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Jan-March 2023

NEWSLETTER

OIL & GAS DEVELOPMENT COMPANY LIMITED

OGDCL Cosponsored the 2nd International Conference on Climate Change & Environment ICCC&E – 2023



Climate change is a global emergency that goes beyond national borders. It is an issue that requires coordinated solutions at all levels – nationally and internationally. In perspective of the ongoing worldwide effects of Climate Change and Environment, 2nd International Conference on Climate Change and Environment ICCC&E-2023 was jointly organized by Pakistan Environmental Protection Agency and Department of Environmental Sciences, Quaid-e-Azam University, Islamabad from January 11 to 13, 2023; Conference was cosponsored by OGDCL, International Rescue Committee (IRC), IMARAT and Sukh-Chyan Residence. The focus of Conference was to create better understanding of the climate change phenomenon, its impacts and development of advanced tools to address the root causes and consequences for sustainable mitigation & adaption.

KEYNOTE SPEAKER



Prof. Gerrit Hoogenboom
University of Florida,
USA



**Ms. Farzana Altaf
Shah**
Director General
PAK-EPA



Dr. Chikondi Chisenga
University of Science and
Technology, Malawi



**Prof. Dr. Paul
van den Brink**
Wageningen University,
Netherlands



Prof. Samir Kumar Khanal
University of Hawaii
at Manoa, USA



Dr. Sanjay K. Mohanty
University of California,
Los Angeles, USA



Dr. Michiel Adriaan Daam
New University of Lisbon,
Portugal



Prof. Nanthi Bolan
The UWA Inst. of Agri.
Australia



**Prof. Meththika Suharshini
Vithanage**
University of
Sri Jayewardenepura,
Sri Lanka



Prof. Lu Jiansong
Wuhan University,
China



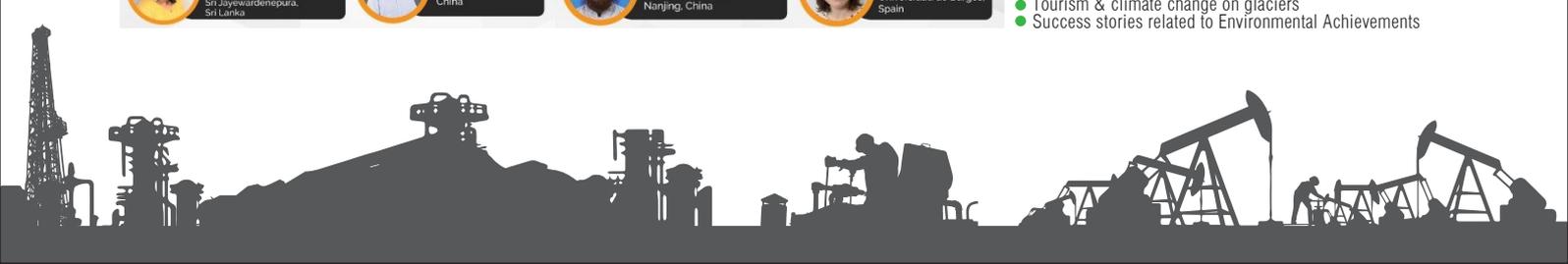
Dr. Md. Enamul Haq Poltan
Hohai University,
Nanjing, China



**Dr. Rocío Barros
García**
Universidad de Burgos,
Spain

Conference Themes

- Biological, chemical, environment and socioeconomic mitigation against climate change in the context of Pakistan.
- Agriculture and natural resource management & conservation
- Deforestation and land degradation
- Impacts of climate change on wildlife/ forest cover changes
- Air pollution/ smog & management
- Vulnerability of flash flooding due to climate change
- Circular economy of plastics/ waste to energy /e-waste
- Natural resource conservation in the scenario of urbanization and land encroachers.
- Water conservation, management, and policy implementation
- Tourism & climate change on glaciers
- Success stories related to Environmental Achievements





2nd International Conference on
Climate Change and Environment
 January 11 - 13, 2023

