

**ARL**

# PIONEERS

in Petroleum Refining

Jan – Sep, 2019  
Volume 1, No. 1

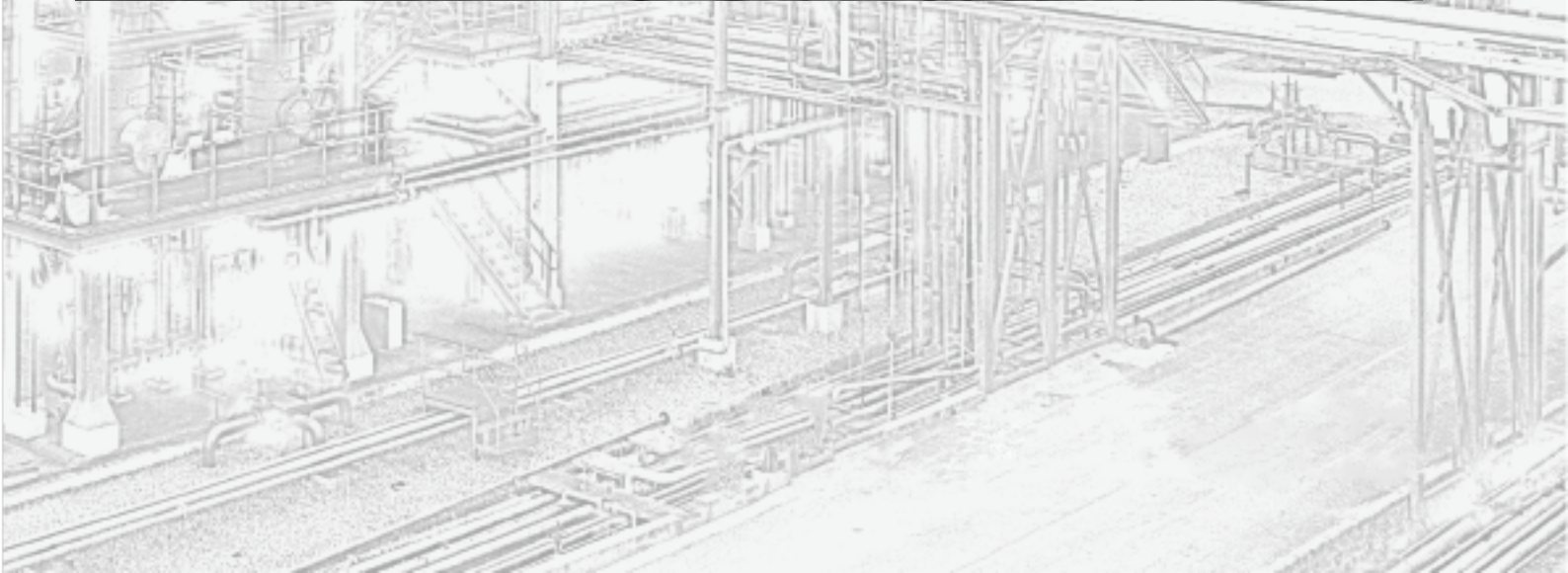


Attock Refinery Limited  
[www.arl.com.pk](http://www.arl.com.pk)

# A PAGE FROM HISTORY

# 1922

TO MORCHA & H



## PATRON IN CHIEF



M. Adil Khattak  
CEO  
(ARL)

## PATRON



Javed Iqbal Malik  
HOD  
(HR&A)

## EDITOR



Sajid Hussain  
Incharge  
(Training & Development)

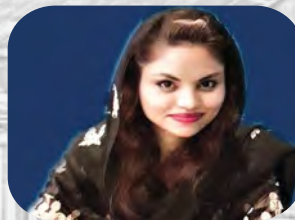
## EDITORIAL TEAM MEMBERS



Salman Shaikh  
Incharge  
(Utility Operations)



Amin Kahoot  
Incharge  
(Fixed Assets & Insurance)



Saba Sarfraz  
Executive  
(Public Relations)



Muhammad Ahmed  
Senior Officer  
(Human Resources)

## PATRON IN CHIEF MESSAGE

### Dear Colleagues

My compliments to the Editorial Team for the re-launch of ARL's Newsletter after a lapse of eight years under its new name PIONEERS.

I am sure the Newsletter would summarise ARL's professional pursuits and extra- curricular activities during the period under review.

M. Adil Khattak

## EDITOR'S NOTE

### Dear Readers

This Newsletter has been renamed from Payam -e- Tel to PIONEERS because Attock Refinery Limited commissioned in 1922, rightfully claims to be the PIONEERS in petroleum refining sector in the Region.

The Newsletter shall cover Company events, social responsiveness, achievements and spotlight on our employees affairs and their contributions.

PIONEERS will be published bi-annually and we look forward to contributions from all Departments and Individuals of the Company to make the Newsletter a success.

You may send feedback at [newsletter@arl.com.pk](mailto:newsletter@arl.com.pk)

**Happy viewing.....!**

# COMPANY EVENTS

## MAN OF THE QUARTER (MOQ) AWARDS

1<sup>st</sup> MoQ (2019) and 2<sup>nd</sup> MoQ (2019) awards ceremonies were held at ARL Diner on April 30, 2019 and August 01, 2019 respectively. In each ceremony, the awards were distributed in the following categories:

<u>Award Type</u>	<u>No. of Recipients</u>
<b>Performance</b>	18
<b>Safety</b>	04
<b>Housekeeping</b>	04

In 1<sup>st</sup> Quarter-2019, Quarterly Safe Man-Hours trophy was won by Heavy Crude Unit Section and one Special Safety Award was also given to Mr. Khurram Shahzad (Security Guard) in recognition of his action beyond the call of duty. In 2<sup>nd</sup> Quarter – 2019, this trophy was won by Power Plant Section.

