# NATIONAL REFINERY LIMITED


**HSE NEWS LETTER** **November 2016**

**HSE Newsletter Contents:**



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


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## 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 (PTW) were issued in the Month of **November 2016** at Korangi & K.T.

| KORANGI REFINERY | | KEAMARI TERMINAL | |
|---|---|---|---|
| **PERMITS** | **TOTAL QUANTITY (NOs.)** | **PERMITS** | **TOTAL QUANTITY (NOs.)** |
| Hot Work Permit | 191 | Hot Work Permit | 34 |
| Confined Space Entry Permit | 15 | Confined Space Entry Permit | — |
| Excavation / Civil Work | 73 | Excavation / Civil Work | 03 |
| Radiography Permit | — | Radiography Permit | — |
| Crane Operation | 18 | Crane Operation | 03 |
| Cold Work Permit | — | Cold Work Permit | 02 |
| Scaffolding Permit | 06 | 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 **25.268592** millions safe man-hours with out Lost Time Injury as on **November 30th, 2016**. Let us all give top priority towards safety, as there is no job, which cannot be done in a safer way.

## 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

| S. No | Date | Team Leader | Nos. of Participant Attended | Nos. of Absentees | Type of Drill | Response Time (min & sec) |
|---|---|---|---|---|---|---|
| **Korangi Refinery** | | | | | | |
| 01. | 03-11-2016 | Mr. Khalid Hussain | 13 | Nil | Dry | —— |
| 02. | 10-11-2016 | Mr. Mohammad Riaz | 13 | Nil | Dry | —— |
| 03. | 17-11-2016 | Mr. Khan Mohammad | 13 | Nil | Dry | —— |
| 04. | 24-11-2016 | Mr. Furqan Ahmed | 13 | Nil | Dry | —— |
| **Keamari Terminal (K.T)** | | | | | | |
| 01. | 02-11-2016 | Mr. Shafiq Ansari | 07 | —— | Dry | —— |
| 02. | 09-11-2016 | Mr. Riaz Ahmed | 07 | — | Dry | —— |
| 03. | 16-11-2016 | Mr. Ibrahim Bozdar | 07 | —— | Dry | ——- |
| 04. | 23-11-2016 | Mr. Asif Bhatti | 07 | —— | Dry | ——- |
| 05. | 30-11-2016 | Mr. Nadeem Jaffri | 07 | —— | Dry | —— |

## Hose Handling Drill

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 **November 2016.**

| S. No | Date | Team Leader | Nos. of Participant Attended | Nos. of Absentees |
|---|---|---|---|---|
| 01. | 01-11-2016 | Mr. Mohammad Arshad | 09 | 04 |
| 02. | 08-11-2016 | Mr. Furqan Ahmed | 10 | 03 |
| 03. | 15-11-2016 | Mr. Furqan Ahmed | 10 | 03 |
| 04. | 22-11-2016 | Mr. Shafique Babar | 13 | — |
| 05. | 29-11-2016 | Mr. Shafique Babar | 13 | —- |

## $H_2S$ & VOCs Monitoring Korangi

HSE department monitors the Hydrogen Sulphide ($H_2S$) & Volatile Organic Compounds (VOCs) which are being toxic in nature to the human beings and pollution to the environment. The results of $H_2S$ & VOCs recorded at more than **80 different locations in Refinery** for the month of **November 2016** on **30th**


## 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). |

## MONTH-WISE STATUS OF INCIDENT & LOSS TIME INJURIES

| Sr. No. | MONTH | INCIDENTS | LOSS TIME INJURIES |
|---|---|---|---|
| 01. | January 2016 | 02 | Nil |
| 02. | February 2016 | 00 | Nil |
| 03. | March 2016 | 00 | Nil |
| 04. | April 2016 | 00 | Nil |
| 05. | May 2016 | 01 | Nil |
| 06. | June 2016 | 01 | Nil |
| 07. | July 2016 | 03 | Nil |
| 08. | August 2016 | 02 | Nil |
| 09. | September 2016 | 02 | Nil |
| 10. | October 2016 | 00 | Nil |
| 11.. | November 2016 | 00 | Nil |
| **Year to Date (Total)** | | **11** | **Nil** |

## Illumination Monitoring Report

HSE department monitor the Illumination intensity at various Rooms, corridor & Control rooms which include Admin Block, Operation Block, all three Refineries, Canteen, Fire station, Security, Shipping office, Oil movement office, Quality Control, Workshop Hall, Ware house office and Dispensary office for the month of **November 2016** on **30th November 2016**. The results was reported to all stake holders.