The Conference was attended by OGDCL team comprising Ms. Shabana Kousar (SO HSEQ, HO), Mr. Kamran Siddique, SO HSEQ, Dakhni Oil & Gas Processing Plant, Mr. Ammar Tariq (SE HSEQ, Wali Oil & Gas Field), Mr. Arbab Sattar (JE HSEQ, Seismic Party-3). Keynote and other speakers presented their research papers; besides, 45 poster-presentations were displayed outside of auditorium hall; OGDCL Representative Kamran Siddique presented a brief on the Success Story of Floating Treatment Wetlands (FTWs) – a project for the betterment of climate affects applying theory/ research into practical solutions. Ms. Naz Baloch Parliamentary Secretary for Climate Change bestowed Shield to him. She concluded the Conference with eloquence that the academic & research institutes of our country should increase research and innovative work to address climate change to protect our living adobe.

Carbon Emissions PER-CAPITA BY COUNTRY

Measuring the total carbon emissions doesn't always paint the most accurate picture of a country's contribution, if their population isn't considered.

For example, even though China is the highest emitter of CO₂, the average American is responsible for producing 14.4 tonnes of CO₂ per person, compared to 7.1 tonnes for a Chinese citizen.

Here's a look at the biggest per-capita carbon emitters in the world:

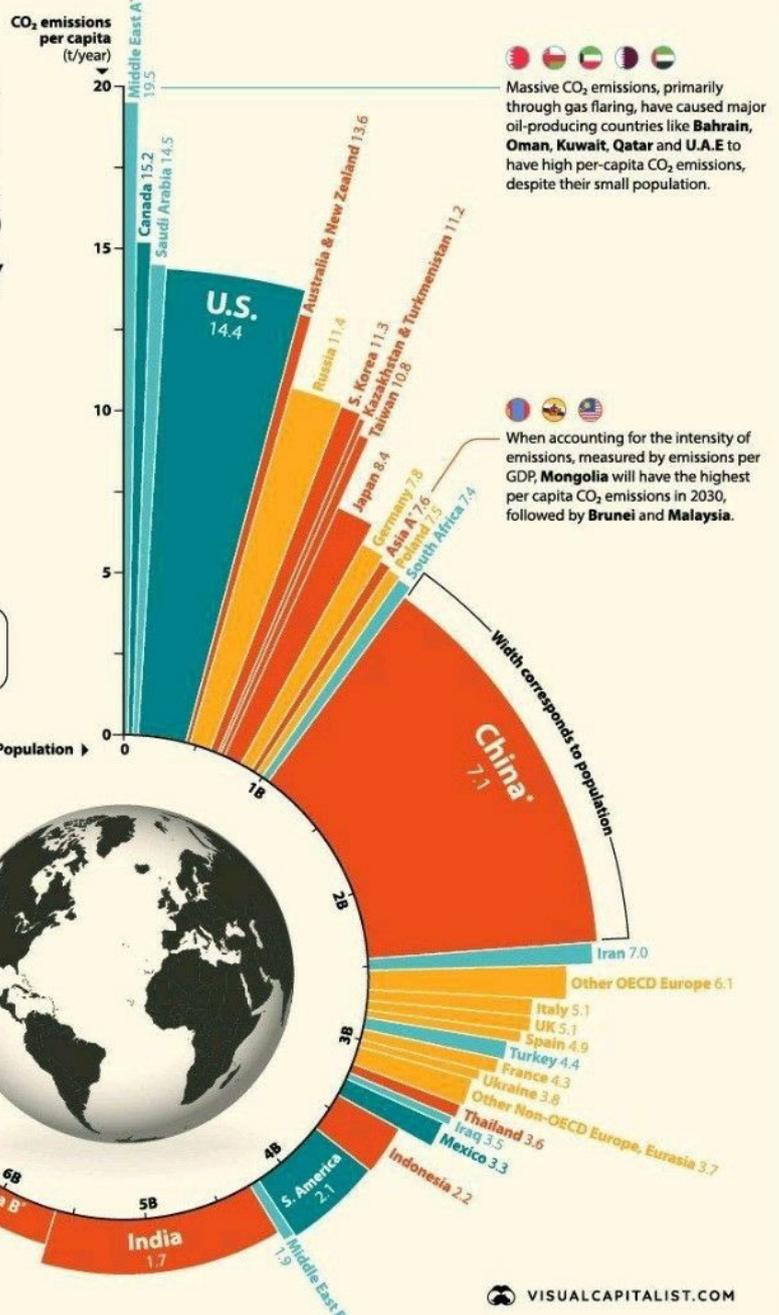


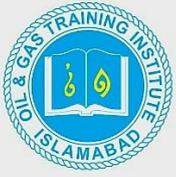
Unequal global distribution of wealth plays a factor in carbon emissions. Developed countries like Qatar emit 31t CO₂/yr, while that of developing countries in Africa can be as low as 0.7t CO₂/yr.