### 1<sup>st</sup> Man of the Quarter 2019

#### PERFORMANCE AWARDS



RAFAQAT ALI SHAH  
OPERATIONS



MUHAMMAD RAMZAN  
OPERATIONS



JAVED MASIH  
OPERATIONS



S. TAJAMAL HUSSAIN  
OPERATIONS



ZAFAR IQBAL  
MAINTENANCE



ARSHAD MAHMOOD  
MAINTENANCE



MUSHTAQ AHMED  
MAINTENANCE



ABDUL QAYYUM KHAN  
MAINTENANCE



ARSHAD MAHMOOD  
HR & ADMIN



MALIK AMJAD  
HR & ADMIN



ASAD MAHMOOD  
HSEQ



MUHAMMAD AZEEM  
HSEQ



NAZAR HUSSAIN  
C&MM



ZULFIQAR ALI  
F&CA



SHAZIA VICTOR  
AHL



MUHAMMAD MAQSOOD KHAN  
OPERATIONS



MUHAMMAD IMRAN  
HR & ADMIN



MUSHTAQ MASIH  
HR & ADMIN

#### SAFETY AWARDS



QAZI AKHTAR HUSSAIN  
MAINTENANCE



SHAFQAT H. SHAH NAQVI  
MAINTENANCE



MUHAMMAD SIDDIQUE  
OPERATIONS



MUHAMMAD NASEER  
OPERATIONS

#### SPECIAL SAFETY AWARD



KHURRAM SHAHZAD  
HR & ADMIN

## 2<sup>nd</sup> Man of the Quarter 2019

### PERFORMANCE AWARDS



SAFDAR MAHMOOD  
OPERATIONS



MUHAMMAD FAZIL  
OPERATIONS



MUNIR MASIH  
OPERATIONS



BHOLA KHAN  
OPERATIONS



MANZOOR HUSSAIN  
HR & ADMIN



MUHAMMAD ADNAN  
HR & ADMIN



SHAUKAT HUSSAIN  
MAINTENANCE



FATEH KHAN  
MAINTENANCE



MUHAMMAD SULEMAN  
MAINTENANCE



ZAFAR MAHMOOD  
MAINTENANCE



MUHAMMAD JAVED  
C&MM



ABDUL QAYYUM  
F&CA



GHULAM JAFFAR  
HSEQ



ATIQUE ALAM PRINCE  
HSEQ



TANVEER HUSSAIN  
AHL



MUHAMMAD SHOAIB  
HR & ADMIN



ANSAR KHAN  
HR & ADMIN



VICTOR MASIH  
HR & ADMIN

### SAFETY AWARDS



ABDUL RAZZAQ  
OPERATIONS



TARIQ MEHMOOD  
OPERATIONS



MUHAMMAD ZAHoor  
MAINTENANCE



AAMIR NAWAZ  
MAINTENANCE

## CEREMONY FOR BRILLIANT EMPLOYEES' CHILDREN

ARL annually awards prizes to the children of Management and Non-Management staff who achieve distinction in Matric to Post Graduation examinations. This year, the ceremony was held on April 04, 2019.



## MORGAH CLUB FLOWER SHOW

70<sup>th</sup> Annual Flower Show was held at Morgah Club on April 07, 2019. Mr. Shuaib A. Malik, Group Chief Executive was the chief guest. Employees of Attock Group of Companies residing in bungalows of ARL Colony participated in this competition.

1<sup>st</sup> Position holders in different categories are as follows:

### **Category**

Extra Large Bungalows

Large Bungalows

Medium Bungalows

Small Bungalows

Walker Cup

Office Gardens

Parks

### **Flower Arrangement:**

Imposed Class

Hanging Gardens

Fun with Drift Wood

Let's Celebrate Birthday

### **Winner**

Mr. Shuaib Anwer Malik

Mr. & Mrs. Habib Anwar

Mr. & Mrs. Khaliq uz Zaman

Mr. & Mrs. Fahad Khan

Mr. & Mrs. Yawar Ikram

ARL- General Office

Morgah Biodiversity Park

Mrs. Abdul Waheed

Mrs. Nadeem Kiyani

Dr. Saira Shabnum

Ms. Maheen Fatima



The Chief guest appreciated the efforts of the participants & gardeners and distributed shields among the winners and cash prizes to the gardeners.



## ELLIOT CLUB FLOWER SHOW

14<sup>th</sup> Annual Flower Show was held at Elliot Club on April 18, 2019. Lawns and vegetable gardens of colony residences of Non Management and Junior Management Staff were assessed in the competition.

1<sup>st</sup> Position holders in different categories are as follows:

<u>Category</u>	<u>Winner</u>
JMS Residence	Mr. Sarfraz Ahmad
NMS Residence	Mr. Muhammad Younas

The Chief guest distributed shields among the winners and cash prizes to the gardeners.



## HORTICULTURE SECTION OF ARL PARTICIPATION IN DIFFERENT FLOWER SHOWS :

•Spring Flowers Show at Rose and Jasmine Garden, Islamabad

ARL got 1<sup>st</sup> position in the category of flower arrangement and cactus garden in 37<sup>th</sup> annual Spring Flowers, Vegetables and Bird Show organized by Islamabad Horticultural Society from March 29-31, 2019.



•Spring Flower Competition at Ayub National Park, Rawalpindi

ARL won prizes in the category of flowers, cactus and rangoli category in annual spring flower competition organized by Army Heritage Foundation on March 29, 2019.



•Environment Mela by National Cleaner Production Center (NCPC)

NCPC organized Environment Mela on April 13, 2019 at Ayub National Park, Rawalpindi wherein Horticulture section of ARL displayed different type of Organic Vegetables.



