2015/2016 SUSTAINABILITY REPORT





Qatar Chemical Company Ltd.





QATAR CHEMICAL COMPANY LTD.

# 2015/2016 SUSTAINABILITY REPORT

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Welcome to our sustainability report for the years 2015 and 2016. This report covers the performance of all three Q-Chem operated facilities:

- 1. Qatar Chemical Company Ltd. (Q-Chem), located in Mesaieed Industrial City (MIC)
- 2. Qatar Chemical Company II Ltd. (Q-Chem II), located in Mesaieed Industrial City (MIC)
- 3. Ras Laffan Olefins Company Ltd. (RLOC), located in Ras Laffan Industrial City (RLC)

Activities of the three operational facilities are presented in aggregate form under "Q-Chem companies", while the performance of each facility is presented separately where applicable.

This is our third publicly available sustainability report. It is directed to all our stakeholders and the public and aims to share the companies' performance in the areas of health, safety, environment, product quality and stewardship, human capital management, outreach, and economic performance. Please refer to the Appendix I for the acronyms list.

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Our Public Relations and Communications team will be delighted to address and respond to your comments, concerns or questions in relation to the information presented in this report.

For any other enquiries, you can reach us at the address below:

Amwal Tower, Omar Al Mukhtar St,

Al Dafna, Doha, Qatar

Qatar Chemical Co. Ltd. (Q-Chem)

P.O. Box 24646

Phone: (+974) 4484-7111

Fax: (+974) 4483-7379



# **MESSAGE**FROM THE **CHAIRMAN**



I am pleased to present to you Q-Chem's third Sustainability Report, covering the years 2015-2016. This report explains our sustainability approach and reflects the challenges, achievements, and opportunities we encounter as we transition to our next phase of sustainable growth.

The past two years marked important steps in sustainable development on a national as well as on an international level. The Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development was adopted by world leaders in September 2015 and officially came into force on the 1st of January 2016. Few months later, 195 countries, including Qatar, signed the Paris Agreement to combat climate change, and the agreement went into effect on 4th November 2016. Both of these marked major milestones in international cooperation on sustainable development. At the same time, Gulf region countries have continued to pursue their national development agendas. The Qatari Government is driving the implementation of its ambitious Qatar National Vision 2030 (QNV), in which the diversification is key to further sustainable economic development in the region. Therefore, expanding into new strategic sectors continues to be of great importance.

Q-Chem is keen to play an active role in this development; we trust that our excellent reputation and strategic approach towards sustainability will ensure future success. We are proud that our efforts are recognized by regional and industry leaders. We received the second prize of the 2014 Environmental Management Award of the Arab Administrative Development Organization (ARADO), an affiliate of the League of Arab States, and the prestigious President's Award for Operational Excellence in the Large Petrochemical Manufacturing Facility category of the years 2015 and 2016 Chevron Phillips Chemical award program. Q-Chem was the

only facility in the Chevron Phillips Chemical family to receive this award twice in a row. This inspires us to continue to implement innovative measures that minimize the impact of our operations on the environment and society at large.

I am pleased to highlight here one of the many successful milestones developed and implemented over the past two years — our Enterprise Risk Management (ERM) system. The program was established in 2015 to help us effectively identify, evaluate and manage risks across all business areas. We will continue to focus our future efforts on prevention and process safety, as well as maintaining international best practice standards and compliance by adhering to best management standards such as OHSAS, ISO and the Responsible Care®.

We are proud of our progress over the past two years in line with Q-Chem's own strategies and in support of sustainable development goals both nationally and globally.

#### Abdulrahman Al-Suwaidi

Chairman of the Board of Directors
Q-Chem Companies

10 | 11

# **MESSAGE** FROM THE **CEO**



Our products are reliable building blocks for other industries, thus supporting the economic growth for many sectors in Qatar and beyond. Quality and safety, alongside high global demand, are the key in responsibility, drive positive changes, and realize drivers of our success. Our shareholders continue to have confidence in our safety, environmental and financial performance and encourage our continuous growth. However, our growth strategy will always go hand in hand with our commitments to external stakeholders. create more value for all stakeholders and advance our environmental performance.

