



Sui Northern Gas Pipelines Limited

# sng

NEWSLETTER

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[www.sngpl.com.pk](http://www.sngpl.com.pk)

SNGPL wishes all readers  
a very Happy New Year

## Progress on LNG project discussed Petroleum Minister visits SNGPL Head Office



**05** AN EVENING WITH  
THE MEDIA MEN

**09** ACTION AGAINST  
ILLEGAL COMPRESSORS

**21** SNGPL WINS  
QUAID TROPHY

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## Inside...

Editorial	03
Petroleum Minister meets MD SNGPL	04
Meet the Press	05
OGRA hearing	07
Crackdown against gas compressors in Islamabad	09
GIS: Mapping the developments	11
Promoting Innovation: SNGPL delegation visited LUMS	13
Interactions	15
Briefs	17
LNG project Activity: Visit of HSE Department	18
SNGPL wins CSR Award	19
HSE Medical Camp	20
SNGPL clinches Quaid e Azam Trophy	21
Inter Departmental Cricket Tournament	22
Black Powder in Gas Transmission Pipelines	23
Design is in the soul	25
Smart Energy Generation	27
Pollution: Destroying the planet, endangering lives	30

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With high hopes and new dreams for a better world, we welcome you to the year 2016. There are always challenges but we should not stop working and dreaming for better days. 'SNG' ended the year 2015 with a fresh new look. Do let us know your views on the new layout and also what other changes you expect from us.

A brief on Federal Minister for Petroleum and Natural Resources, Shahid Khaqan Abbasi meeting with the MD SNGPL, along with other interactions, is part of this month's 'SNG'. This issue also carries a report on 'Meet the Press' event organized by the Media Affairs Department. SNGPL continues to partner with the educational sector and a report on one such collaboration is part of the newsletter. Also included in 'SNG' are reports on crackdown against illegal use of compressors, OGRA hearing, GIS Open Day event and an interdepartmental cricket tournament.

Interesting write ups on variety of issues are contributed as usual by the SNGPL staffers which are like beautiful flowers in a bouquet and these have made this month's 'SNG' more fragrant. We always look forward to your feedback. ■



# Petroleum minister visits SNGPL Head Office Progress on LNG project discussed



Federal Minister for Petroleum and Natural Resources (P & NR) Shahid Khaqan Abbasi recently visited SNGPL Head Office to review progress on LNG project. Federal Minister was accompanied by Secretary Petroleum and Natural Resources (P & NR), Mr. Arshad Mirza, Team Lead on Prime Minister's Performance Delivery Unit Mr. Mohammad Adnan Gillani and other officers of the Ministry. MD SNGPL, Mr. Amer Tufail welcomed the Federal Minister to the comprehensive dialogue between the Ministry of Petroleum and Natural Resources, and SNGPL wherein all aspects of the ongo-

ing LNG project were discussed in much detail.

SNGPL management made a detailed presentation elaborating its strategy to comply with carious critical timelines as advised by the Ministry, to ensure timely

completion of the LNG project. Federal Minister and the Secretary, Petro-

leum and Natural Resources (P & NR) were assured that the Company has dedicated all resources taking into account the national importance of the project which will go a long way towards combating prevalent energy crisis in the country. ■

*SNGPL management made a detailed presentation elaborating its strategy to comply with carious critical timelines as advised by the ministry, to ensure timely completion of the LNG project.*

## An evening with the media men SNGPL keeps up the tradition of ‘Meet the Press’

**Asif Shakeel**

**M**edia, in all its forms, has undoubtedly become the most important tool of communication. Being termed as the fifth pillar of state, media has evolved much over the time. Gone are the times when newspapers and magazines were the only source of information and it won't be wrong to say that the advent of electronic, television and radio, along with online media has completely changed the landscape of media both in the world and in Pakistan. The pace of information flow on the electronic media requires the organizations to be in constant touch with the newsrooms of media organizations so that their opinion on a relevant issue is never missed for it can damage the organization's reputation.

SNGPL management and Media Affairs Department has always recognized the significance of media, both print and electronic, in reaching out to consumers. An old tradition in this regard is 'Meet the Press' event where journalists get the opportunity to interact with the Managing Director and senior management of SNGPL in an informal sitting. This year the annual press meet was organized in the month of December. The event was attended by senior journalists and beat reporters from all the leading media organizations of the country. Journalist fraternity was represented by Arshad Abbasi, President,

Lahore Press Club.

MD SNGPL, Amer Tufail welcomed the journalists to the event and requested to pray for the martyred souls of Army Public School (APS), Peshawar. Mr. Tufail thanked the media men for joining in the event. Some journalists were of the opinion that most of the public departments tend to hide information from media which forms the information gap and affects their public reputation. Mr. Tufail assured journalists that SNGPL strongly believes in sharing of information. He said that SNGPL, as a utility company, strives to provide its consumers with uninterrupted gas supply but there are circumstances beyond its control which include, but not limited to, insufficient gas supply. He said that SNGPL plays the



*President Lahore Press Club with MD SNGPL at the event.*





*Front row (R to L): Rubnawaz Ahmed Khan (Reporter, Daily Jang), Javed Farooqi (Bureau Chief, Capital News), Shahzad Amjad (Reporter, Daily Express), Mohammad Luqman (Samaa TV), Faisal Iqbal (GM Billing SNGPL), Talib Faridi (Express News), Amir Tufail (MD SNGPL), Zahid Hussain (SGM Distribution/ Customer Services), Arshad Ansari (President, Lahore Press Club), Mazhar Iqbal (ARY News), Iftikhar Alam (Reporter, Daily Nation), Huma Sadaf (PTV News).*

*Back row (R to L): Kashif Siddiqui (GM LNG/LPG SNGPL), Azam Khan (GM Logistic Support SNGPL), Zia Mehmood (GM Lahore SNGPL), Atif Parvaiz (News One), Kashif Bhatti (Reporter, Daily Khabrain), Faraz Qureshi (PRO SNGPL), Farrukh Baseer (Reporter, Daily Dunya), Babar Rafique Mir (Executive PRO SNGPL), Ashraf Mehtab (Daily Nai Baat/ Neo News), Umair Rana (Dawn News), Shahid Maqsood (Chief Officer Sales SNGPL), Asad Shoab (Jaag News), Ali Farooq (Reporter, Daily Jehan Pakistan), Asif Masood (Reporter, Daily Din), Zia Tanoli (Reporter, Daily Express), Jawad Malik (Geo News), Jawad Akbar (Reporter, Din News), Mohammad Naeem (Reporter, Daily Ausaf), Ali Raza Awan (Executive Officer Media Affairs SNGPL), Hassan Abbas (Reporter, Daily Business Recorder), Mian Shahid Nadeem (Reporter, Waqt News), Awais Ahmed Bajwa (PRO SNGPL), Sudheer Chaudhry (Abb Tak News), Saleem Sheikh (Bureau Chief 92 News), Saeed Baloch (Aaj News), Tanveer Yaqoob (Executive Officer Media Affairs).*

role of service provider so it transmits whatever quantity is supplied to it hence there is nothing to hide from public.