**Prophet ﷺ Said,**

"If a muslim plants a tree or sow seeds & then a bird, or a person or an animal Eats from it, it is regarded as a charitable Gift (sadaqah) for him."

(Sahih Bukhari)



## HR CONFERENCE

In pursuance of its commitment to wholesome development of Human Capital, ARL organized 7<sup>th</sup> HR Conference on April 25, 2019 at Morgah Club, Rawalpindi. The theme of the conference was **“Leveraging HR to Achieve Excellence”**. HR experts and professionals from over 30 organizations participated in this one day conference where 10 papers were presented.

Mr. M. Adil Khattak, CEO (ARL), in his opening address welcomed the participants and said that the Conference has been structured to provide insight into the HR best practices and allow participants, the opportunity to contribute and interact with experts and professionals of various organizations to benefit from each others' experience.



## HAJJ FAREWELL CEREMONY

Hajj farewell ceremony was held on June 25, 2019. The function was attended by pilgrims, head of departments and CBA executive body members.



## MORGAH CLUB PICNIC PARTY

Morgah Club arranged a picnic party for its members and their families at Ayubia- Dunga Gali on April 27, 2019. Majority of the participants and their family preferred to walk through Ayubia – Dunga Gali Pipeline track. After reaching the designated guest house at Dunga Gali, lunch was served followed by different recreational activities. The picnic was thoroughly enjoyed by the members and their families.



## INTEGRATED GENERAL TURNAROUND OF THE REFINERY

Refinery units were integrated in the wake of up-gradation project in 2016. The first ever Integrated Turnaround (TA) of ARL was executed during June 20 to July 24, 2019 (34 days).

The TA was a challenging job entailing planning and availability of necessary resources. The planning included timely approval from Ministry, Crude and Product management, outsourcing for required services and availability of essential spare parts.

Some important modifications were also planned in addition to maintenance of equipment. This included Naphtha Hydro-Treater (NHT) Modification at Reformer Plant; provision of Remotely Operated Isolation Valves (ROIVs) at Isomerization plant and Pre-Flash units; replacement of Liquid-Seal drum of old flare, replacement of common slop tank of Howe Baker Units (HBUs); replacement of Alloy Headers/ Piping of overhead condensers (DHDS); Tie-in connections for new Sour Buffer Tank at Sour Water Unit (SWU); replacement of catalyst of Reformer Plant's Reactors and replacement of Hydrogen Unit (HYU) Pre-Reformer catalyst.

Third party services were hired for supply of skilled manpower; Hydro Jetting Cleaning; Hydraulic bolt tightening; rental cranes; fork lifter; scaffoldings; insulation; maintenance of heaters; inspection services for Reformer reactors & LPG bullets; services for calibration of Pressure Safety Valves (PSVs), maintenance of critical transformers, UOP & Clariant advisors for supervising catalyst replacement jobs and service of local contractors for hot jobs i.e. modifications and repairs.

Major task was to arrange outsourced skilled manpower services for insulation scaffolding and maintenance of heaters. These jobs were awarded to M/s Descon. The peak number of skilled outsourced manpower was 251 persons. During TA, all jobs were done in safe manner in close coordination with Health safety & Environment (HSE) department and other stake holders. As a result ZERO LTI was achieved during the TA. Total Safe-Man-Hours of manpower supplied by M/s Descon were 55,068 man-hours.

Reformer plant activities were completed 5 days ahead of target. Complete refinery shut down was carried out for 7 days during the TA, because of old flare shutdown, as it was necessary for

replacement of its liquid-seal drum. During these 7 days, Howe Baker Unit-II (HBU-II), Heavy Crude Unit (HCU), Lummus and Boiler House were also shut down for relevant maintenance activities.

Maintenance of following equipment of various plants was carried during TA:

S. No.	Equipment	Quantity
1	Towers	23 Nos.
2	Vessels <small>(Demisters/Mesh Blankets are installed inside 12 vessels)</small>	55 Nos.
3	Heat Exchangers <small>(Shell &amp; Tube type)</small>	120 Nos.
4	Reactors	06 Nos.
5	Heaters	12 Nos.
6	Air Fin Coolers	62 Cells
7	Cooling Towers <small>(CT-I and CT-100)</small>	02 Nos
8	PSVs <small>(Excluding HBU-II, HCU, Lummus)</small>	300 nos.
9	Critical Control Valves	50 Nos.
10	Transmitters <small>(Flushing/Cleaning/Calibration)</small>	All
11	ESD System <small>(Loop testing)</small>	All



## KASHMIR HOUR AT ARL

In order to express solidarity with the oppressed people of Indian Occupied Kashmir, Attock Refinery Limited (ARL) solemnly observed the Kashmir Hour along with the entire nation on August 30, 2019.

The Chief Executive Officer, Mr. M. Adil Khattak, dilated on the historical background of the unfinished agenda of partition of Sub-continent between Pakistan and India and the prevailing geo-strategic environment. He emphasized the utmost need for an internally stable Pakistan based on strong economy to defeat enemy's nefarious designs and urged all to contribute towards this end.

The Company also sponsored assemblies and walks by the children of seven schools affiliated with ARL.



## MORGAH CLUB SWIMMING GALA 2019

Swimming season of Morgah Club starts from May 01 and ends on Aug 31 each year. At the end of swimming season, swimming competitions are held in which members and their families whole heartily participate. The Morgah Club swimming gala dates back to the 50's.

This year the swimming competitions were held from 28-31 August. Besides conventional swimming events, the gala included Fancy Dress, Boat Race, Thread & Needle Race and Coke Race. The gala concluded on a thrilling Water Polo Match between Khaur Club and Morgah Club which was won by Morgah Club by 5 goals to 2 followed by dinner in the serene environment of the Club with music playing in the background.