- *1 Middle East A
Bahrain, Oman, Kuwait, Qatar, United Arab Emirates
- *2 Middle East B
Israel, Jordan, Lebanon, Syria, Yemen
- *3 Asia A
Brunei, Malaysia, Mongolia, Singapore
- *4 Asia B
Asia without Asia A, China, India, Thailand, Taiwan, Indonesia, S. Korea or Japan
- *5 China
China, Hong Kong

The CO₂ emission values are based on estimates of the source chart. There may be a negligible difference between the ones provided here and the source data.

SOURCE: AQAL GROUP, IEA (2021)





OIL & GAS TRAINING INSTITUTE TRAIN THE HSE TRAINER

March 13-15, 2023



The third batch of Train-The-HSE-Trainer Workshop was organized by OGTI on March 13-15 2023. This course was made up of 24 guided learning hours and designed for all levels of training experience, with the primary aim of developing veteran-level ability of Field HSE Facilitators to conduct productive and exciting HSE courses.

The course was sketched and orchestrated by Muhammad Mubashir Abbas, Lead HSEQ Auditor/ Instructor (Head of Department – HSEQ) and aimed to develop essential training skills and promote a clear understanding of effective teaching methods, leaving training delegates energized, motivated and well-equipped to deliver quality training sessions to get the best output from versatile audiences. Participants were necessitated to work in teams, do quizzes/ exercises, go through pertinent case studies, prepare short presentations and deliver toolbox talks to an audience on a subject of their own choice, followed by a feedback session to demonstrate their learning and comprehension based on SKA (Skill-Knowledge-Attitude). It is

anticipated that the Workshop is going to assist HSE Facilitators a long way in delivering learner-focused sessions through professional engagement, maximizing the potential of the standardized HSE training material.

The Contents

a) Design (A Request For Training/ Conducting a Cost-Benefit Analysis, Role of Training, Conducting a Needs Assessment, Goals & Objectives, Evaluation Strategies, Writing a Training Proposal/ Working with Training Providers/ Trainer's Types (Methods))

b) Development (Characteristics of Adult Learning, Kolb Learning Styles, Sequencing Learning Activities, How to Prepare a Powerful Training Module/ Presentation, Organizing a Presentation, Effective Visual Aids, Role Playing – Emergency Scenario Interactive Emergency Drill)

c) Delivery (Delivery Skills Reminders, Interaction Skills, Group Process, Cultural Factors, Resistance & “Difficult Learners”, Facilitation Skills, Energizers, Closing a Training Session & Evaluation Process/ Action Planning/ Use of Comparison Groups).



OIL & GAS TRAINING INSTITUTE

First Corporate HSE Event

February 13, 2023



First Corporate HSE Event was organized by HSEQ Department in collaboration with OGTI at OGTI Dining Hall, I-9/2, Islamabad on February 13, 2023 in order to promote and campaign for the best HSE practices. MD/ CEO/ ED HR OGDCL honored the Event as Chief Guest(s). Contests like message-oriented competitions, Speech on Climate Change Effects in Pakistan, HSE Quiz, Poems Competition, Cartoon Competition, Crosswords, HSE Poster & Slogan Competition, HHP Presentation, etc. were held. The basic purpose of the event was to instill & reinforce positive behavior-based awareness plus motivation amongst the participants.