We are keen to uphold our reputation for high standards in safety and quality. After all, outstanding safety is and will always be critical to what we do. Thanks to our rigorous Operational Excellence Management System, we have now set a new global standard, with only 0.04 Recordable Injury Rate (RIR) in 2015, and 0.09 RIR in 2016. According to this measure which is adopted by the US Occupational Safety Health Administration, Q-Chem is ranked in the top 10% of all chemical companies in terms of safety performance Nonetheless, we continue to strive for zero RIR both for our employees and contractors.

The past two years have demonstrated the best environmental performance by Q-Chem to date, with the lowest number of environmental events in our history and with the highest rate of improvement. Our hard work in managing environmental performance with various programs and management instruments has borne it fruits.

Q-Chem is a leading petrochemicals producer. We recognize that the keystone to achieving ambitious goals is the dedication and motivation of our people. Hence, we continue to engage, empower and develop our employees and contractors to share the benefits of doing so. We have encouraged our employees to take part in social activities, enhanced our corporate social responsibility outcomes, and increased company engagements with internal and

> I invite you to read through this report and become familiar with our activities and achievements. We value your feedback and insights, which enable us to meet our commitment to creating value for all stakeholders in a transparent and responsible way.

Nasser J. Al-Kuwari Vice Chairman & CEO Q-Chem Companies

# ABOUT **US**



established in 1997 to produce high-quality petrochemical products, and to add value to Qatar's raw material-based economy. Following the excellent performance of the first Q-Chem plant, a second adjacent plant was constructed in Mesaieed Industrial City (MIC). In 2010, Ras Laffan Olefins Company Ltd. (RLOC), a world-class ethylene cracker, was established in Ras Laffan Industrial City by Q-Chem and its partners. Q-Chem's products, which are sold and distributed to customers through Muntajat<sup>1</sup> in more than 120 countries, include high-density and medium-density polyethylene

Qatar Chemical Company Ltd. (Q-Chem) was (HDPE, MDPE), normal alpha olefins (NAO), 1-Hexene,

Q-Chem companies have established a reputation for high safety and quality standards, which we continually strive to improve. As Q-Chem continues to grow and increase production capacity to achieve its vision of becoming a premier producer of petrochemicals, we also remain focused on enhancing Qatar's economy, society, and environment in line with the Qatar National Vision (QNV2030) and the National Development Strategy (NDS2011-2016).



# Our Vision, Mission and Values

#### Vision

• To be the premier producer of petrochemicals in our respective markets

#### Mission

 To meet and exceed the expectations of our customers, shareholders, employees, and community

#### Goals

- Operational excellence
- Customer satisfaction
- Employee commitment
- · Community partnership
- Superior financial return

#### **Values**

#### We believe in...

- Protecting the safety of people, process assets, and the environment
- Employing and developing Qatari nationals
- Respecting diversity and cultural differences
- · Continuously improving our employees> skills, processes, and products
- Communicating well, empowering and engaging individuals and teams, and recognizing superior performance
- · Fostering a fair, interesting, enjoyable, and rewarding workplace

#### **Principles**

- Work safely or not at all
- There's always time to do it right
- If it's worth doing, do it better

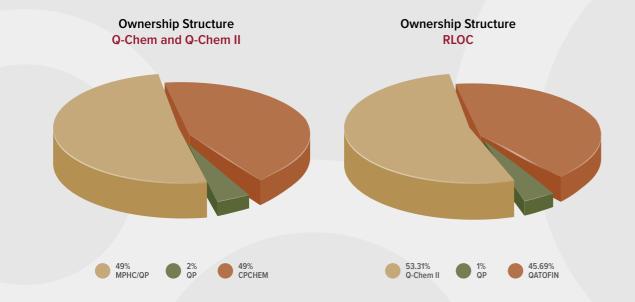
<sup>&</sup>lt;sup>1</sup> Qatar Chemical and Petrochemical Marketing and Distribution Company <sup>2</sup> Mesaieed Petrochemical Holding Company Q.S.C. (MPHC)