Winners and runner-ups were awarded Gold and Silver medals by Mr. M. Adil Khattak, President Morgah Club.



## TREE PLANTATION CAMPAIGN

Attock Refinery Limited plants 10,000 to 12,000 saplings each year for cleaner environment. In order to encourage tree plantation among community, Horticulture Section launched Spring and Monsoon seasons tree plantation campaigns in the months of March and July, 2019 at different locations including ARL Vegetable Farm, Fruit orchard, Cricket ground, Jogging Track and District Police Lines, Rawalpindi.



## SAFETY WEEK

The International Labour Organization (ILO) marks the World Day for Safety and Health at Work on 28th of April each year to promote the prevention of occupational accidents and diseases. This year, ARL celebrated safety week from April 22-26, 2019. In his opening remarks, CEO stressed on employees' role for making ARL a safer workplace.

During this week, safety talks and presentations were held in all sections of refinery. Area safety Incharges along with HSE team discussed issues related to safety and shared suggestions for the improvement of safe and healthy practices at workplaces.



## ANTI RIOTS KIT

Attock Refinery limited (ARL) is an entity of paramount strategic and national importance. Due to this sensitivity, ARL has been assigned the highest security category of Key Point Installation I-A, by National Key Points Intelligence Division (KPID), Ministry of Interior.

ARL Security maintains a strict vigil round the clock with the help of more than three hundred trained guards and state of the art weapons/equipment. To meet all sort of challenges ARL recently constituted an "Anti Riots Squad" for which 10 Anti Riot Kits were procured. Qualified police instructors trained the ARL security guards.



### AWARENESS SESSION ON MALARIA DAY

Attock Sahara Foundation (ASF) in collaboration with NCPC organized an awareness session on Malaria Day on April 26, 2019 at Elliot Club. The speakers shared useful information regarding malaria and the effective methods for its prevention.



### WORLD ENVIRONMENT DAY

ARL in collaboration with NCPC and Environment Protection Agency (EPA), Rawalpindi celebrated World Environment Day on May 31, 2019 with a theme of "Beat Air Pollution". Students from academic institutions were also invited on this occasion.



During the session, the speakers focused mainly on Air Pollution, its health impacts, facts & figures regarding the air pollution and what can be our role to combat it. The session was concluded with the pledge to shift towards environment friendly solutions and to circulate the message to other fellows.

### PLASTIC BAG HAZARDS AND DENGUE AWARENESS CAMPAIGN

ARL in line with government's initiative to curb use of polythene / plastic shopping bags has launched a proactive campaign in ARL campus and surrounding communities of Morgah and Kotha Kalan. As an alternative to polythene / plastic bags ARL has established sale points for durable cloth bags on nominal charges and all shops in the area have been advised to use paper bags in lieu of polythene / plastic bags. As an incentive, ARL management replaced available polythene bags with shops/hawkers in the area with paper bags free of charge.

ARL has also taken proactive measures for eradication of Dengue virus from the area. The Company regularly fumigates residential areas of local Union Councils of Kotha Kalan and Morgah applying Thermal and Cold Fogging techniques. Attock Hospital Limited is offering Lab test services for its diagnosis on very nominal charges. ARL has also donated five fumigation spray machines to the District Administration to beef up their efforts towards a Dengue free environment.



In addition ARL arranged an awareness seminar on 'Plastic Bag Hazards and Dengue Awareness' on September 2, 2019 which was attended by members of District Administration including Health, Welfare and Education departments as well as local community.

# ACHIEVEMENTS / AWARDS

## JP-8 DISPATCH THROUGH PAKISTAN RAILWAYS

ARL started dispatch of Jet Fuel grade JP-8 to Pakistan Air Force (PAF) through Pakistan Railways on May 28, 2019 since Rail is a safer, faster and more economical mode of product dispatches. Previously, these supplies were made through bowzers.



## UNITED NATIONS GLOBAL COMPACT (UNGC) AWARD

ARL participated in “**Living the United Nations Global Compact Responsible Business Award 2018**” announced by Global Compact Network, Pakistan. In recognition of promoting UNGC Principles and sustainable development goals, ARL was awarded second prize in the Category of large National Companies on January 07, 2019 at Marriot Hotel, Karachi.

## BEST PRACTICES AWARD IN OCCUPATIONAL SAFETY & HEALTH

ARL won Second Prize in the category of Oil, Gas & Energy of Employers' Federation of Pakistan (EFP) **14<sup>th</sup> Best Practices Award in Occupational Safety & Health 2018**. Award distribution ceremony was held on April 26, 2019 at Marriot Hotel, Karachi. ARL's HSE team deserves appreciation over this achievement.



## NATIONAL FORUM OF ENVIRONMENT & HEALTH (NFEH) AWARD

ARL participated in “**16<sup>th</sup> Annual Environment Excellence Award-2019**” organized NFEH, Karachi. ARL was declared winner among participating organizations on June 26, 2019 after the final assessment of submitted documents.

# SOCIAL RESPONSIVENESS

## MEENA AND SUNDAY BAZAARS

ASF organized its annual Meena Bazaar in ARL Cricket Ground on March 16, 2019 wherein NGOs, Companies and Banks set up their stalls. Food, handcraft, garments and jewelry stalls remained the main attraction for families visiting the Meena Bazaar. The Meena Bazaar is aimed at funds raising for the poor and destitute segment of the local community and to provide healthy recreation for the surrounding communities.

ASF also arranges Sunday Bazaar at ARL Miller Park to provide products prepared by ASF Skill Development Centre as well as organic fruits & vegetables of ARL farms on subsidized rates and also to provide opportunity to locals to sell home made products.