‘Working in SNGPL is like walking on a thin rope where you have little margin to save yourself’, MD added. He said that despite the fact that SNGPL has nothing to do with gas exploration and production, it is always the target of criticism from media, public representatives and public. He expressed hope that journalists would understand the

domain of SNGPL as a utility company and would help in covering the information gap.

Journalists requested the Managing Director to make arrangement for the upload of gas shut down notices, load management plans etc on the Company website. MD directed the relevant Managers to look into its possibility.

Arshad Abbasi, on behalf of all journalists, thanked MD SNGPL and Media Affairs Department for arranging the event. ■

## Determination of RLNG Price OGRA hearing held in Lahore



**O**il and Gas Regulatory Authority (OGRA) in its decision of October 2015 determined provisional price of Re-gasified Liquefied Natural Gas (RLNG) at US\$ 8.636/MMBTU excluding GST.

Sui Northern Gas Pipelines Limited (SNGPL) being an

**Syed Jawad Naseem, GM (RA) SNGPL gave a detailed presentation highlighting the observations pointed out in motion for review including administrative margin, cost of service, UFG on distribution network and allocation of RLNG.**

affected company filed a motion for Review Petition with the Authority on 12 October 2015. Sui Southern Gas Company Ltd (SSGCL) and Pakistan State Oil (PSO) have also filed review petitions against the above mentioned decision of the Authority.

The Authority in accordance with the procedure mentioned in the OGRA Ordinance, 2002 decided to conduct a public hearing for determination of sale price of RLNG in Karachi & Lahore, on December 28, 2015 and January 04, 2016 respectively. The SNGPL team was led by Deputy



Managing Director (Operations), along with the Chief Financial Officer, Senior General Managers and other senior officers of the Company on the hearing held in Lahore on 04 January 2016.

The Registrar OGRA read out the rules and procedure of the hearing at the beginning of the session. The Chairman OGRA requested the PSO to present their stance first.

Deputy General Manager PSO, Om Prakash gave the presentation and elaborated their stance regarding gross margin, infrastructure Cess and application of determination (including revised) from April 2015.

After PSO, Syed Jawad Naseem, General Manager (RA), SNGPL gave a detailed presentation highlighting the observations pointed out in motion for review including administrative margin, cost of service, UFG on distribution network and allocation of RLNG.

From SSGCL, Syed Fasihuddin Fawad, General Manager (RA), presented the Company stance regarding LNG Service Agreement (LSA) charges, cost of service and administrative margin.

After the presentations by petitioners, the Chairman OGRA requested the interveners to present their point of view on the subject matter. Various interveners including



G.A Sabri on behalf of All Pakistan Textile Manufacturers Association (APTMA), Salman Akram Raja on behalf of Fatima Fertilizer & Pak Arab Fertilizers Limited, Raziuddin representing the Government of Khyber Pakhtunkhwa and representatives from CNG Sector gave their views/comments and pointed out their reservations on the RLNG Price determination. The Interveners also gave suggestions to improve the overall natural gas sector in Pakistan.

The Authority as well as the Management of SNGPL appreciated the suggestions and concerns of the interveners / consumers while assuring them of their full cooperation.

The hearing concluded with the closing remarks by the Chairman OGRA. ■



# Safety threat and an illegal act Crackdown against Gas Compressors in Islamabad

**Kawish Bakht**

Islamabad Region of Sui Northern Gas Pipelines limited recently initiated a crackdown against all consumers and premises that are involved in using gas compressors and are depriving their neighbouring premises from the possible share of gas during winter when there are times of national crises due to Supply-Demand issues. A surgical crackdown operation was initiated in the capital city and allied areas on the directives of General Manager Islamabad Ejaz Ahmad Chaudhary in accordance with the commitment of SNGPL management to supply the available fuel to every consumer that lies on the network with his due share. The crackdown drive is being monitored by the

Chief Engineer and carried out under supervision of Engineer UFG-Control. A total of 16 of domestic connections were disconnected during the three-day operation. The compressors of disconnected consumers have been confiscated besides disconnection of gas supply pertaining to various localities of Islamabad City. Gas connection of a commercial consumer has also been disconnected from main Bazar of Bhara Kahu who was involved in usage of gas compressor and was involved in depriving the neighbouring domestic population from gas supply. The FIR is being lodged against the Commercial Consumer involved in usage of gas compressor.



The Compressors being used by the residential consumers not only deprive the neighbouring consumers of their due share of gas supply but also pose a serious threat to the consumer itself who use it. There are incidents of compressor blasts but are not reported. Three such blast incidents reportedly occurred during this winter in Islamabad, but have been concealed due to the illegality and guilt on behalf of those users. People have also suffered losses of precious lives in one of the incidence due to compressor blast. The majority is either unaware of these brutal facts or trying to manage in self deception. The blasts due to compressors happen as there are pressure fluctuations in the gas network. The Company is trying to continuously make the network operations better and operate at optimum level. The consumers involved in usage of gas compressor use these devices at their homes and conceal this fact as well. Whenever there is rise in Line pressure and compressor is still in operation, the input pressure of the compressor rises causing to amplify the pressure at compressor output to undesired levels. The connected appliances are not designed to be compatible to those pressures and this converts to a blast. There is loss of life and property but the people want to live in oblivion and are not willing to give up the usage of central heating systems and heaters while rest of the population is even deprived of cooking the food.



***Whenever there is rise in Line pressure and compressor is still in operation, the input pressure of the compressor rises causing to amplify the pressure at compressor output to undesired levels. The connected appliances are not designed to be compatible to those pressures and this converts to a blast.***



Therefore the crackdown would continue against all those involved in illegal usage of gas compressors.

In the times of crisis the usage of gas must be confined to cooking and water heating purposes only. People should use warm clothes and understand the supply-demand gap. The usage of compressors totally deprives the neighboring premises from gas supply, which is against the concept of social justice and responsible citizenship. People have erroneous assumptions and these are definitely disastrous. If there is crisis at national level we must share it equally without discrimination and fulfill the spirit of sacrifice and collective thinking taught by our religion and moralities of nationhood. This situation may be improved by the Coordination, mutual understanding and responsible thinking. ■

*The writer is Engineer at UFG-Control, Islamabad.*

# GIS: Mapping the Developments

Furqan Iqbal

Sui Northern Gas Pipelines Limited has been continuously investing in pipeline network expansion, therefore its operations and maintenance activities are becoming more complex which would be difficult to manage in conventional way, therefore a cultural shift is required to replace the conventional service methodology with modern technology. Geographic Information System (GIS) is one such technology and to make the management and staff aware of its significance, a GIS open day was organized in Lahore regional office. The objective was to impart a culture of GIS implementation and replacement of manual drawing in true spirit. A large number of Executives and subordinate staff visited the stall and expressed their interest in maps which were displayed in front of GIS section. GM (Lahore Region) Zia Mahmood Ahmad also visited the stall and newly developed GIS section, and appreciated the efforts of the department for promotion of GIS. Other visitors include Chief Billing Officer, Chief Admin Officer, Chief officer IT/MIS, DCO (Sales), DCE (Dev.), DCE

(UFG), DCE (O&M), Senior Engineer (Maintenance), Senior Engineer (OPS), I/c Harbanspura and I/c Kasur sub regions. Visitors, while expressing their satisfaction on the performance of GIS section, also gave suggestions for improvement in service quality.