## Noise Survey Report Korangi

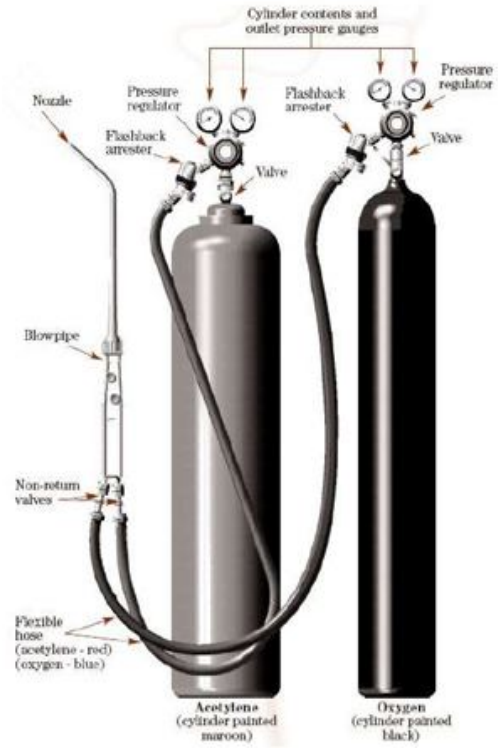
HSE department recorded the noise level reading at various location i.e., Lube-I, Lube-II, Fuel Refinery, Utilities, Oil Movement, R.O, Power Generation, Workshop, Warehouse, Quality control, Fire Protection, Shipping and Security department for the month of **November 2016** on **30th November 2016**. 182 & 283 / 293 Pump house & Fire Pump house # 2 was not in operation. The results of noise level reading was reported to all stakeholders.

# Safety Article: Working Safely with Acetylene Cylinders

Acetylene is the most common gas used for fueling cutting torches in industry. When mixed with pure oxygen in a cutting torch assembly, an acetylene flame can theoretically reach over 5700°F.Oxy/fuel gas equipment has many uses - welding, cutting, heating, straightening, and descaling. The equipment is versatile, easy to move and cheap. It is so widely used that sometimes people forget about the dangers. Many people are injured each year by the incorrect or careless use of oxy/fuel gas equipment. The main hazards are:

- fire caused by heat, sparks, molten metal or direct contact with the flame.
- explosion when cutting up or repairing tanks or drums which contain or may have contained flammable materials.
- fire/explosion caused by gas leaks, backfires and flashbacks.
- fumes created during flame cutting.
- fire/burns resulting from misuse of oxygen.
- burns from contact with the flame or hot metal.
- crushing or impact injuries when handling and transporting cylinders.

However the most hazardous among them is Flashback.




**A flashback occurs** if there is a flammable mixture of fuel gas and oxygen in the hoses when the torch is lit. This can ignite the mixture and will travel backwards into the cylinder. A flashback can cause decomposition of the acetylene.

## 1. How to Prevent Flashback:

Only use regulators, flashback arrestors, hoses and blowpipes designed for acetylene and oxygen, respectively, marked and manufactured to the correct Standards. For most welding and cutting processes, the acetylene pressure should not exceed 0.62 bar (9psi).

a. **Use the correct lighting-up procedures*:***

- Before lighting the blowpipe, purge the hoses by opening the gas supply to each hose for a few seconds. This will flush out any flammable mixtures of gases in the hose.
- Purge one hose at a time and close the blowpipe valve after purging.
- Use a well-ventilated area.
- Use a spark ignitor to light the gas.
- Use the correct gas pressures and nozzle sizes for the job.

**a. Handle acetylene cylinders with care:**

- Do not drop or jar them.
- Do not roll them across the floor.
- Keep them in an upright position, and if returned to an upright position, leave for an hour to settle.

**a. Fit flashback arresters (or equivalent):**

- Fit flashback arresters onto the pressure regulators on both the acetylene cylinder and the oxygen cylinder. These, or equivalent devices, prevent any decomposition traveling back into the cylinder.

**a. Maintain non-return valves:**

- Fit non-return valves (often called check valves) on the torch, to prevent back feeding of gas into the hoses.
- Inspect regularly and replace damaged non-return valves.

**a. Keep nozzles in good condition:**

- Poorly maintained nozzles cause turbulent gas flow, which increases the risk of flashback.
- Inspect nozzles regularly. Make sure they are not blocked by dirt or spatter. Replace damaged nozzles.

## 2. What to do if there is a flashback:

If a flashback does occur:

- Immediately close both the blowpipe/nozzle valves, oxygen first, then acetylene.
- Close both cylinder valves;
- If the flame cannot be put out at once, evacuate the area and call the HSE & Fire Protection Department.
- Do not move or vent cylinder, monitor for any heat over the next hour;
- Before using again, make sure all equipment is working effectively, especially anything that might have been affected by heat. If in doubt, consult your supplier.