## FEMALE SPORTS GALA

ASF organized Sports Gala for female students of local schools from April 25-30, 2019 at Elliott Club where in 200 students participated in different sports.



## SESSION ON KITCHEN GARDENING AND COMPOSTING

ASF in collaboration with NCPC organized a session on Kitchen Gardening and Composting at Elliott Club on March 13, 2019. The purpose of the session was to demonstrate healthy kitchen gardening activities to produce fresh, cheaper, healthy and pesticide free vegetables at domestic level. A large number of participants attended the session.



Following employees left us for thier final abode.



**Khalid Mahmood (Late)**  
Senior Security Officer  
died on April 09, 2019



**Munir Ahmad (Late)**  
Plant Operator Incharge Senior  
died on August 18, 2019

GOODBYES.....

EMPLOYEE NAME	DESIGNATION	DEPARTMENT	Leaving DATE
Mr. Zain Ul Abideen	Senior Officer	C & MM	January 3, 2019
Mr. Naveed Imran	Senior Officer	Operations	January 14, 2019
Mr. Mubassar Ahmad	Field Operator	Operations	February 12, 2019
Mr. Liaqat Ali	Security Officer	HR&A	March 12, 2019
Mr. Muhammad Jamshaid Safdar	Boardman	Operations	February 13, 2019
Mr. Zafar Ahmad	Senior Officer	HSEQ	February 15, 2019
Mr. Mohammad Azeem	Senior Officer	Maintenance	February 27, 2019
Mr. Muhammad Jamil Tariq	Engineer	Maintenance	March 19, 2019
Mr. Muhammad Abrar	Boardman	Operations	May 6, 2019
Mr. Bilal Saeed	Boardman	Operations	May 9, 2019
Mr. Faizan Yasin	Executive	HR & Admin	May 15, 2019
Ms. Seerat Batool	Engineer	HSEQ	May 26, 2019
Mr. Muhammad Daud	Senior Officer	Maintenance	June 7, 2019
Mr. Zahid Khan	Boardman	Operations	June 11, 2019
Mr. Muhammad Atif Imran	Field Operator	Operations	June 12, 2019
Mr. Shehryar Khan	Executive	F & CA	June 16, 2019
Mr. Muhammad Eisa Khan	Field Operator	Operations	June 19, 2019
Mr. Sabeeh Ullah Shah	Field Operator	Operations	June 20, 2019
Mr. Umar Rafique	Field Operator	Operations	June 20, 2019
Mr. Touseef Hassan	Senior Officer	HSEQ	June 23, 2019
Mr. Muhammad Aslam	Shift Engineer	Operations	June 30, 2019
Mr. Imran Khan	Senior Engineer	Maintenance	July 15, 2019
Mr. Muhammad Raza Tariq	Engineer	Engineering	August 14, 2019
Mr. Muhammad Ajmal	Engineer	Operations	August 19, 2019
Mr. Muhammad Nawaz	Senior Officer	HSEQ	August 21, 2019
Mr. Hassan Ali	Field Operator	Operations	August 24, 2019
Mr. Waqas Mir	Senior Officer	Maintenance	August 30, 2019
Mr. Kamran Ahmad	Boardman	Operations	September 6, 2019
Mr. Muhammad Fahad Khan	Incharge	Operations	September 15, 2019
Mr. Zaheer Ahmed	Senior Executive	Engineering	September 30, 2019

## WELCOMES.....

EMPLOYEE NAME	DESIGNATION	DEPARTMENT	JOINING DATE
Mr. Shahrukh Arshad	Field Operator	Operations	February 7, 2019
Mr. Faisal Shahzad	Executive	F & CA	February 14, 2019
Mr. Javaid Akhtar	Senior Officer	HR & Admin	February 14, 2019
Mr. Tariq Rasheed Raja	Field Operator	Operations	February 15, 2019
Mr. Muhammad Ishtiaq	Field Operator	Operations	February 15, 2019
Mr. Mazhar Iqbal Cheema	Shift Engineer	Operations	March 1, 2019
Mr. Muhammad Adnan	Junior Officer	HR & Admin	April 1, 2019
Mr. Abid Bashir	Junior Officer	HR & Admin	April 3, 2019
Mr. Jawad Hussain	Senior Officer	Maintenance	April 15, 2019
Mr. Muhammad Saad	Senior Officer	Maintenance	April 15, 2019
Rana Asif Hameed	Field Operator	Operations	April 19, 2019
Mr. Javaid Iqbal	Field Operator	Operations	April 22, 2019
Mr. Nouman Akram	Engineer	Maintenance	May 8, 2019
Mr. Habib Ur Rehman	Senior Officer	Operations	June 11, 2019
Capt. (R) Rohail Ikram	Deputy Chief Security Officer	HR & Admin	June 18, 2019
Mr. Munir Ahmed	Junior Officer	HR & Admin	July 09, 2019
Mr. Muhammad Ijaz Nadeem	Junior Officer	HR & Admin	July 09, 2019
Mr. Khurram Shyzad	Engineer	Operations	September 2, 2019
Mr. Ali Ud Din Kirmani	Engineer	Operations	September 2, 2019
Mr. Asif Ejaz	Senior Officer	C & MM	September 2, 2019
Mr. M. Hasnain Shah	Environment Engineer	HSEQ	September 2, 2019
Mr. M. Noman Anwar	Senior Officer	Maintenance	September 12, 2019



# CREATIVITY CORNER

*"You see things; and you say, 'Why?' But I dream things that never were; and I say, 'Why not?'"*  
(George Bernard Shaw)



In the third step, the final products of Reformer and Isomerization units are blended together with Naphtha.

