NATIONAL REFINERY LIMITED

HSE NEWS LETTER **October—2018**

HSE Newsletter Contents:

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. During working days in the morning several naked flame hot work permits were audited before issuance of various jobs at different locations inside Refinery by Sr. Engineer, Engineer and HSE / Fire Protection Officers along with respective area custodians. Following Permit to Work were issued in the Month of **October 2018** at Korangi & K.T.

KORANGI REFINERY	
PERMITS	**TOTAL QUANTITY (NOs.)**
Hot Work Permit	417
Confined Space Entry Permit	07
Excavation / Civil Work	05
Radiography Permit	—
Crane Operation	09
Cold Work Permit	—
Scaffolding Permit	04

KEAMARI TERMINAL	
PERMITS	**TOTAL QUANTITY (NOs.)**
Hot Work Permit	30
Confined Space Entry Permit	—
Excavation / Civil Work	14
Radiography Permit	—
Crane Operation	01
Cold Work Permit	—
Scaffolding Permit	—

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 **30.163688** millions safe man-hours with out Lost Time Injury as on **October 31st , 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@nrlpak.com

Overview of ISO 45001

Overview of ISO 45001:2018

Increased global trade brings new health and safety challenges which have driven the need for an international OH&S management system standard to enable global benchmarking and to raise the bar for health and safety in the workplace. For this reason, ISO have developed an international standard that will be applicable to organizations of any size, sector or location.

In March 2018, ISO 45001 was published to increase global consistency and make workplaces safer and healthier for all. OHSAS 18001 will be withdrawn with the publication of ISO 45001:2018 and there will be a three-year migration period from the date of publication i.e 2021.

Fire Drill at NRL Korangi & KT :

Live Fire / Dry drill is carried out every **Thursday** at 1000 hrs. sharp at **NRL Korangi Refinery** & Dry Drill is carried out every **Wednesday** at 1530 hrs sharp at NRL Keamari Terminal. This drill helps in checking the fitness of fire fighting equipment & imparting training to Auxiliary Staffs as describe in Procedure to gain experience for combating / catering of live fire fighting. HSE department observes the response time during fire drill. Following are the status of Drills practices which were carried out in the month of **September 2018.**

S. No	Date	Team Leader	Nos. of Participant Attended	Nos. of Absentees	Nature of Drill	Response Time (min: sec)
Korangi Refinery						
01.	04-10-2018	Mr. Muhammad Riaz	12	01	Live	05 minutes 10 Sec
02.	11-10-2018	Mr. Shahid Mehmood	13	—	Live	05 minutes 30 Sec
03.	18-10-2018	Mr. Shahid Mehmood	13	—	Dry	—
04	25-10-2018	Mr. Azam Baig	11	02	Live	05 Minutes 10sec
Keamari Terminal (K.T)						
01	03-10-2018	Mr. Muhammad Abid	04	——	Dry	——
02	10-10-2018	Mr. Shafiq Ansari	04	——	Dry	——
03	17-10-2018	Mr. Furqan Ahmed	04	——	Dry	——
04	24-10-2018	Mr. Furqan Ahmed	04	——	Dry	——
05	31-10-2018	Mr. Asif Bhatti	04	——	Dry	——

Hose Handling Drill Korangi :

Hose handling drill is carried out every **Tuesday** at 1000 hrs. sharp at Fire station NRL Korangi Refinery. This drill helps in handling of fire fighting equipment to Auxiliary Staffs from Productions, Security, Quality Control and Oil movement departments to handle / cater emergency situation. Following are the status of Hose Handling Drills practices which were carried out in the month of **September 2018.**

S. No	Date	Team Leader	Nos. of Participant Attended	Nos. of Absentees
01.	02-10-2018	Mr.Muhammad Riaz	11	02
02.	09-10-2018	Mr.Ali Muhammad	09	04
03	16-10-2018	Mr.Ali Muhamad	11	02
04	23-10-2018	Mr.Muhammad Naveed	12	01
05	30-10-2018	Mr.Muhammad Naveed	11	02

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).