A general opinion regarding GIS operations which came from the visitors is that GIS should be established as a



department rather than a section with a segregated annual budget since it needs to have a dedicated resource person in each distribution regional office who would be responsible for monitoring day to day changes in SNGPL pipeline network like

updated loop lines, new development and timely marking of pipelines etc with the help of GIS.



***In future, Geographic Information System mapping would be helpful in emergency situations like navigating and locating pipeline installation ..... it would also help in creating a paperless environment.***



In future, Geographic Information System mapping would be helpful in emergency situations like navigating and locating pipeline installation such as valves, TBS's etc. At present, complete visualization of SNGPL



pipeline network is underway. Besides, it would also help in creating a paperless environment. Geographic Information System (GIS) has potential to serve as a center of information as it would be able to provide maps on requests from other departments.

During the Open Day Executives session, Chief Officer IT/MIS said that gradually all consumers will be mapped by utilizing HHUs data. Currently SNGPL has MM3 and

M3 orange + units with already installed GPS chips.

The open day event helped motivating employees for adopting new and better technology which would help SNGPL enhance its services to optimal satisfaction level.

*The writer is Executive Officer (GIS).*

## Retirements



▶▶ Mushtaq Ahmed, Executive Officer (Corporate Affairs), Head Office retired after serving the company for 40 years, 02 months and 16 days.

Imran Ahmed Khan, Chief Engineer/ Station I/C, Multan (T) retired after serving SNGPL for 35 years, 09 months and 12 days.

Waqar ullah Babar, Senior Billing Officer, Sargodha (D) retired after serving the company for 32 years and 05 months.

# Promoting innovation: SNGPL delegation visited LUMS

**Abdur Rehman**

Corporate Social Responsibility (CSR) has emerged as a powerful concept in corporate world over the period of time. SNGPL also realizes its responsibility towards the society hence it pays full attention towards corporate social responsibility. SNGPL has always collaborated with educational institutions for it believes that such partnership proves beneficial for both the Company and the Nation as a whole. Lahore University of Management Sciences (LUMS) is one of the country's leading institutes in management sciences and technology. SNGPL also easily integrates with their latest Research and Development.

Telecom Department of SNGPL has installed and operates advanced equipment for Microwave, SCADA, Video Conference, Satellite Links and Fiber Optic links. Keeping on top of the latest technology requires constant research and development. Joint efforts with higher education institutions are of great help for the purpose. On one such invitation of Chairman, Electrical Engineering Department, LUMS, Dr Shahid Masud, a two-person delegation consisting of Chief Engineer Telecom, Muhammad Akhlaq and Engineer Telecom, Abdur Rehman visited the department to evaluate the final year projects of the LUMS Electrical Engineering

Graduating Batch. The purpose was to evaluate the projects and find their relevance and application in Oil & Gas Sector. Students had come up with several remarkable projects which are being shared with our readers for their interest:

## Wireless Sensor Network based Monitoring

The project consisted of Wireless Nodes running the Zigbee Protocol and making a Mesh Topology Network.

Using several sensors, these Wireless Nodes were able to monitor Temperature, Intrusion etc. and report to a Master Base consisting of a PC and operator. This master base was running Serial port capture and a Graphical User Interface (GUI) based on MatLab.

The frequency band used was 2.4 GHz non-licensed band. Data rate is suitable for Monitoring and Control Signal only.





### **Brain Machine Interface**

This project earned top score as it is a revolutionary concept. A headset directly connects with the brain of the operator and extracts his thoughts. Multiple Electrodes touching the skull of the operator take the small electrical signals generated in the human brain and convert them into computer readable instructions. For example, the operator moved a robot crane just by thinking about moving it. Instructions like go forward, go backward, move left, move right were shown experimentally. While there is a possibility to extend this project to read all of the human brain data including memories and emotions. The SNGPL delegation suggested the project group to use Linear Regression as part of the Artificial Intelligence algorithm to further refine the reading ability of the headset.

### **DC Microgrid for Rural areas**

This project proposed a Microgrid System for rural areas where conventional power supply is not available. The

source for DC power generation was Photovoltaic panels which were supplied to each house individually and if excess power was produced, it gets directed towards the grid.

### **Formation Control of Robots using Computer Vision**

This project consisted of four motorized robots, each with different markings on top. A computer analyzed the position of the robots using a camera. The robots were then sent instructions on specific tasks like making a formation of square, triangle etc. and going to a specific point on the project plane. The robots were connected wirelessly using XBee modules over 2.4 GHz.

### **Self-Organizing Acoustic Localization Network**

This project consisted of four nodes of wireless communication enabled devices which geo-located each other based on sound. Its purpose was to provide a location awareness service in case the GPS satellites are taken down or if they are not available in certain area like an underground tunnel. A primary node which knows its location emits a sharp beep. A secondary node which listens to the beep calculates its location based on the time required for sound to reach it. Once this secondary node knows its location, it can become a Primary node and help other nodes identify their own locations. In this way the GeoLocation system becomes self-aware.

*The writer is Engineer at Telecoms department*





▶▶ Prof. S. Sohail Naqvi, Vice Chancellor, Lahore University of Management Sciences (LUMS) calls on MD SNGPL, Amer Tufail in his office.



▶▶ A delegation from All Pakistan Textile Mills Association (APTMA) pays a visit to MD SNGPL, Amer Tufail at the Gas House, Lahore.



▶▶ Delegation of KBK Electronics Limited in a meeting with MD SNGPL, Amer Tufail at the SNGPL Head Office.



▶▶ A delegation of Jang Media Group led by Group MD Sarmad Ali pays a visit to MD SNGPL, Amer Tufail.

## Farewell for the ex-MD

A farewell party for the ex-Managing Director, SNGPL, Arif Hameed was organized recently by the SNGPL Board of Directors in Lahore. MD SNGPL, Amer Tufail, Chairman Board of Directors (BoD) Saeed Mehdi, Members BoD Mian Misbah ur Rehman, Rizwanullah Khan, Ahmed Aqeel, Manzoor Ahmed and Mustafa Ahmed Khan were present on the occasion. MD Amer Tufail and BoD Chairman, Saeed Mehdi praised Arif Hameed for his services for the Company. The event was also attended by Senior General Managers and General Managers of the Company. ■





## Mehfil-e-milaad at SNGPL Head Office

On the religious occasion of Eid Milaad ul Nabi (SAW), Mehfil-e-Milaad was organized at the SNGPL Head Office. Naats were recited at Milaad while religious scholars shed light on the life of Prophet Mohammad (PBUH). MD SNGPL, Amer Tufail was also present at the occasion. Mehfil-e-milaad was attended by a large number of SNGPL staff.



