

NATIONAL REFINERY LIMITED



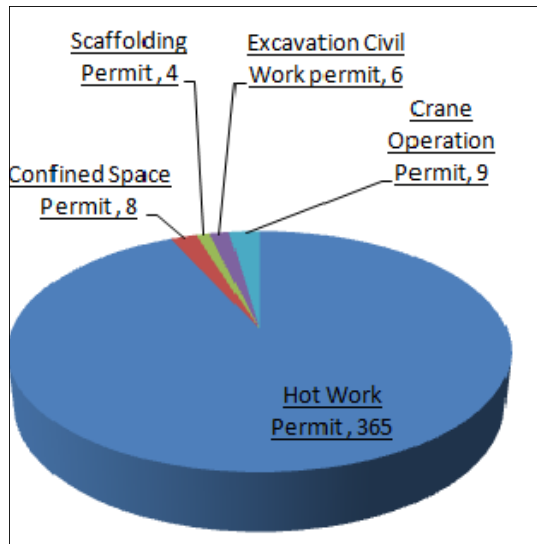
HSE NEWS LETTER

November—2018

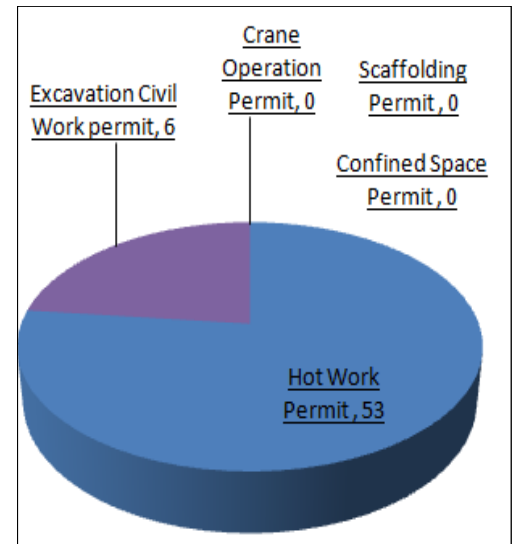
Permit to Work System at NRL Korangi & K.T

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 **November 2018** at Korangi & K.T.

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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 **30.359188** millions safe man-hours with out Lost Time Injury as on **November 30th, 2018**. Let us all give top priority towards safety, as there is no job, which cannot be done in a safer way.

Question or concerns regarding this news letter may be directed to:

Manager HSE
National Refinery Limited (NRL), 7-B, Korangi Industrial Zone, Karachi - 74900, Pakistan.
Email: mgrhse@nrpak.com



30.35 Million Safe Man Hours Till 30 Nov 2018

Emergency Response and Preparedness Drills Conducted By HSE Department



Evacuation Drills Conducted by HSE Department



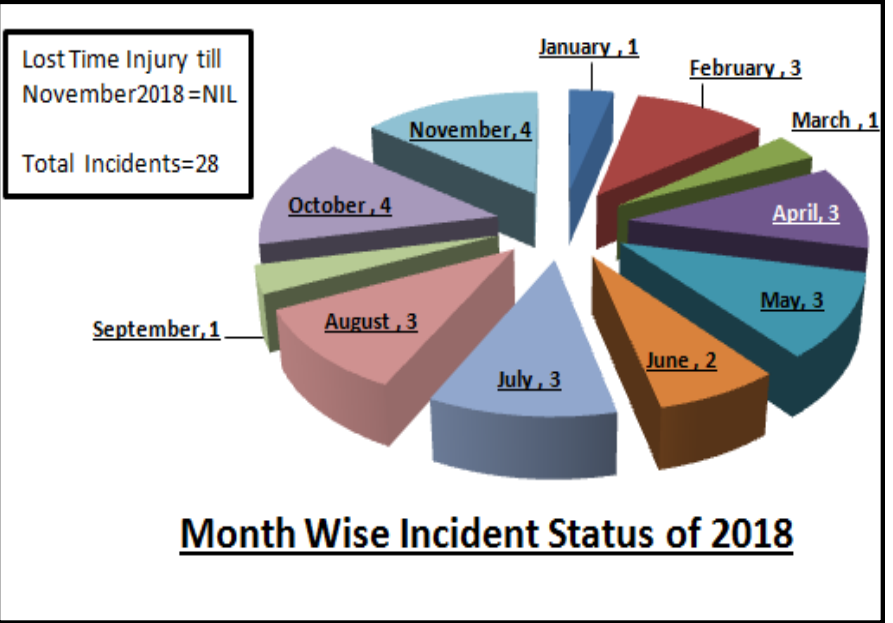
Mock Drill and Hose Handling Drill Conducted by Fire Protection Department