#### 2015/2016 **REPORT**

# **Ownership Structure**

structured to support the focus of our operations: (MPHC), which is majority owned by Qatar Petroleum to transform Qatar's natural gas wealth into high- (QP), Chevron Phillips Chemical International Qatar value petrochemicals and derivatives for sale in Holdings LLC (CPChem) as well as Qatar Petroleum global markets. Q-Chem's shareholders include (QP) and Qatofin as illustrated below:

Q-Chem and its associated companies are Mesaieed Petrochemical Holding Company Q.S.C.





# **Corporate Profile**



#### **Qatar Chemical Company Ltd.** (Q-Chem)

The Q-Chem facility is a worldclass integrated petrochemical plant producing high-density and medium-density polyethylene (HDPE & MDPE), 1-hexene, and other products using state-ofthe-art technology provided by Chevron Philips Chemical, a major integrated producer of chemicals and plastics. The Q-Chem operations started commercial operations in 2004. Located in MIC, the Q-Chem complex has a production capacity of 453,000 metric tons per annum (MTA) of polyethylene and a 1-hexene unit with a production capacity of 47,000 MTA. The complex also consists of a sulfur recovery unit, a Sulfur palletization unit, a water treatment plant, a seawater cooling system, dock facilities, other associated utilities, and administrative buildings.



#### **Qatar Chemical Company II** Ltd. (Q-Chem II)

Constructed adjacent the Q-Chem plant in MIC, the Q-Chem II facility takes advantage of economies of scale to produce 350,000 MTA of HDPE, and the first full-range Normal Alpha Olefins (NAO) unit with a production capacity of 345,000 MTA. The plant began commercial operations in 2010 to meet the increasing demand of customers in Asia, Europe and Africa. The NAO plant produces a full range of alpha olefins, including butene, hexene, octene, decene, and higher molecular weight olefins



#### Ras Laffan Olefins Company Ltd. (RLOC)

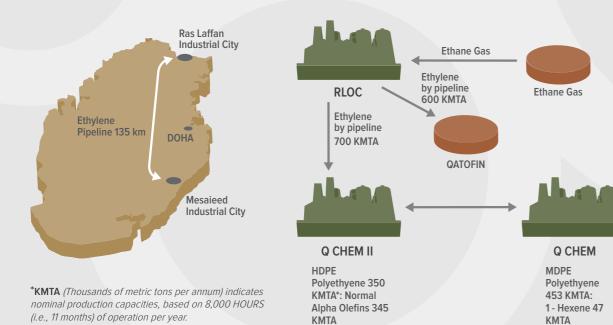
Ras Laffan Olefins Company Limited (RLOC) is owned by Q-Chem II - 53.31%, Qatofin Company Limited Q.S.C. (Qatofin) – 45.69%, and Qatar Petroleum – 1%.

RLOC constructed a world-class 1.3 million MTA ethylene cracker plant in Ras Laffan Industrial City, which was inaugurated in 2010. The cracker is operated by Q-Chem II on behalf of RLOC partners. Ethylene produced by RLOC is transferred from Ras Laffan to Q-Chem II and Qatofin derivatives units in Mesaieed via a 135 km pipeline. In Mesaieed, 700,000 MTA of ethylene is allocated to Q-Chem II and 600,000 MTA to Qatofin.



# **Our Supply Chain**

The diagram below illustrates the supply chain processes and resulting products of the Q-Chem companies.