## Quran Khwani for APS martyrs

16 December 2014 will always be remembered as black day in the history of Pakistan when terrorists killed 144 children at the Army Public School, Peshawar. On the first anniversary of the tragic event, Quran Khwani for female staff members was held at the SNGPL Head Office. At the end of Quran Khwani, prayers were offered for the martyred souls.





# LNG project construction activities: Visit made to ensure maintenance of HSE standards

Employees' health and safety is always the top priority at SNGPL. To accomplish this task, regular field visits are arranged to check the compliance of HSE procedures in its true spirit. Company strives for promoting the health & safety awareness to provide better work environment for its employees.

A visit to Sangi Camp was conducted in September 2015, by General Manager (HSE) Farrukh Majeed with HSE Executives from the Head Office regarding "LNG Infrastructure Development Project, Phase-1 (Sawan to Qadir pur, 42" dia line of length 111KM)". General HSE initiatives were observed and progress was reported to concerned departments. Workers were provided with safety gadgets and personal protective equipments for their protection during site activities. There were few anomalies but as a whole, system was well managed.

A follow up visit of Sangi camp was also conducted in November 2015 by Head Office HSE Executives to monitor project activities and to check compliance regarding already reported anomalies. Activities during the pipeline construction were observed to check for their



impact on environment, Occupational Health and Safety. Different sites were visited in Khairpur district starting from Salhepat to Chundko camp. Compliance of PPEs was observed at welding of pipeline near Salhepat, Lowering at RD-186, Canal crossing (Horizontal Directed Drilling) at NARA Canal and Hydrostatic Testing near Sawan. Socio-economic survey was also conducted and local population was consulted to assess the social impacts of the project. Compliance from camp management was appreciated and their attitude towards HSE was commended. ■

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# SNGPL wins CSR Award at International CSR Summit

Asma Maqbool

**E**ighth International CSR Summit and Awards ceremony was held in January in Islamabad. The event was organized by National Forum for Environment and Health. SNGPL participated in the CSR Awards in the Category of 'Sustainable Initiatives'.

Federal Minister for Science & Technology Rana Tanveer Hussain and Federal Minister for Information & Broadcasting Senator Pervaiz Rashid jointly presided over the ceremony. Chairperson Benazir Income Support Programme, Marvi Memon also attended the ceremony. In her speech, she said that Pakistan at present is facing seriously alarming situation regarding nutritional health and needs of mothers and children. She said that the corporate, business sector, non-governmental organizations, and international community should come forward to provide assistance to the government to address

health and growth needs of women and children. Farrukh Majeed, General Manager (HSE) participated in the Panel discussion and emphasized the importance of investment in CSR and its benefits.

Winners were selected on the basis of the Company's CSR activities particularly good governance; addressing all key stakeholders; sincerity and on-going commitment in incorporating ethical values into their business; employee health and safety program; involvement in community related activities and protection of the

environment. SNGPL was declared winner in the category of 'Sustainable Initiatives' and Farrukh Majeed, GM (HSE) received the award given in recognition of the services and overall performance of SNGPL in the field of CSR. ■

*The writer is Engineer at HSE Department.*



# Occupational Health and Safety Medical Camps

Asma Maqbool

**H**ealth, Safety & Environment Department of SNGPL organized two days Occupational Health and Safety Medical Camps for employees of SNGPL Faisalabad Distribution, Faisalabad Compression, Central Metering Workshop, Corrosion Control and SNGTI at FSD-D & Central Metering Workshop recently.

Regular Occupational Health surveillance plays an important role for our workforce which is directly involved in operational activities and is exposed to occupational environmental hazards. All the respective Sites Executives and Staff showed keen interest and participated enthusiastically to get them examined. During these camps, following major activities were carried out:

- Awareness of employees regarding usage of Personal Protective Equipment at PPE stall. Height and weight were measured for lungs function testing and body mass index (BMI) was calculated for counseling on weight reduction.
- Diabetic and hypertensive tests were done at blood sugar and blood pressure testing stalls. Uncontrolled status of these two non-communicable diseases can

affect quality of work and can make employees prone to injuries and involved in unsafe acts. Those who are already having the disease and newly screened out were on the spot advised to control the status by medication intake and life styles changes.

- To raise awareness about hazards of blood borne pathogens spread at workplace and to screen out those employees who are suffering from hepatitis B & C and share the same instruments with non diseased employees, this type of screening is arranged. This activity can help to control these communicable diseases spread and by making patients aware to take timely medical treatment.



- Eyesight testing of drivers and computer operators of IT/MIS is also another initiative to keep track of ocular health and follow-up.
- Lungs function testing is done for selected employees who are regularly exposed to dust, fumes and vapours workplace.

*Continued on page 24*



## Stand up for the Champions SNGPL clinches Quaid-e-Azam Trophy for the fourth consecutive time

**T**eam SNGPL once again crushed all the rival teams to win Quaid-e-Azam Trophy for fourth consecutive time. SNGPL beat UBL in the final by six wickets.



This was SNGPL's fifth overall success in the major domestic cricket event of the country. SNGPL remained unbeaten throughout the tournament and met UBL in the day-night final match at the National Cricket Stadium in Karachi. UBL won the toss and elected to bat. SNGPL bowling attack bowled out UBL for 208. Mohammad Hafeez and Bilawal Bhatti took 3 wickets each while Azizullah took 2 wickets. SNGPL team was in much trouble after losing four wickets at the score of 57. At this time the skipper Misbah ul Haq scored marvelous 85 runs. He was followed by Umar Akmal who scored 44. SNGPL posted 238 on the scoreboard. UBL's fate was no different in the second innings also



and the whole team was bowled out for 189. Bilawal Bhatti was the real game changer who produced his career-best figures of 8-56. SNGPL was given a target of 160 runs. After losing three early wickets, a 110-runs

partnership between Misbah ul Haq along with Azhar Ali helped SNGPL secure a strong position. SNGPL won its fifth Quaid-e-Azam trophy with a sweep shot by Misbah ul Haq.

The winning team was handed over the trophy and prize money of Rs 2.5 million. Pakistan Cricket Board (PCB) Chairman, Shahryar Khan, Advisor to PCB Chairman, Salahuddin Sallu and President of Karachi City Cricket Association (KCCA) Ijaz Farooqi were present at the

closing ceremony. Bilawal Bhatti was declared man-of-the-match for his magical spell. ■

# Procurement Department wins the Inter Departmental Cricket Tournament

**Tariq Ali**

An Inter Departmental flood light cricket tournament was organized by the SNGPL Billing department in the month of December at Model Town Ground, Lahore. Teams from six departments participated in the tournament which were divided in following two groups:

Group 'A': Billing, Audit & Project.