OUR AIM: NO ACCIDENTS



INCIDENT / ILL HEALTH AND LOSS TIME INJURY

Near miss	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.
Incident	An incident is an unplanned, undesired event that adversely affects completion of a task.
Accident	An accident is an undesired event that results in personal injury, property damage and equipment damage.
Loss Time injury (LTI)	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



ETP water sampling



Stack Emission Testing



Noise Monitoring in Plant



H2S and Noise Monitoring in plant area

SAFETY ARTICLE : WHAT CAUSES INDUSTRIAL BOILER EXPLOSIONS?

Boiler explosion history tells that an industrial boiler is a potential bomb. Steam boilers have been known to explode when not maintained.

BOILER SAFETY PRECAUTIONS TO AVOID BOILER

EXPLOSIONS:

- ◆ Hydraulic should be carried out at a defined pressure before the start of a boiler.
- ◆ Check if the pump inlets are open at the start of a boiler.
- ◆ Install an automatic ash removal system such as rotary valves in a boiler so as to prevent the accumulation of ash in a furnace or other equipment. The accumulation may result in the blockage or excessive heating of boiler parts resulting in its failure.
- ◆ Pump priming must be done at the start of the boiler.
- ◆ All loose and wrong connections must be checked and make sure to rectify the connections before starting your boiler.
- ◆ Well trained man power must be hired for operating **boiler**.



PRECAUTIONS TO BE CARRIED OUT REGULARLY:

- ◆ Never operate **boiler** above the design pressure and check for the safe operation of **Safety valves** as well as fusible plugs.
- ◆ Strainer must be installed before the pump & check for its proper functioning to remove dirt particles from boiler feed water as this prevents the blockage of a feed line.
- ◆ Water must be treated before feeding it to the boiler to prevent the accumulation of dirt in a Boiler shell.
- ◆ Regular **inspection and maintenance of boiler** including its accessories and valves to check for possible failures and cracks are necessary.
- ◆ Make sure that the boiler vents are not restricted by any kind of obstruction such as cloth etc.
- ◆ Always check for the **leakages of steam**, water, air and flue gases from any suspicious place.
- ◆ Follow boiler manual for safe and efficient working of your boiler.
- ◆ The control panel should be cleaned regularly and should be kept in a cool and an isolated place away from your boiler.
- ◆ Check if all the hot parts of the boiler are insulated, do not touch the parts with bare hands where the insulation is not provided.
- ◆ Maintenance of both **FD Fan and ID Fan** is important and regularly check for greasing in all the movable parts for the ease of operation.
- ◆ Regular cleaning of movable mechanical parts is necessary.

PRECAUTIONS TO BE CARRIED OUT OCCASIONALLY:

- ◆ Occasionally clean the **boiler tubes** to prevent any ash deposition or scaling inside or outside the tubes.
- ◆ Failure to do so will affect the **boiler efficiency** and will eventually overheat the tubes leading to the tube leakage problems.
- ◆ The ratio of **primary and secondary air** must be maintained in accordance with fuel feeding.
- ◆ Periodically check burner operation **back pressure** and line pressure to prevent any thermal hazards.