage and / or injury easily could have occurred. |
| <b>Accident</b>               | An accident is an undesired event that results in personal injury, property damage and equipment damage.                                                                                             |
| <b>Loss Time injury (LTI)</b> | If any NRL employee on duty had on the job accident, which render the employee medically unfit to resume of his duty next 24 hours is considered to be lost time injury (LTI).                       |



## INTERNAL / EXTERNAL MONITORING CONDUCTED BY HSE DEPARTEMENT



**Ambient Air Monitoring**



**Drinking Water Sampling**



**Stack Emission Testing**



**Vehicle Emission Testing**



**Noise Monitoring in Plant**



**NRL In-house / Internal Monitoring**

## Safety Article: Safety Precautions for Toxic / Flammable gas release.

### Toxic gases:

A **toxic gas** is one which is capable of causing damage to living tissues, impairment of the central nervous system, severe illness or, in extreme cases, death when it is ingested, inhaled, or absorbed by the skin or eyes.

### Flammable gases:

A **flammable gas** is a gas that burns in the presence of an oxidant when provided with a source of ignition. Flammable gasses can include methane, hydrogen, propane, and propylene. The risk of a fire starting increases in relation to the amount of gas present.



#### List of some common Toxic gases at Refinery :

- ◆ Hydrogen Sulphide (H<sub>2</sub>S)
- ◆ Carbon monoxide (CO)
- ◆ Chlorine gas (Cl<sub>2</sub>)
- ◆ NO<sub>x</sub>
- ◆ SO<sub>x</sub>
- ◆ Ammonia (NH<sub>3</sub>)

#### List of some Flammable gases at Refinery:

- LPG
- Refinery Gas
- Propane
- Di-acetylene
- H<sub>2</sub>S
- Sulphur Dust

### Precautionary steps in case of release of Toxic / Flammable gas:

- ◆ The officer in charge first of all decides the direction to take when approaching the incident site, selecting a route so as to have the wind coming from behind.
- ◆ Clear up all source of ignition especially in the direction where the wind is blowing the vapors/gases.
- ◆ Evacuate all persons; except those necessary to deal with emergency; especially from an area which is in the path of the flammable vapors/gas cloud.
- ◆ If there is immediate danger to life or health (IDLH), the area should be evacuated by Public Safety at the discretion of EH&S personnel on the scene.
- ◆ Task related PPE's must be used by the workers while dealing with the incident scenario. Such as Canister mask , SCABA , ELSA , Face mask etc.
- ◆ People working on flammable gas leak should be provided with full protection against "frost bite" and must be equipped with self breathing apparatus and/or supplied air breathing.
- ◆ Liquid LPG by its rapid vaporization and consequent lowering of the temperature can cause severe frost bite burns (cold burn). This is due to contact of liquid LPG with the skin. Protective clothing, such as coveralls, gloves and goggles should be worn when handling LPG.
- ◆ Primary consideration should be to isolate & minimize the leak by closing valve and or inserting clamps or plugs in the leak area.
- ◆ "No sparking regulation" must be strictly enforced till the emergency is over.
- ◆ Don't touch harmful substances. Be aware that fumes may possess a risk.
- ◆ Public Safety security of the area will be maintained until the time the leakage get controlled and security is no longer required.
- ◆ Proper vigilance & supervision for the job to be employed.
- ◆ An attendant should be in the area at all times, for monitoring breathing air.
- ◆ In less windy / still air conditions, Toxic & Flammable gas that are heavier than air push out breathable oxygen without any appreciable feeling, Inhalation can cause irritation of nose, throat and lungs etc. Long-term exposure may cause cardiac sensitization including irregular heartbeats and death due to cardiac arrest.

To be continued in next month..