Group 'B': Procurement, Accounts & Treasury.

Each Team had to play two group matches and the winners of most matches from both the groups were to qualify for the final match. Interestingly all the six teams won one match each therefore the decision had to be



made on the basis of net run rate. Teams of Procurement & Project departments had better run rates hence both got top positions at group level and qualified for the Final match.

Project team won the toss in the final match and elected to bat first. Procurement team managed to restrict the project team at 63 runs for the loss of 5 wickets in allotted 5 overs. Procurement team achieved the target of 64 runs in 4 Overs for the loss of only 1 wicket.

Tariq Ali was declared Man of the Match and Shahid Bukhari was declared Player of the tournament for their performances.

The best score in a match was also made by the Procurement team against Accounts team i.e 120 runs in allotted 6 Overs without losing any wicket. Mr. Shahid

Bukhari & Awais Shafi were unbeaten for their opening partnership.

Chief Guest Asif Qureshi,

GM (Treasury) & President of CBA Union, Shahzada Iqbal distributed the trophies to the players, winning & runners up teams during the presentation ceremony. ■



# BLACK POWDER IN GAS TRANSMISSION PIPELINES

**Tauseef Ahmad Karim**

In the Natural Gas industry, the term “Black Powder” is used for a blackish material that is collected in the pipelines which may lead to erosion failures of valves, lower efficiency of compressors, clogging of instrumentation and valves as well as customer complaints. The jagged shape and high hardness of Black Powder makes it very erosive to many engineering materials. Black Powder can be found in several forms such as wet with a tar-like appearance, or dry in the form of very fine powder. Black powder can be reported in recently commissioned or older gas Transmission pipelines. Different pipeline operators report different compositions for the Black Powder removed from their pipelines. Black powder so obtained from the pipeline predominantly contains Iron Sulphides (FeS) but sometimes Iron Oxides such as  $Fe_3O_4$  and FeOH and Iron Carbonates ( $FeCO_3$ ) are also present.

The components (Iron Oxides, Iron Carbonates & Iron Sulphides) of Black Powder have one thing common that these products are formed inside the pipelines as a result of corrosion of the internal walls of the pipeline; more specifically, by reactions of Iron (Fe) present in ferrous

pipeline steel with condensed moisture containing Oxygen ( $O_2$ ), Hydrogen Sulphide ( $H_2S$ ) and Carbon dioxide ( $CO_2$ ). These are all relatively high in specific gravity (Sp. Gr. 4 to 5.1), abrasive and are typically difficult to remove in cleaning operations.

The risk of internal corrosion of pipelines due to presence of water in the dry sale gas can not be avoided

as it is difficult to completely remove water contents of sale gas; however it can be limited to maximum at 7lb/MMCF in sale gas, the safe limit, which is received from gas producers. Water vapors in sale gas may condense on the inner wall of the pipelines due to high dew points. Water vapor can also enter into the pipeline through periodic

upsets of gas treatment plants that cause water carry over into the pipeline. This water when couples with corrosive species in the gas like  $CO_2$ ,  $H_2S$  and with the presence of  $O_2$ , even in small amounts can result in internal corrosion with the formation of corrosion products namely,  $FeCO_3$ , FeS, and Iron Oxides/Hydroxides respectively.

Iron carbonate ( $FeCO_3$ ) corrosion product is produced by the chemical reaction of dissolved  $CO_2$  in condensed





water producing carbonic acid ( $\text{HCO}_3$ ), which in turn reacts directly with the steel. Iron Sulfide corrosion product is usually formed from  $\text{H}_2\text{S}$  or produced by SRB (Sulfate reducing Bacteria) in the presence of water by directly reacting with the wall of the pipelines. Iron Oxide ( $\text{Fe}_3\text{O}_4$ ) corrosion product is formed by the direct oxidation of pipeline steel walls in the presence of water in gas. It is important to note that these reactions occur in the presence of water, otherwise in the absence of water these reactions are not possible to occur. Therefore, it is mandatory to limit water,  $\text{CO}_2$ ,  $\text{O}_2$ ,  $\text{H}_2\text{S}$  in the gas streams from gas producers to avoid above mentioned chemical reactions which can produce Black Powder as a result of internal corrosion. Excessive internal corrosion not only produces Black Powder which is detrimental to the instruments/measurement gadgets, but it may also cause rupture of pipeline.

SNGPL is receiving gas from 38 gas fields presently in Transmission Network which fall in the provinces of

Punjab, Khyber Pakhtunkhwa, Sindh & Balochistan. SNGPL Transmission Department is limiting  $\text{CO}_2$  (not more than 3 mole%),  $\text{O}_2$  (not more than 0.1 mole%),  $\text{H}_2\text{S}$  (not more than 16 ppm) and water (not more than 7lb/M-MCF) in the sale gas through Gas Sales Agreement with the gas producers in order to get pipeline quality gas in our Transmission Network. If the gas producer delivers gas over and above the specified limits of above mentioned constituents, it is termed as Off-Specification gas. SNGPL has the option to accept or reject Off-Specification gas subject to the safety of pipelines. This Off-Specification gas comes with a penalty to the gas producer in the form of discounts on the well head notified price of gas. Apart from this, SNGPL Transmission Department carries out On-Stream Pigging of the pipelines on as and when required basis in order to ensure the efficient operation of pipelines by removing any sort of black powder or foreign material which may be attached to the inner wall of the pipeline. ■

*The writer is Senior Engineer (T) at Section – IV, Lahore.*

**Continued from page 20**

- Bone density Scan is carried out to rule out any employee suffering from osteopenia and osteoporosis due to reduced blood levels of Vitamin D and Calcium in our bones. This is prevalent in our part of world. Consumption of junk food, soft drinks, synthetic food colors, reduced exposure to sun light and reduced intake of calcium rich food in our diet are few contributory factors.
- General medical examination of each enrolled employee at camp is done and fitness evaluation and counseling is done by OH Consultant.

In the end, brochures and HSE issues related booklets were handed over to participants with the will to keep SNGPL



employees safe and healthy. ■

*The writer is OH Consultant at HSE department.*

# The Design is in the soul

**Mohammad Asim**

**E**very creation bespeaks the Intelligence behind it – Aristotle.

As a teenager he joined Reed College at Stanford and only studied Calligraphy for fun as a pass time. After a decade he incorporated what he had learned and created one of the finest eye appealing aesthetically designed computers named: APPLE. His name was Steve Jobs who before his death in 2011, transpired to the public that how without any basic knowledge let alone degree of computers he created a unique, artistic, machine featuring both elegance and beauty. His simple catchphrase answer was : The design is in the Soul.