HOD-HSEQ conferring Shied to
Mr. Shahzad Safdar, ED HR/ Admin



HOD-HSEQ conferring Shied to
Mr. Asif Shuja Khan, Ex-DG Pak EPA



HOD-HSEQ conferring Shied to
Dr. Afzal, Director NIBGE

PROGRAM

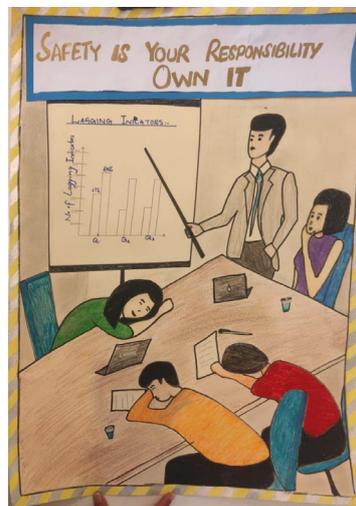
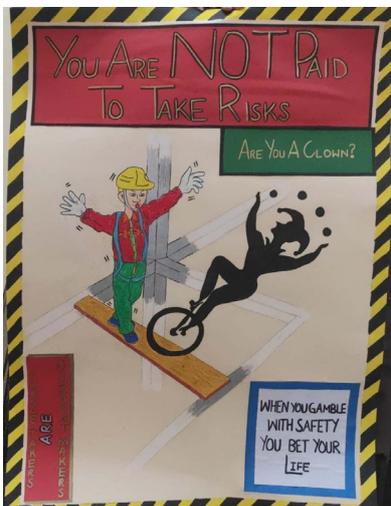
TILAVAT E QURAN		1000 – 1005 hrs.
Inaugural Speech by Chief Guest	MD/ CEO/ ED HR	1005 – 1010 hrs.
Movie Clip on Climate Change Effects in Pakistan	HSEQ Rep.	1010 – 1030 hrs.
HSE Quiz (Twenty Winners)	Open Forum	1030 – 1040 hrs.
A Funny Poem on HSE	HSEQ Rep.	1040 – 1045 hrs.
Crossword Competition (First Three Winners)	Open Forum	1045 – 1100 hrs.
TEA/ REFRESHMENTS		1100 – 1115 hrs.
Hazard Hunting Competition (from Pictures)	Open Forum	1115 – 1125 hrs.
HHP Presentation (Three Best Hazards)	HSEQ Reps.	1125 – 1135 hrs.
HSE Poster & Slogan Competition (Best Poster Wins)	HSEQ Reps.	1135 – 1150 hrs.
Role Playing Competition (Best Role Wins)	HSE Team A, B, & C	1150 – 1215 hrs.
Brainstorming Session on HSE Conflict Management	Think Tank/ Open Forum	1215 – 1230 hrs.
Speech – Evolution of HSE Culture in OGDCL	Muhammad Ilyas	1230 – 1235 hrs.
Retirement Shied & Souvenir		1235 – 1240 hrs.
Shields/ Souvenirs Distribution	Guests, Participants	
GROUP PHOTO		1245 hrs.
LUNCH		1300 – 1330 hrs.

Event Special Guests (Think Tank/Judges Panel)

Mr. Asif Shuja Khan, Ex-DG Pakistan EPA
 Mr. Irshad Ramay, Coordinator NCP, Attock Oil Refinery
 Dr. Muhammad Afzal, Director NIBGE, Atomic Energy Commission

Event Management

Mr. Muhammad Mubashbir Abbas, HOD-HSEQ
 Mr. Talat Haider, HOD-OGTI
 Ch. Razzi Murtaza Goheer, Coordinator HSE-Services
 Mr. Abdul Matin Khan, Coordinator HSE-Services
 Ms. Shabana Kouser Malik, Coordinator HSE-Admin/OH