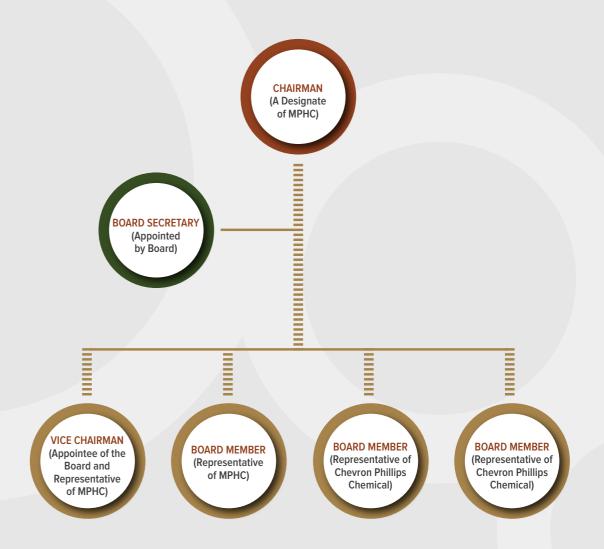


# **Governance Structure**

The Board of Directors is our highest governing relevant concerns. Different committees provide high meet periodically to review performance and address to regular internal and third-party audits.

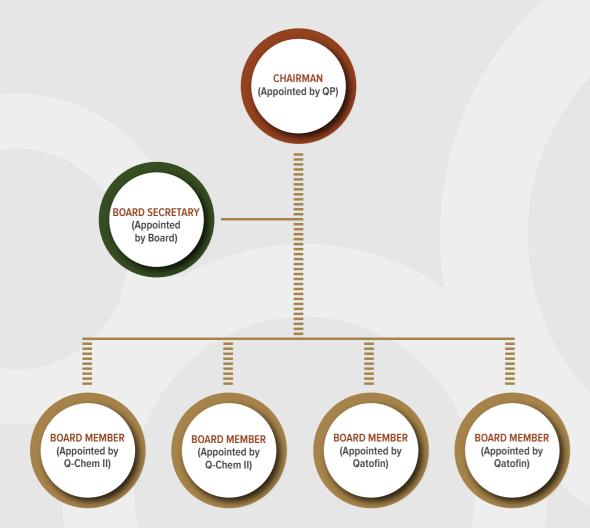
body, providing oversight and decision-making for all levels of accountability and integrity in support of the company operations. Board members are selected Board. In accordance with industry best practices, by and represent our shareholders. Board members our governance bodies and operations are subject

# Q-Chem and Q-Chem II Structure of the Boards of Directors<sup>2</sup>



<sup>2</sup> Mesaieed Petrochemical Holding Company Q.S.C. (MPHC)

#### RLOC Structure of the Board of Directors<sup>3</sup>



<sup>3</sup> QAPCO: Qatar Petrochemical Co.



# Sustainability at Q-Chem

of the State of Qatar, laid out an ambitious plan in and economic performance of the sector and 2008 for sustainability, as expressed in the Qatar National Vision 2030. The Vision is supported by a 5-year National Development Strategy establishing concrete targets and goals on the way to reaching a sustainable economy.

The energy and industry sector of Qatar is one of the pillars of Qatar's economy, with petrochemicals playing an important role in the policy of economic diversification. Sustainable performance in the energy and industry sector is essential to the development of the national economy. Q-Chem is committed to continuously improve its own

H.H. Sheikh Hamad bin Khalifa Al Thani, Father Emir operations to boost the environmental, social, our country.

> At Q-Chem, we hold ourselves accountable to our stakeholders and our nation and we are committed to conducting our operations in a sustainable and responsible manner. Sustainability is at the core of the company's vision, mission, goals, and values and is fully integrated into our long-term business strategy. By engaging our stakeholders, assessing the issues that are the most material to the business, and keeping our Operational Excellence Management System at the heart of all that we do, we have built sustainability into our culture.

# Valuing our Stakeholders

will generate an ever-increasing value for a proactive stakeholder engagement approach. As a responsible organization, we aim to facilitate greater transparency and constructive engagement with internal and external stakeholders.

We are confident that engaging stakeholders. To achieve this, we have established various avenues that allow us to collect valuable inputs our products and contribute to the prosperity related to our operations. We aim to understand of the community. Therefore, we have adopted stakeholder expectations and measure the level of their satisfaction with our activities, processes and products as a means for continuous improvement. The table below shows our most important stakeholder groups, their main interests and respective channels of engagement.