Finally, an Octane booster chemical viz. NMA & MMT and light green colored dye (The green dye is added in 90-92 RON petrol (PMG) to give a distinctive color, in accordance with Ministry of Petroleum notification) is added in the destination tank and the product is homogenized. The octane boosters used in the refinery produce unleaded PMG. The term unleaded means that it does not contain LEAD – a toxic metal – which if released in atmosphere through the vehicles' exhaust, causes numerous respiratory problems and environmental pollution.

The final product is tested at Quality Control Laboratory. The national RON specification of PMG is 92.

## HOW IS PETROL PRODUCED

Petrol is a generic name of the crude oil refinery product called Premium Motor Gasoline (PMG) which is used in spark ignition engines. This product is produced in four steps:

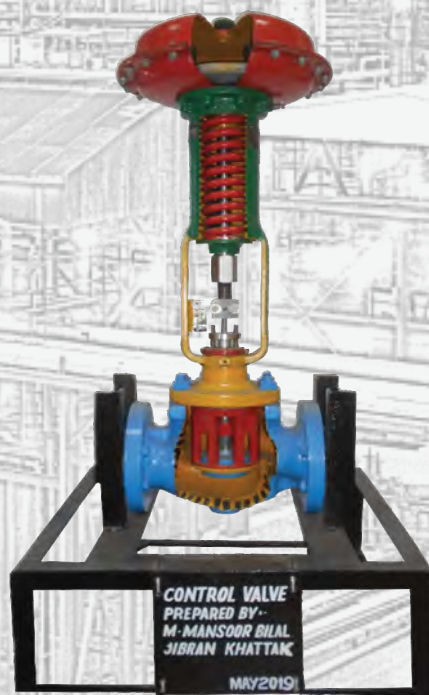
Firstly, Naphtha (raw form of petrol) is obtained from crude oil distillation (separation process of products from crude).

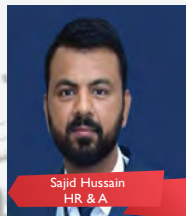
Next, Research Octane Number (RON, the main quality test of petrol) of Naphtha, which is originally around 60 to 70, is increased by Reforming (aromatic rings formation) and Isomerization (branched chain hydrocarbons) processes at Reformer and Isomerization units respectively.



## CONTROL VALVE CUT-OUT MODEL FOR TRAINING, SKILL ENHANCEMENT AND TROUBLESHOOTING.

Control Valve is a very critical part of a process plant. It is used in almost every type of process control as final control element; it has different sizes and designs. First time in ARL we have prepared an in-house cut view of a globe type control valve for training, skill enhancement and learning purpose which is available and displayed in Instrument Maintenance workshop.





## HUMAN RESOURCE (HR)... OLD MYTHS AND NEW REALITIES

David Ulrich, the leading HR expert of our time, speaks of a new version of HR in his critically acclaimed book 'Human Resource Champions' "that it be defined not by what it does, but by what it delivers -- results that enrich the organization's value to customers, investors (taxpayers), and employees."

He further writes that "the HR function traditionally has spent more time professing than being professional. The HR function has been plagued by myths that keep it from being professional".

The old myths that keep HR from being a profession along with contrasting new functional realities are illustrated:

Old Myths	New Realities
People go into HR because they like people.	HR departments are not designed to provide corporate therapy or as social or Health-and-happiness retreats. HR professionals must create the practices that make employees more competitive, not more comfortable
Anyone can do HR.	HR activities are based on theory and research. HR professionals must master both theory and practice.
HR deals with the soft side of a business and is therefore not accountable.	The impact of HR practices on business results can and must be measured. HR professionals must learn how to translate their work into financial performance.
HR focuses on costs, which must be controlled.	HR practices must create value by increasing the intellectual capital within the firm. HR professionals must add value, not reduce costs
HR's job is to be policy police and the health-and-happiness patrol.	The HR function does not own compliance-managers do. HR practices do not exist to make employees happy but to help them become committed. HR professionals must help managers commit employees and administer policies.
HR is full of fads.	HR practices have evolved over time. HR professionals must see their current work as part of an evolutionary chain and explain their work with less jargon and more authority.
HR is staffed by nice people.	At times, HR practices should force vigorous debates. HR professionals should be confrontational and challenging as well as supportive.
HR is HR's job	HR work is as important to line managers as are finance, strategy, and other business domains. HR professionals should join with managers in championing HR issues.

In the words of Ulrich, "Regardless of whether these myths originate with HR people or with line managers, it is time they were overcome. It is time to talk less and do more; time to add value, not write value statements; time to build competitive, not comfortable, organizations; time to be proactive, not reactive. It is time to perform, not preach."

So, HR needs to shed "Old Myths" and take on "New Realities" in order to evolve into a true profession that makes a difference for any organization.



## RECYCLING KITCHEN WASTEWATER THROUGH AEROBIC TREATMENT; A CASE STUDY

World population is at the verge of water shortage which demands proper management of water resources to meet requirements of rapidly growing population. Collection and reuse of wastewater has never been a priority in Pakistan but the concept is much more demanding in current needs especially in the areas having water shortage like Pothohar region. A low cost treatment system to reuse wastewater in agriculture

sector may also aid in meeting water shortages. Wastewater creates public health problems by polluting natural water resources and may also affect agriculture production. Treatment of wastewater could have positive impact on environmental

health by reducing pollution and to some extent help to mitigate water scarcity problems in agriculture sector. Recycled wastewater may be used for irrigation of garden, parks and road side plantation; thus may enhance urban amenities. Grey water is a type of wastewater from urban areas including water from showers, washing machines, kitchens sinks etc. According to studies, a single person generates approximately 30-70,000 liters grey water per year. Proper recycling of grey water can make it a good source of water supply for a variety of purposes, including irrigation. This can also lead to a considerable reduced water demand.