HSEQ NEWSLETTER



**AN AWARENESS SESSION ON
A HEALTHY LIFESTYLE TO REDUCE
CORONARY RISK FACTORS
FOR FEMALE OCCUPANTS**



Coronary and Periphery Artery Disease (CAD & PAD) is a common heart condition. The major blood vessels that supply the heart/ coronary arteries struggle to send enough blood, oxygen and nutrients to the heart muscle and lower part of the body. Cholesterol deposits (plaques) in the heart and leg arteries and inflammation are usually the cause of this disease. CAD/ PAD is one of the leading causes of death in the world. Traditional risk factors such as family history, hypertension, hypercholesterolemia, diabetes mellitus and smoking account for the entire risk for incident coronary events. Several other potential risk factors (such as age, sex, unhealthy lifestyle, stress, smoking and use of alcohol etc.) have also been identified in an effort to improve risk assessment for CAD/ PAD. However, healthy lifestyle habits used to help treat CAD/ PAD can help prevent it to keep the arteries strong and clear of plaque. Keeping in view the above, HSEQ Department in consultation with Medical Services Department scheduled a 01-day training session on the subject matter as Batch-1 for female occupants of OGDCL House on Jan 03, 2023. Dr. Haroon Ali (MBBS) delivered the subject session at Main Conference Hall, Ground Floor. All female occupants attended the training with keen interest.

IS THERE A DIFFERENCE BETWEEN PAD AND CAD?

Peripheral Artery Disease is similar to Coronary Artery Disease, both caused by fatty deposits in the wall of the arteries (atherosclerosis). While CAD is in the heart and PAD is usually in the legs., their major risk factors are the same. Family history, age, smoking, high cholesterol, diabetes, and obesity are the top risks.

<p>CAD Coronary Artery Disease</p> <ul style="list-style-type: none"> • Most common heart disease • Affects 8.8 million deaths worldwide • In the U.S., up to 1/4 of middle-aged men and 1/3 of women are at risk of developing CAD in their lifetime • According to the American Heart Association, CAD is the single leading cause of death in America today. 		<p>PAD Peripheral Artery Disease</p> <ul style="list-style-type: none"> • Common circulatory problem • Affects 202 million people worldwide • Smoking increases the risk for PAD by 400% and brings on PAD symptoms almost 10 years earlier. • The National Institutes of Health estimates that a person with PAD has a six to seven times higher risk of coronary artery disease
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An Awareness Session on

Building Fire Safety

With Respect To Building Code of Pakistan-Fire Safety Provisions-2016



FAREWELL

Mr. Muhammad Iyas

The hardest part of any relationship is when it is time to say goodbye. As much as we might like things to stay the same, change is an inevitable part of life. On the eve of retirement (March 22, 2023), Mr. Muhammad Iyas was invited to share his experience and cherished thoughts on the evolution of HSE culture in OGDCL. HSEQ Team wished him all the best for the post retirement era and paid him tribute for his commendable service, positive attitude, cooperation, sense of responsibility, integrity and ready wit. Mr. Muhammad Iyas joined OGDCL in 1996 and remained posted for 27 years in Qadirpur Gas Processing Plant (which is a record in itself). He held BTech Degree in Chemical Engineering. Mr. Muhammad Mubashir Abbas, HOD-HSEQ presented him a shield along with a souvenir package as a gift.





OIL & GAS TRAINING INSTITUTE

Process Safety Management



January 23-25, 2023



A comprehensive Process Safety Management Foundation Course was conducted at OGTI January 23-25, 2023. Saghar Mehboob, HSEQ Rep. Nashpa, was the Course Facilitator. The course was based on OSHA's PSM Elements and DuPont's PSRM Model. In the course, participants learned a) how to identify process safety and major accident hazards in facilities and to assess their risks and define critical controls (barriers); b) understand the concepts of static and dynamic barrier management, use of barrier management to analyze process safety and root cause incident investigation; c) characteristics of different types of barriers: hardware (plant), human (people) and organizational (process); d) managing process safety risks, by providing governance and structure in terms of showing commitment of the organization to process safety, understanding hazards & their associated risk, managing risk in operations, maintenance & learning from incidents; and e) good-industry practices related to the individual PSM elements. This standardized course was meant for those responsible for implementing process safety management in their domains like Area & Plant Managers, HODs (Operations & Maintenance), Senior Engineers (e.g. Design, Reliability & Inspection). The program was based on a mix of interactive lectures, breakout sessions and worked cases. Delegates from various fields/ plants participated in the training. Participants were extremely keen to have learned the process safety fundamentals especially the very vibrant and energetic team of process engineers.