#### Landscaping in progress





| STAKEHOLDER GROUP   | MAIN INTERESTS  | ENGAGEMENT CHANNELS   |
|---|---|---|
| National Authorities: Government of Qatar, Qatar Energy and Industry Sector   | Compliance with regulations, economic and social development, national growth and employment.   | Board of Directors, public events<br>and media, national campaigns,<br>and outreach programs.   |
| Employees: Shift workers, managers, and all other employees   | Safety, compensation, wellness, community engagement.   | Daily operations, periodical performance reviews, feedback through the management chain, social events and workplace campaigns and programs.                                    |
| Regulatory Agencies: Qatar Ministry of Municipality and Environment, Qatar Petroleum, Economic Regulatory Agency, Industrial Cities Authorities, Responsible Care® initiative | Compliance with laws, participation in industry initiatives, reporting and monitoring of performance.   | Annually/ quarterly/ monthly performance reporting, Board of Directors, and participation in events and programs.   |
| Customers: Muntajat QPSPP (Qatar Petroleum for sale of Petroleum Products) Dolphin Energy Qatofin Qatar Acid  | Reliable and timely delivery of products, product quality, bagging and shipment safety and security.  | Sales contracts, direct marketing, frequent meetings with customers and agents and customer feedback surveys.   |
| Suppliers:  Manufacturers of raw materials  | Cost and sales, product quality, delivery and inventory control.  | Supplier audit questionnaire, procurement and finance department, and invoicing.  |
| Contractors: Catering, maintenance, and service providers   | Payment of invoices, quality services, manpower / equipment requirements, safety and security, and cost.  | Tendering contracts, safety orientation, contractor audit questionnaire, quarterly contractors' evaluations, on-site contractor engagement, feedback tracking, and training.    |
| Shareholders: Chevron Phillips Chemical International Qatar Holdings LLC, Mesaieed Petrochemical Holding Company (MPHC), Qatofin, and Qatar Petroleum (QP)                    | Safety, economic return on investment, reliable operations, and enterprise risk management. Disclosure of price-sensitive and company confidential information. | Weekly HSE performance reporting,<br>Periodic Board of Directors reports,<br>monthly production and financial<br>performance reporting, and annual<br>sustainability reporting. |
| Lenders and Insurers  | Timely full payment of invoices, reliable operations, and full compliance with regulations.   | Lenders audit questionnaire, production and financial performance reporting, and invoicing.   |
| Communities:  Mesaieed, Doha, Ras Laffan, Qatari society  | Safety, infrastructure development, environmental programs, education, and employment.  | Community outreach events, employee programs, grievance hotline, recruitment campaigns, collaboration with educational institutes, and press releases.                          |

# **Materiality Assessment**

Q-Chem's materiality assessment identifies and of greatest importance to our business and our most affect the decisions of our stakeholders in relation to our company.

We revisit our materiality assessments on an annual basis. This helps us to identify the issues that are

assesses our most important economic, social and stakeholders alike, and to detect areas where environmental impacts, as well as those issues that particular attention is required by our management.

> The table below identifies the range of material issues confronting Q-Chem companies, ranked by their significance to our business and stakeholders.