Wastewater treatment has gained importance worldwide, but there is an immense need to develop a low cost treatment system for recycling grey water from urban areas. Most people consider bacteria and other microorganisms to be undesirable components of wastewater. In fact, only a small fraction of the microbes found in wastewater are truly pathogenic. Naturally occurring microorganisms are the workhorses of wastewater treatment. Consisting of bacteria,

fungi, protozoa, rotifers and other microbes, these organisms thrive on many of the complex compounds contained in domestic wastewater. Different technologies have been employed for grey water treatment; some are natural, other employ physiochemical and biological processes but choice for adopting proper technique depends upon multiple factors. Major focus of all such treatment processes should be on the

need of low cost treatment systems to improve the water quality.

An Aerobic Treatment System (ATS) is a small scale sewage treatment system similar to a septic tank system that uses aerobic



process for digestion rather than just the anaerobic process used in septic systems. The traditional septic system, the aerobic treatment system produces a high quality secondary effluent, which can be sterilized and used for surface irrigation. Aerobic wastewater treatment encourages the growth of naturally occurring aerobic microorganisms as a mean of renovating wastewater. Such microbes are the engines of wastewater treatment plants. Organic compounds found in wastewater are high energy forms of carbon that power these engines. Domestic wastewater is a source of about 47 percent organic material, which can promote growth of microorganism being a source of energy for them. Microbial treatment of wastewater is thus an effective way to degrade organic compounds.

Currently, a study has conducted at Attock Refinery limited (ARL) Rawalpindi, a system has designed for recycling kitchen wastewater under aerobic conditions utilizing activated sludge.

Pre and post-treatment water quality parameters were measured to compare the efficiency of system to reduce the pollutants in kitchen wastewater. Emphasis was the reuse of kitchen grey water with a simple and cost effective water recycling system that could be employed locally to make recycled water suitable for irrigation application, which may be an important step towards the sustainability of an urban ecosystem. The project was implemented at ARL Rawalpindi by employing aerobic treatment of wastewater originating from the kitchen of Mess and collected in the primary settling pit of the treatment system. Screening was done with in secondary settling pit having storage capacity up to 10,000 liters. A water pump was installed at settling pit to pump out the water into the main biological treatment tank containing activated sludge. The bacteria grew naturally and are responsible for decomposition of suspended/dissolved organic matter.

Sampling of kitchen wastewater was done from settling pit (untreated) and storage tank (treated), fortnightly for three months. From each level samples were collected and analyzed in Quality Control Laboratory of ARL to monitor

### Water Conservation



We all know that water is a limited recourse and availability of useful water is decreasing with the passage of time. It is need of the hour that we should endeavor to stop wastage of water. We need to keep a close watch on water leakages.

Awareness should be created about water conservation in our homes. We must educate our children and guide them how to use minimal water in our day-to-day affairs. On an average, 75% of water used indoors is in the bathroom, 25% of which is for the toilet. The most effective way to save water is to upgrade to efficient fixtures.

However, there are other tips to help reduce the amount of water you use at home:

- » Frequently check your overhead water tanks for any overflow; toilets, faucets and pipes for leaks and get them rectified immediately
- » Turn off the water after you wet your tooth-

brush

the selected water quality parameters. The quality of treated kitchen wastewater was analyzed for physiochemical parameters including pH, BOD, COD, EC, turbidity, TSS, TDS and oil contents.

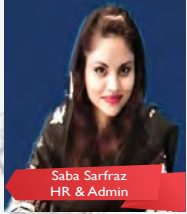
This treatment resulted in remarkable improvement in wastewater quality and significant differences were recorded between kitchen water and coagulation tank outlet water quality which showed that wastewater quality was improved to a significant extent. There was significant decrease in concentration of pollutants between wastewater from kitchen waste outlet source and sample taken after aerobic treatment. The results clearly showed better efficiency of aerobic treatment system that reduced the values of the above mentioned parameters up to 87% and enabled it to be fit for irrigation purposes. Treated water is being used for irrigation of Citrus orchards at ARL.

Aerobic treatment units can provide rapid treatment of wastewater and can be replicated to provide high quality effluent in situations where the natural surrounding has limited ability to renovate domestic wastewater and in the areas having water scarcity like Pakistan.

brush

- » When washing dishes by hand, don't leave the water running for rinsing
- » Use a broom, not a hose, to clean driveways and sidewalks
- » Don't run the hose while washing your car
- » Water recycling: "Grey water" is the water draining from your house's sinks, bathtubs, and laundry machine, which can be used to water plants, as opposed to "black water" from toilets, which needs to be treated before reuse.





## PLASTIC BAGS AND ARL DRIVE

The polythene/plastic bags have the life of a Satan; they don't decompose in 100's of years and flow from the land into sea to become the part of marine life. Pakistan's plastic problem has become a global issue. River Indus is the second largest contributor of plastic pollution through rivers into the marine world. According to a study, there is more micro plastic in the ocean than there are stars in the Milky Way. Pakistan is facing a serious issue of sewerage system blockage due to polythene bags, case in point is Karachi during this monsoon season. Similar situation is being confronted by other towns and cities of Pakistan.

The government banned usage of polythene/plastic bags on August 14, in Islamabad city and the provincial governments also took steps in this context. Minister for Climate Change Ms. Zartaj Gul has proposed fine and jail term for violator of ban on one-time-use plastic bags which may vary between Rs. 5,000 to Rs. 500,000.

ARL in line with government's initiative to curb use of polythene / plastic shopping bags has launched a proactive campaign in ARL campus and surrounding communities of Morgah and Kotha Kalan to create awareness among employees and surrounding communities by

highlighting the hazards of plastic / polythene bags and the resultant co-lateral damage to the environment. As an alternative to polythene / plastic bags ARL has established sale points for durable cloth bags on nominal charges as part of CSR and all shops in the area have been advised to use paper bags in lieu of polythene / plastic bags. As an incentive, ARL management replaced available polythene bags with shops/hawkers in the area with paper bags free of charge.