The design of our ever expanding Universe including us has a divine character and soulful existence. It is a complementary organic mixture of Spirit and Matter. The spherical planets, the rounded stars, the spiral galaxies, the celestial paths, the vibrating atoms, the proportionate crystals, the circular waves, the desert mirage, the subtle air, the infinite space, and the patterned objects around us are all actually constricted and condensed masses of invisible cosmic rays, visible light, and Gases in motion.

Human being has a spiritual existence whose creation starts with the gust of soul spewed by God. This spirit or divine energy is a fundamental design which has the

potential to express itself in myriad of forms in Time and Space. In human creation, this spirit has numerous godly attributes of creativity, beauty, finesse, intellect etc. If this spirit is developed in right direction, it leads to development of our character. Character is nothing but a combination of thought and action that shows itself in our personality disposition. It is the work of human character that shaped the environment, harnessed the nature, created products and technological marvels in relentless pursuit of conquest of Universe. The inspiring ideas, the poetic expressions, the appealing products, the emotional interactions, the loving relationships and cherishing memories all have lasting impact in our lives not because they are appealing to our senses, but because they touch our SOUL.

Whatever we feel and think is manifested in either in our physical existence or in our actions. A frustrated person may show himself either in ominous silence, or some aggressive behavior. Similarly, a happy person may exhibit his feelings through the glow of his eyes, a smile or any other exhilarating gesture. Soul needs physical expression in the universe to move in time and space. That is why it takes the shape of a matter. Every existence has a soul. The minutest particle atom shaped by a wave named Photon with zero mass. The oscillations of atoms created by the invisible waves create molecules and the process is continual till the formation of elements and compounds visible to our naked eye. The impetus for every creation is in a wave. As per laws of physics and uncertainty principle the existence of wave and matter is continuous and complementary. The objects surrounding us are nothing but the interaction of numerous invisible laws of universe to assuming a myriad of tangible shape. The action or performance of matter shows the inherent character possessed inside

it. This alchemy of Spirit and Matter is called Divinity.

Business is a Law says the ancient Chinese proverb. The products designed, created and delivered by the individuals and organizations are in fact the result of their inherent culture within themselves. Intel's finesse, Apple's aesthetics, Mercedes Engineering, Macdonald's delivery, Dell's simplicity shows the inspiration behind the intelligent work of art derived from the Cultural Soul of each organization. It is combination of VALUES that take shape over the years to create a quality working atmosphere within organization. The different concepts like Six sigma, Total Quality, and Just in Time are all in fact based on the immutable laws of fair play, sense of responsibility, punctuality, that shape human behavior for excellence. The human and organizational character is all shaped by spiritual values.



***Knowledge as an idea takes its roots in our soul and processed in the brain. Human being is a creator, designer, augments, and implementer of knowledge.. It becomes concrete when it is reflected in us and in our surroundings.***

Knowledge as an idea takes its roots in our soul and processed in the brain. Human being is a creator, designer, augments, and



The best products are driven by Simplicity. This cliché has a deep rooted meaning. When we explore through complexities we are searching for simplicity for our understanding and communication. Simple equations, words, and deeds provide the best possible explanations of life and nature. Simple ideas are coherent, logical, spontaneous, comprehensible and appealing. The soul is shaped and developed through effort. Creation of anything is in fact tangible image form of our soul. Computer is the image of human brain. Cleanliness around ourselves shows our inner self. Whatever we modify, change, and create around us is actually the expression of our inner self.

Matter needs refinement to match the inner Soul as aptly said by Einstein: Science is nothing but the refinement of everyday ideas. The thought is a wave which needs human intellectual effort for expression in words, deeds, products and services. The quality of anything created depends less in the effort but more into the heart we put into it. Two cooks starting with same ingredients and recipe yet each produce a dish that tastes quite different from the other. Why? Taste comes from the heart which demands strong involvement of human emotions and concentration of mind. This alchemy of mind and heart provides the taste. All travels from the soul to the cooking vessel.

implementer of knowledge. It becomes concrete when it is reflected in us and in our surroundings. Some people are creator of knowledge, some are implementer. In both activities it is the human soul and its character that matters. Beethoven was deaf but created music. He listened from the heart. The musical rhythm was in his soul which later took the shape of symphonies. Success in life is designed in the mind and expressed in form of accomplishment. The Soul has a natural tendency to seek for its expression through matter. The Human Soul is fundamentally manifested as a code of life in intertwining structure of our DNA.

***Continued on page 29***



# Smart Energy Generation: Combined Heat and Power (CHP)

## SHEIKH MUHAMMAD AAMIR

Combined heat and power (CHP), also known as cogeneration, is the simultaneous production of electricity and heat from a single fuel source, such as: natural gas, biomass, biogas, coal, waste heat, or oil. CHP is not a single technology, but an “Integrated energy system” that can be modified depending upon the needs of the energy end user.

CHP provides:

- Onsite generation of electrical and/or mechanical power.
- Waste-heat recovery for heating, cooling, dehumidification, or process applications.
- Seamless system integration for a variety of technologies, thermal applications, and fuel types into existing building infrastructure.

The two most common CHP system configurations are:

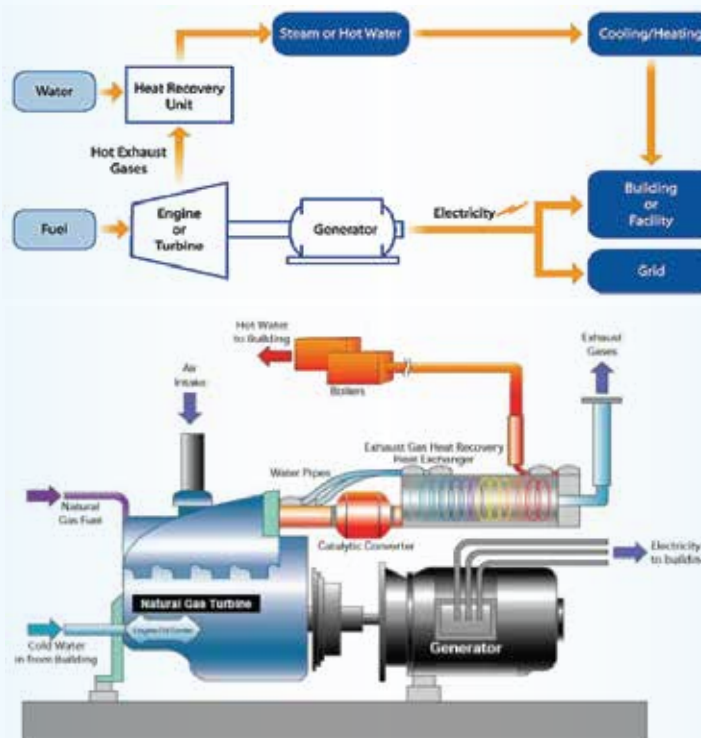
1. Gas turbine or engine with heat recovery unit
2. Steam boiler with steam turbine

CHP technology exists in a wide variety of energy-intensive facility types and sizes nationwide, including:

- Industrial manufacturers - chemical, refining, ethanol, pulp and paper, food processing, glass manufacturing
- Institutions - colleges and universities, hospitals, prisons, military bases

- Commercial buildings - hotels and casinos, airports, high-tech campuses, large office buildings, nursing homes
- Municipal - district energy systems, wastewater treatment facilities, K-12 schools
- Residential - multi-family housing, planned communities

CHP is more efficient, less fuel is required to produce a given energy output than with sepa-



rate heat and power. Higher efficiency translates into:

- Lower operating costs
- Reduced emissions of all pollutants
- Increased reliability and power quality
- Reduced grid congestion and avoided distribution losses

To produce 75 units of useful energy, the conventional generation or separate heat and power systems use 147 units of energy—91 for electricity production and 56 to produce heat—resulting in an overall efficiency of 51 percent. However, the CHP system needs only 100 units of energy to produce the 75 units of useful energy from a single fuel source, resulting in a total system efficiency of 75 percent.