Tomorrow is the reward for working safely today





OIL & GAS TRAINING INSTITUTE

Enterprise Risk & Crisis Management

By Mr. Naeem Ahmad Subhani

February 14-15, 2023

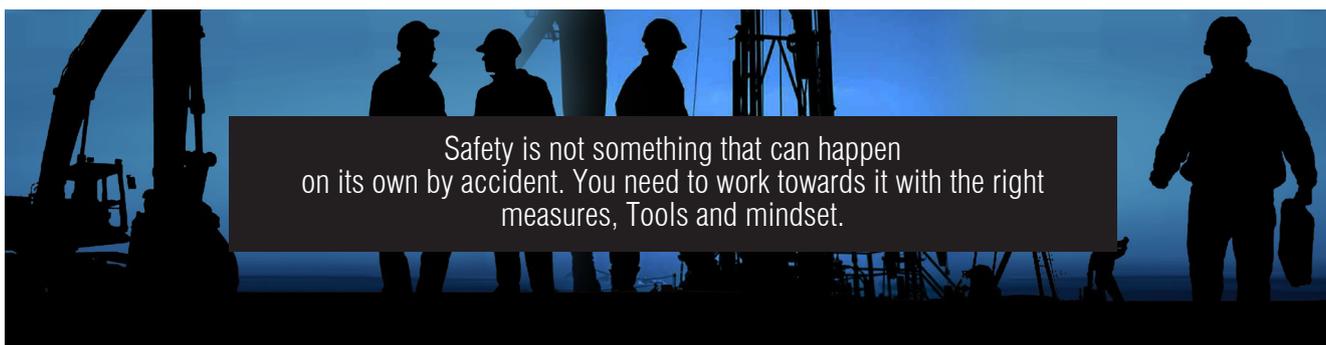


Corporate Risk Management Team (C-RMT) and Emergency Management Team (EMT) are teams that are responsible-entities within OGDCL for managing risks & crisis situations. However, there has been considerable difference in the working culture between the public sector and private sector organizations as far as true implementation of these roles is concerned.

As per guidance of Board's RMC and MD/ CEO, HSEQ Department was assigned to bridge this gap through arranging awareness sessions for the top tier Management; HSEQ Department, subsequently, arranged a WORKSHOP on February 14-15, 2023 at OGTI, followed by a brainstorming session with the key objectives as mentioned below:

- To harmonize understanding levels amongst Corporate Risk Management Team (RMT) to map Operational Risks with Strategic & External Risks for company's business continuity and growth;
- To enable the pragmatic roles of Emergency Management Team (EMT) during emergencies for business continuity and demonstrate preparedness level through an EMT-LMT Interactive Emergency Drill (Terrorist Ambush Attack On Pick And Drop Convoy, Seismic Party # 2)
- To learn devising a purposeful Risk Dashboard to be presentable to Board's Risk Management Committee (RMC) along with an Action Plan/ Roadmap for company's growth through risk aversion/ minimization strategies

Mr. Naeem Ahmed Subhani, Course Facilitator, ended the Workshop with a note of thanks after bestowing Certificates to the participants.



Safety is not something that can happen on its own by accident. You need to work towards it with the right measures, Tools and mindset.

QADIRPUR GAS FIELD CELEBRATED ANNUAL HSE EVENT 2023

Annual HSE event was celebrated at Qadirpur Gas Field during March 2023 with the following main goals:

- Enhance HSE awareness
- Team building
- Promote healthy activities i-e games and sports
- Recognize the efforts of different sections and individuals to enhance HSE culture at QGF
- Encourage participation in HSE activities at all levels within field.

To achieve the desired goal number of activities planned and executed in the event with commitment and involvement of field management and maximum number of employees. A combination of field staff and officers were introduced in all teams with the aim to build a better teamwork towards success. The HSE Event 2023 activities were basically divided into various categories to encompass all aspects including: -

- Sports gala
- HSE Awareness Walk
- Award and recognition to best performers (at section level and individual level)
- Firefighting and first aid competition between the ERT (members)
- Display and demonstration of HSE Equipment
- Quiz competition to encourage field staff to read and learn about HSE policies and procedures
- Hazard recognition competition
- Annual HSE performance award to best performer section in terms of HSE compliance
- Prize distribution