For this purpose awareness sessions were conducted for resident of ARL colonies, local community, and students of schools administered by the Company. Door to Door visits in vicinity and meetings with representatives

of Union Councils were arranged. ARL also launched a week long campaign in the month of August to collect all sorts of polythene/plastic bags and litter by involving its employees which ended by organizing a seminar in which representatives from local administration, Union Councils, Social Welfare department, Environment Protection Agency (EPA) and other stakeholders participated.



ساجد حسین  
ایک آرائی



رضوان الدحاہر  
سی این ایم ایم

## غزل

طلاطم ہے اب اندروں میں  
کیوں حدت نہ رہی خوں میں  
اک بحر بیکراں ہے موجزن  
ڈوب جا تو جلوہ ہو میں  
دل سے اثباتِ لالہ کر  
کیوں یہ دعویٰ ہے منہ میں  
دہرا پھر اقرارِ الٹ کو  
مستور وحدت ہے تیری ٹو میں  
مادیت کا فسوں ہو گیا کارگر  
ہرچہرہ مضطرب، ہرزبان زبوں میں  
چاک گریباں تو نہیں، ہے جم غفیر  
اک مدت چاہیے اس کے رفو میں  
لا تشریب کے وارث کہاں گئے!  
ہے خلق ڈوبی ہوئی لہو میں  
طالبِ لامکاں جو تھا ساجد  
حیف وہ کھو گیا رنگ و بو میں

## نظم سوئمنگ میزن اور ہم

اک زمانہ تھا کہ مشہور تھی سوئمنگ اپنی  
دوستوں یاروں سب پہ چھائی تھی دھشت اپنی  
دوچار لپٹھیں تو اک سانس میں کر جاتے تھے ہم  
انڈر واٹر اسپید بھی لا جواب تھی اپنی  
اک عرصہ تو دھن میں مگن رہے ہم بھی  
پھر دن بدن ہمت جواب دینے لگی اپنی  
وقت اپنا جو کھیل کود میں گزرا کرتا تھا  
سوچ بچار اور پریشانیوں میں نبھنے لگی اپنی  
دن میں دفتر اور گھر میں سوچتے ہیں کہ  
کیا کہیں اور بھلا کس کوسنائیں اپنی  
اب کچھ کھیلنا بھی چاہیں تو کھیل نہیں پاتے ہم کہ  
اس موڑ پہ تو ٹانگیں بھی ساتھ نہیں دیتیں اپنی  
ریٹائرمنٹ اپنی میں بھی کئی سال رہ گئے باقی ہیں  
کاش کہ اس سال ہو جائے پروموشن اپنی  
اس انہونی سے یقیناً پھر سے جواں ہو جاؤں گا  
آپ حضرات سے دعا کی درخواست ہے اپنی



محمد اقبال  
آج آرہا ہے

## غزل

اک کھپتلی ہوں میں میری ڈور ہے تیرے ہاتھ میں  
کوئی بھی میری بات نہیں میری ہی بات میں  
جو نظر آتا ہے سامنے وہ میں نہیں میرا ہمزاد ہے  
ایک اور ذات کوئی جو آن بسی ہے میری ذات میں  
جو لکھا گیا ہے میرے لئے مجھے وہی کردار نبھانا ہے  
تبدیلی اب ممکن نہیں دی گئی ہدایات میں  
پہلے سے ہے طے شدہ اس کھیل کا انجام بھی  
چھوڑ جائیں گے ساتھ سبھی آخری لمحات میں  
جب پردہ گر جائے گا کھیل ختم ہو جائے گا  
اور کردار گم ہو جائے گا تاریخ کے صفحات میں



ساجد چوہدری  
آج آرہا ہے

## غزل

دل کے صحرا میں ابھی پھول کھلاؤ برسوں  
اک تبسم کے لئے اشک چھپاؤ برسوں  
اس کے آنے کی ہر اک آس کو باندھے رکھو  
اس کی راہوں میں رکھو دل کا پڑاؤ برسوں  
اک تبسم کی میرے دل نے تمنا کی تھی  
تم سے یہ کس نے کہا تھا کہ ستاؤ برسوں  
اک کرم ایسا کہ تھی دید تیری، شام و سحر  
ہے ستم کیسا کہ اب آؤ نہ جاؤ، برسوں  
مجھ کو معلوم ہے اس جھوٹ میں سچ کتنا ہے  
سچ کی ضد ہے کہ ابھی جھوٹ چھپاؤ برسوں  
اب محبت سے ضروری ہے محبت کا بھرم  
اس کو چاہا ہے تو بس اس کو ہی چاہو برسوں  
خود ہی جل اٹھی تھی یا اس نے جلادی ساجد  
آتش عشق میں اب دل کو جلاؤ برسوں

## قائد اعظم کے نقش قدم پر!



”قائد اعظم کتنی دفعہ علی گڑھ آئے اور میں نے انہیں دُور و نزدیک سے کئی بار دیکھا۔ اکثر بھیڑ کی وجہ سے مجھے اُن کی تقریر کھڑے ہو کر سُنی پڑی۔ مگر وہ ایک تقریریں میں نے اُن کے قدموں میں بیٹھ کر بھی سنی ہیں۔ اُن دنوں اُن کے قدموں میں بیٹھنے کے لئے بھی مقابلہ ہوتا تھا مگر آج اُن کے نقش قدم پر چلنے والا ایک بھی نظر نہیں آتا۔“

اقتباس: (آواز دوست - مختار مسعود)



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MR ENTERPRISES  
Designer  
IMTIAZ KHAN  
+92-312-56-91-55-3