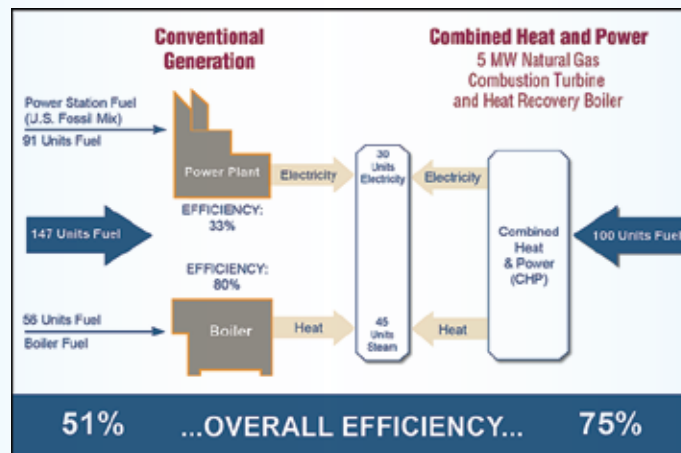
A CHP system's efficiency depends on the technology used to generate the electricity and thermal energy, the system design, and how much of the thermal energy is used by the site. Therefore, every CHP system will have a different, site-specific efficiency once installed. However, the five most commonly installed CHP prime movers tend to offer fairly standard ranges of achievable efficiency as follows:

- Steam Turbine: 80 percent
- Reciprocating Engine: 75-80 percent
- Gas Turbine: 65-70 percent

- Micro Turbine: 60-70 percent
- Fuel Cell: 55-80 percent

The most commonly used approach to determining a CHP system's efficiency is to calculate total system efficiency. Also known as thermal efficiency, the total system efficiency ( $\eta_o$ ) of a CHP system is the sum of the net useful power output (WE) and net useful thermal outputs ( $\Sigma Q_{TH}$ ) divided by the total fuel input (QFUEL), as shown below:

$$\eta_o = \frac{WE + \Sigma Q_{TH}}{Q_{FUEL}}$$



The calculation of total system efficiency is a simple and useful method that evaluates what is produced (i.e., power and thermal output) compared to what is consumed (i.e., fuel). CHP systems with a relatively high net useful

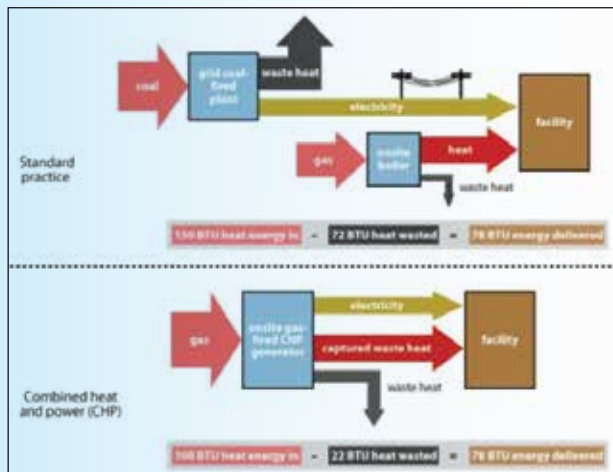
thermal output typically correspond to total system efficiencies in the range of 60 to 85 percent.

However, "Effective Electric Efficiency" calculations allow for a direct comparison of CHP to conventional power generation system performance. Effective electric efficiency ( $\xi_{EE}$ ) can be calculated using the equation below, where (WE) is the net useful power output, ( $\Sigma Q_{TH}$ ) is the sum of the net useful thermal outputs,

( $Q_{FUEL}$ ) is the total fuel input, and equals the efficiency of the conventional technology that otherwise would be used to produce the useful thermal energy output if the CHP system did not exist:

$$\epsilon_{EE} = \frac{W_E}{Q_{FUEL} - \sum (Q_{TH} / \alpha)}$$

CHP benefits in the following ways:



- CHP requires less fuel to produce a given energy output, and avoids transmission and distribution losses that occur when electricity travels over power lines.

- CHP can be designed to provide high-quality electricity and thermal energy to a site regardless of what might occur on the power grid, decreasing the impact of outages and improving power quality for sensitive equipment.

- Because less fuel is burned to produce each unit of energy output, CHP reduces air pollution and greenhouse gas emissions.

- CHP can save facilities considerable money on their energy bills due to its high efficiency and can provide a hedge against unstable energy costs. ■

*The writer is Executive Engineer at Compression Department, Faisalabad.*

**Continued from page 26**

Electric waves show themselves in light bulbs. Water as a chief component of life has an inner design in simple combination of Hydrogen and Oxygen (both combustible) as  $H_2O$ . This unique molecular design makes itself a best solvent and fire extinguisher. Add one more molecule in the design ( $H_3O$ ); it becomes heavy nuclear fuel whose unleashing energy can exterminate us. Change of design alters the property and functionality of any entity.

The invisible is more important than the visible because former has a soulful existence. Pain, Happiness, Joy, and all kind of stresses invisible waves that attribute to us and shape our personality. The towering building structures hold not because of bricks but rather by the laws

of architecture. Planes fly effortlessly in thin air not because of wings but by harmonizing according to the laws of aero dynamics. Heavy Ships and Submarine float not because of their shapes and sizes but by following the laws of hydrodynamics. The shape must match the soul to stand and relate. Thus, every existence relates to an invisible law. Break the law, destroy the existence. Action ceases to give desired result without Passion. Implementation must be both in letter and spirit so as to speak. Also is to conclusively speak: If Soul is lost, Everything is lost.

The writer is Deputy Chief Officer, SNGTI. ■

*The writer is Deputy Chief Officer, SNGTI*



# Pollution: Destroying the planet, endangering lives

**Muhammad Saleem**

**W**e hear every day that pollution is increasingly bringing about changes to our atmosphere; so much so that not even the air we breathe is safe anymore. Pollution happens when pollutants, which are mostly waste materials of any form, contaminate our natural surroundings. It causes imbalance in our environment, disturbing our ecosystem, affecting human lives adversely. Pollution occurs in various forms; air, water, noise, soil/land, radioactive, etc.