HSEQ NEWSLETTER





OIL & GAS TRAINING INSTITUTE

HSE Laws & Regulations for Oil & Gas E&P Sector



March 28-29, 2023



HSE Department arranged a training session in OGTI from March 28 to 29, 2023 on HSE Laws and Regulations For Oil & Gas E&P Sector. HSE Regulatory Framework includes local as well as national requirements, rules, standards/ guidelines related to environment, occupational health & safety. The main components of oil and gas e&p sector related laws & regulations include Directorate General Petroleum Concession (DGPC) Guidelines, Oil & Gas Safety Regulations (Mines Act), IEE/EIA Regulations (Pakistan Environmental Protection Act), National Environmental Quality Standards [NEQS] Rules [Pakistan Environment Act], Wildlife Protection Ordinance [Federal/ Provincial], Explosives Rules and Pakistan Nuclear Regulatory Authority (PNRA) Regulatory Guides. Muhammad Sameem Hussain Qaiser, Senior HSEQ Officer, conducted the session; HSEQ professionals from various fields participated in the session.



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COMPLIANCE OF SAFETY PROTOCOLS RETROFITTING OF VINTAGE LIFTING CRANES

Mechanical cranes held by Logistics Department were in deteriorated condition and being used in the hazardous environment for the last 35 years. During the 3rd Party Inspection, these mechanical cranes were declared unfit/ not safe for operation. Logistic Department by taking initiative, after carrying out risk assessment, stopped the operation of these cranes as the risk rated intolerable and integrity found low due to posing significant hazards to the humans/ material). The process for complete refurbishment of 4 x cranes out of these was planned. Logistic Department refurbished 2 x cranes with installation of new electronic SLI (Safe Load Index System) utilizing indigenous resources with an expenditure of PKR 2 million per crane only. After refurbishment work, these 2 x cranes are now being checked by the 3rd Party Assessors to evaluate/ confirm their fitness for operation



BEFORE

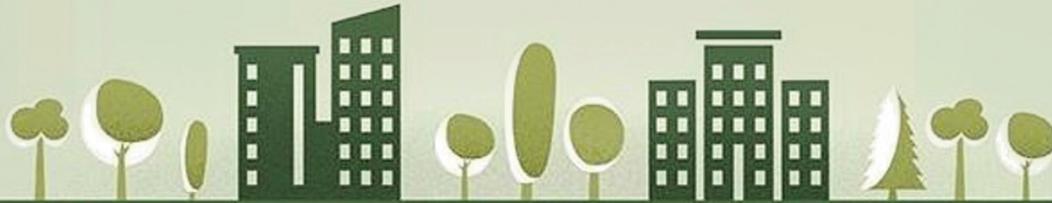


AFTER

*The Safe Way is
the Only Way*



HSEQ NEWSLETTER



BENEFITS OF URBAN TREES



Strategic placement of trees in urban areas can **cool the air** by between 2 °C and 8 °C.



Large urban trees are excellent **filters** for urban pollutants and fine particulates.



Mature trees **regulate water flow** and **improve water quality**.

A tree can absorb up to 150 kg of CO₂ per year, sequester carbon and consequently **mitigate climate change**.



Wood can be used for **cooking and heating**.



Trees can **provide food**, such as fruits, nuts and leaves.

Spending time near trees **improves physical and mental health** by increasing energy level and speed of recovery, while decreasing blood pressure and stress.



Trees properly placed around buildings can **reduce air conditioning needs** by 30% and **save energy used for heating** by 20-50%.

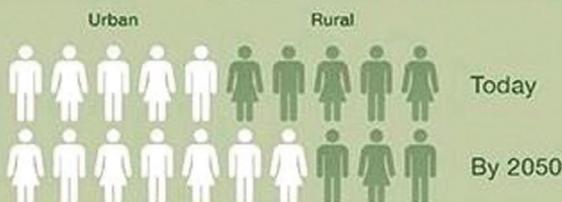


Trees provide habitat, food and protection to plants and animals, **increasing urban biodiversity**.



Landscaping, especially with trees, can **increase property values** by 20%.

World urban population is growing fast...



...planting trees today is essential for future generations!