MONTHWISE STATUS OF INCIDENT & LOSS TIME INJURIES

Sr. No.	MONTH	INCIDENTS	LOSS TIME INJURIES
01	January 2018	01	Nil
02	February 2018	03	Nil
03	March 2018	01	Nil
04	April 2018	03	Nil
05	May 2018	03	Nil
06	June 2018	02	Nil
07	July 2018	03	Nil
08	August 2018	03	Nil
09	September 2018	01	Nil
10	October 2018	04	Nil
	Total No.	**24**	**Nil**

INTERNAL MONITORING CONDUCTED BY HSE DEPARTEMENT

S.#	Testing	Locations	Date (NRL)	Date (K.T)
1	H_2S and VOC	Plant area, Storage tanks, Flare area, Management block parking, Q.C,Gantries & terminals.	22nd & 23rd Oct-2018	04th –Oct-2018
2	Illumination	Control rooms, canteen & corridors.		
3	Noise Level	Plant area, Power generation & Pump house		
4	Rain Water Channel Monitoring	Inside NRL	05th-Oct-2018	—

Safety Article : Hydrogen Fire

Hydrogen Fire:

Normally hydrogen fires are not extinguished until the supply of hydrogen has been shut off due to the danger of re-ignition and explosion. Personnel who work around hydrogen should be trained in the characteristics of hydrogen fires and proper procedures for dealing with them. Hydrogen is colorless, odorless, tasteless, non-toxic, and non-poisonous. It's also non-corrosive, but it can embrittle some metals. Hydrogen is the lightest and smallest element, and it is a gas under atmospheric conditions.

Best practices for dealing with a gaseous hydrogen fire include:

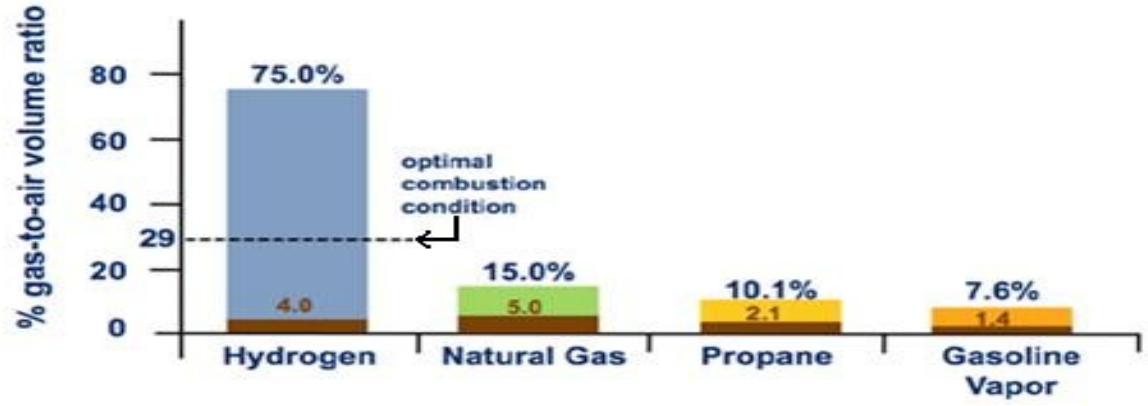
- A hydrogen fire is often difficult to detect without a thermal imaging camera or flame detector.
- Do not extinguish the fire until the hydrogen supply has been shut off, as unburned gaseous hydrogen can result in an explosion. Spray water on adjacent equipment to cool it.
- Do not try to put out a hydrogen cylinder fire unless the cylinder is out in the open or in a well-ventilated area free of combustibles and ignition sources.
- Do not attempt to remove a burning cylinder. Keep it and surrounding cylinders cool by spraying with water.
- If multiple cylinders are burning, fight the fire from as great a distance as possible to protect against the possibility of flying debris.
- Let a gaseous hydrogen fire burn, but spray water on adjacent equipment to cool it.
- Be careful not to spray pressure-relief devices, since ice formation could make them inoperable.

Hydrogen Combustion:

The auto-ignition temperature of a substance is the lowest temperature at which it will spontaneously ignite without the presence of a flame or spark. The auto-ignition temperatures of hydrogen and natural gas are very similar. Both have auto-ignition temperatures over **1,000°F.**

Hydrogen Flammability:

Hydrogen's flammability range (between 4% and 75% in air) is very wide compared to other fuels, as shown in Figure



To be continued...