Air pollution is the most dangerous form of pollution. Not only it is bad for our environment but is also dangerous for human health as well. Scientists say that every year a large sum of people fall prey to the clutches of air pollution. According to a study published in journal "Nature" it's been concluded that air pollution leads to more than 3 million premature deaths around the world. One of the significant causes behind air pollution is smoke; smoke from factories, vehicles, chimneys, burning of wood etc. Also, the air we breathe has become toxic by the contamination of sulphur dioxide in it, which happens when coal is burned. The release of sulphur dioxide and various other hazardous gases into the air then becomes the root cause for acid rain and global warming. As a result, we inhale polluted particles which lead to diseases such as asthma and lung cancer etc.

Water Pollution is yet another prominent and equally dangerous form of pollution. Contamination of water affects almost 60 per cent of living species, humans and/or animals. Industrial development is to be held responsible as one of the main reasons behind water

pollution. The waste material gets dumped into the lakes and rivers which infects the water and causes death of aquatic animals. It needs not to be mentioned that human beings depend on these aquatic species. Thereby contaminating the entire chain of seafood, consumption of which causes diseases like diarrhea and cholera. Hence water pollution is not dangerous for aquatic species only but humans too. Another factor behind water pollution is the excessive spraying of insecticides and pesticides on plants. It causes irreparable damage to the ground water system. Moreover, our daily activities such as laundry, washing clothes, utensils by ponds, rivers or lakes also contribute to water pollution.

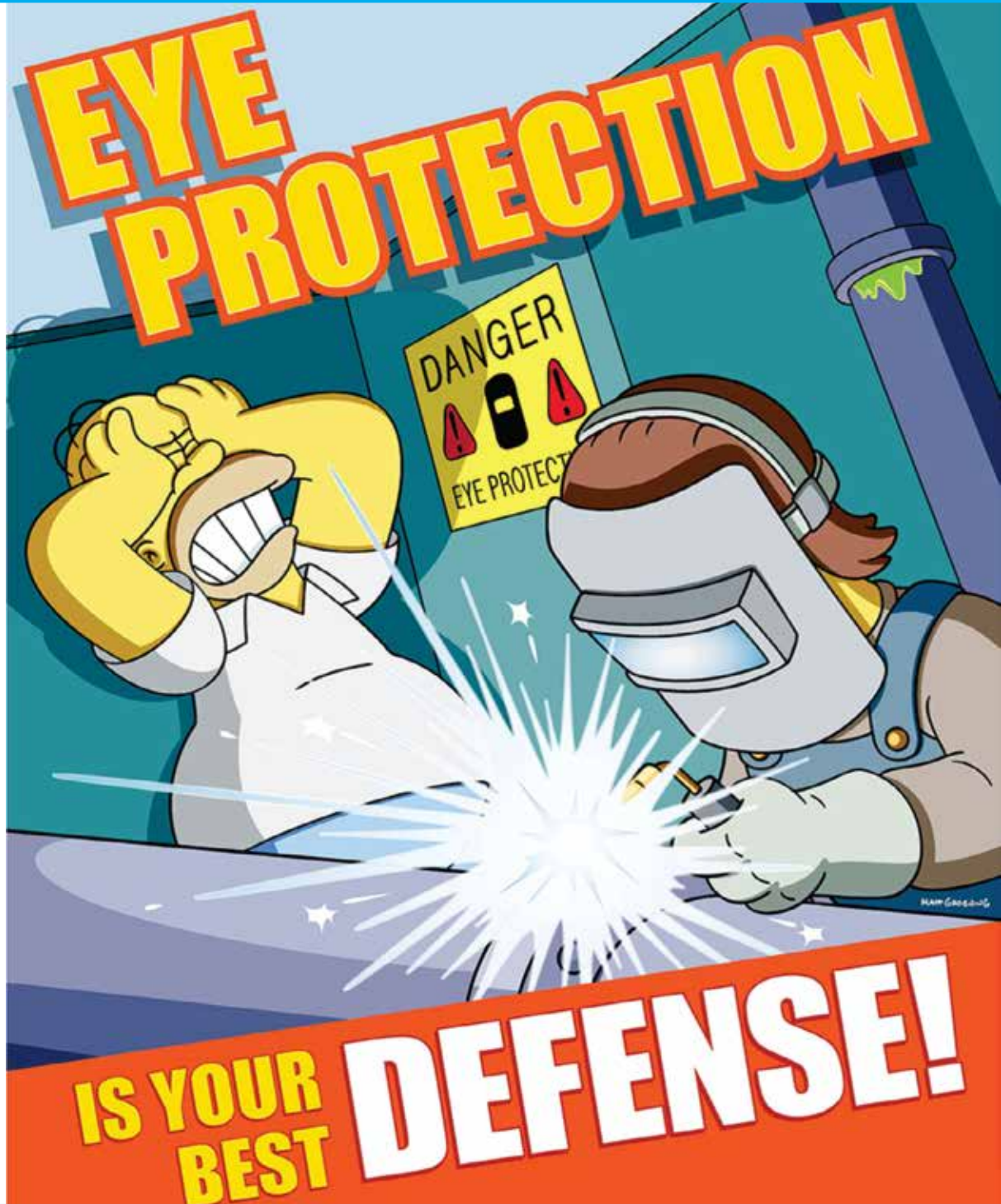
Land Pollution happens when the soil is incorporated with unwanted chemicals. Like all the other factors involved in various forms of pollution, human beings are responsible for this one too. Usage of fertilizers, insecticides and pesticides absorbs nitrogen compound from the ground thereby making the resultant plant lacking in nutrition. Deforestation also contributes to land pollution.

In conclusion, pollution does not only harm human beings by deteriorating their health but it also poses a great danger to every living organism in this world. It affects nature, plants, animals, forests, ponds, lakes, rivers, fruits, vegetables etc., all of which human life depends on. The responsibility of clean and pollution free atmosphere falls on our shoulders because in the end, it's us human beings who are the main victims of this monster. ■

*The writer is Engineer (Transmission) at Multan – T.*



# SUI NORTHERN GAS PIPELINES LIMITED



**HEALTH SAFETY & ENVIRONMENT DEPARTMENT**



**15-SP-HSE-14**





USE  
**GAS** WISELY DURING  
WINTER



**DUE TO SHORTAGE OF GAS,  
COOK YOUR MEALS DURING THESE HOURS**

- To ensure availability of gas during cooking hours, SNGPL is constantly striving to balance the demand and supply of gas for domestic users.
- Do not use geysers and heaters.
- The use of gas compressors is illegal and unethical, it disrupts fair distribution of gas to other consumers. Report the use of compressors to 1199.



**SUI NORTHERN GAS PIPELINES LIMITED**

Please contact us on our helpline for any enquiries or complaints. **Helpline: 1199** [www.sngpl.com.pk](http://www.sngpl.com.pk)