SAFETY OUT OF FOCUS

The Phillips 66 Explosion:

The Rise of Process Safety Management in the Petrochemical Industry

OSHA was founded in 1970, in an effort to promote and enforce workplace safety, and their stated mission is to “assure safe and healthful working conditions for working men and women”. However, there was considerable controversy during its early years as it spottily began enforcing, what was perceived as, cumbersome and expensive regulations. Notable events in the 1980s, such as the Bhopal and West Virginia Union Carbide industrial accidents, raised OSHA’s awareness that fundamental changes were needed to develop more effective safety management systems. This awareness led to the rise of what is now known as Process Safety Management (PSM). This discipline covers how industries safely manage highly hazardous chemicals. OSHA’s PSM standard lays forth multiple requirements such as employee and contractor training, use of hot work permits, and emergency planning. Unfortunately, PSM was still a work-in-progress during the fall of 1989.

What When	The Issue(s)	Explosions at Phillips 66’s Houston Chem Complex	
	Date	October 23, 1989	
	Time	1:00 PM	
Where	Differences	Occurred during maintenance	
	Physical Location	Near the Houston Ship Channel in Texas	
	Process Location	HDPE Plant	
	Work Process	Maintenance work on reactor legs	
Impact to the Goals	Safety	23 fatalities; 314 injuries	
	Environmental	Explosion debris spread over 6 mi radius	
	Compliance	Fine	\$4,000,000
	Production-Schedule	Business disruption loss	\$700,000,000
	Materials, Labor	Damage to plant & facilities	\$715,000,000
		This incident	\$1,419,000,000
	Frequency	Once every ten years (Average)	
	Annual Total	\$141,900,000	

On October 23, 1989, the Phillips 66 Petroleum Chemical Plant near Pasadena, Texas, then producing approximately 1.5 billion of high-density polyethylene (HDPE) plastic each year, suffered a massive series of explosions. 23 died and hundreds were injured in an explosion that measured at least 3.5 on the Richter scale and destroyed much of the plant. Many of the deficiencies identified at the Phillips 66 plant were in violation of OSHA’s PSM directives; directives which had been announced, but had not yet been formally enacted.

Phillips 66 Explosion Cause ((RCA) Map revealed that how a series of procedural errors occurred that fateful day. Contract workers were busy performing a routine maintenance task of clearing out a blockage in a collection tank for the plastic pellets produced by the reactor. The collection tank was removed, and work commenced that morning. However, at some point just after lunch, the valve to the reactor system was opened, releasing an enormous gas cloud which ignited less than two minutes later.

The subsequent OSHA investigation highlighted numerous errors. First, the air hoses used to activate the valve pneumatically were left near the maintenance site. When the air hoses were connected backwards, this automatically opened the valve, releasing a huge volatile gas cloud into the atmosphere. It is unknown why the air hoses were reconnected at all. Second, a lockout device had been installed by Phillips personnel the previous evening, but was removed at some point prior to the accident. A lockout device physically prevents someone from opening a valve. Finally, in accordance with local plant policy but not Phillips policy, no blind flange insert was used as a backup. The insert would have stopped the flow of gas into the atmosphere if the valve had been opened. Had any of those three procedures been executed properly, there would not have been an explosion that day. According to the investigation, contract workers had not been adequately trained in the procedures they were charged with performing

Additionally, there were significant design flaws in the reactor/collector system. The valve system used had no mechanical redundancies; the single Demco ball valve was the sole cut-off point between the highly-pressurized reactor system and the atmosphere. Additionally, there was a significant design flaw with the air hoses, as alluded to earlier. Not only were the air hoses connected at the wrong time, but there was no physical barrier to prevent them from being connected the wrong way. This is the same reason North American electrical plugs are mechanically keyed and can only be plugged in one way. It can be bad news if connected incorrectly! Connecting the air hoses backward meant the valve went full open, instead of closed. Both of these design flaws contributed to the gas release, and again, this incident would not have occurred if either flaw was absent.

The Phillips 66 explosion was a tragedy that could have been avoided. The industrial safety standards that OSHA is charged with enforcing aim to prevent future tragedies like this one. While a gradual safety-oriented transformation has come with some pain and a price tag, few may argue that such standards are unnecessary; but the industrial workers deserve to work in an environment where risk to their health has been reduced to the most practical level.