| Rank | Material Aspect                                 | National Authorities | Employees | Regulatory Agencies | Customers | Suppliers | Contractors | Shareholders | Lenders/Insurers | Communities |
|------|---|----------------------|-----------|---------------------|-----------|-----------|-------------|--------------|------------------|-------------|
| 1    | Employees' and Contractors' Health and Safety   | 0                    | •         | 0                   | 0         |           | 0           | •            | •                | 0           |
| 2    | Process Safety                                  | 0                    | •         | 0                   | 0         |           | 0           | •            | •                |             |
| 3    | Qatarization                                    | 0                    | •         |                     |           |           |             | •            |                  | 0           |
| 4    | Compliance with Regulation                      | 0                    | •         | 0                   | 0         | 0         | 0           | •            | •                | 0           |
| 5    | Operational Excellence                          | 0                    | •         | 0                   | 0         | 0         | 0           | •            | •                | 0           |
| 6    | General Security                                | 0                    | •         | 0                   | 0         | 0         |             | •            | •                |             |
| 7    | Customer Satisfaction                           | 0                    | •         |                     | 0         | 0         | 0           | •            | •                |             |
| 8    | Manpower Training and Development               |                      | •         | 0                   |           |           | •           | •            |                  | 0           |
| 9    | Product Stewardship                             | 0                    |           | 0                   | 0         |           |             | •            | •                |             |
| 10   | Resources Conservation and Pollution Prevention | 0                    | •         | 0                   |           |           |             | •            | •                | 0           |
| 11   | Indirect Economic Impact                        |                      |           |                     |           |           |             | •            | •                |             |
| 12   | Corporate Governance                            | 0                    | 0         | 0                   | •         | 0         | •           | •            | •                | 0           |
| 13   | Social Enrichment                               |                      |           |                     | 0         |           |             | •            |                  | 0           |
| 14   | Economic Performance                            | 0                    |           | 0                   | 0         | 0         |             | •            | •                |             |

• aspect within Q-Chem boundaries O aspect outside Q-Chem boundaries

| П                                   | 12 Corporate Governance                    | 4 Compliance                      | with Regulation                               |  |  |  |  |
|-------------------------------------|--|-----------------------------------|---|--|--|--|--|
| ision                               | 7 Customer Satisfaction                    | Manpower Training                 | 5 Operational Excellence                      |  |  |  |  |
| Influence on stakeholders' decision | 14 Economic Performances                   | Manpower Training and Development | HIGH  |  |  |  |  |
| holde                               |  | MIDDLE                            | SIGNIFICANCE                                  |  |  |  |  |
| stake                               | 13 Social Enrichment                       | GNIFICANCE                        | Employees' and Contractors' Health and Safety |  |  |  |  |
| ce on                               | LOWER                                      | Product Stewardship               | Health and Salety                             |  |  |  |  |
| ıfluen                              | SIGNIFICANCE                               | 10 Resources Conservation         | 2 Process Safety                              |  |  |  |  |
| =                                   | 11 Indirect Economic Impact                | IU and Pollution Reservation      | 3 Qatarization                                |  |  |  |  |
|                                     | Significance of impact from material topic |                                   |   |  |  |  |  |
| ■ Env                               | vironmental Social Economic                |                                   |   |  |  |  |  |



# **Summary of Sustainability Performance**

Continuous monitoring is crucial to improving performance. The table below summarizes our sustainability performance and plans, categorized by the sustainability focus areas and the material aspects.

| Material aspects                  | Key Performance<br>Indicator                                | Performance in 2015   | Performance in 2016  | Plans in place  |
|-----------------------------------|---|---|--|---|
| Operational Excelle               | nce   |   |  |   |
|                                   | Compliance with<br>Qatar national laws                      | Full compliance<br>with Qatar<br>national laws                                      | Full compliance<br>with Qatar national<br>laws   | Maintain full compliance with applicable Qatar national laws  |
| Compliance with Regulations       | Safety management compliance                                | API/PSI metrics<br>in place 9 years<br>in a row without<br>heat- caused<br>accident | OHSAS 18001:2007<br>certification for<br>all manufacturing<br>sites  | Maintaining OHSAS compliance in accordance with OSHA guidelines   |
|                                   | Energy, carbon<br>management &<br>compliance                | CTO compliant,<br>flaring and GHG<br>are audited by<br>3rd party                    | Preparations<br>ongoing for ISO<br>50001 Energy<br>Management<br>certification in 2018   | 1) CTO compliance 2) LLA compliance 3) GHG accounting & reporting 4) Compliance with MIC/RLC and MME environmental laws and regulations     |
| Operational<br>Excellence         | Quality<br>management                                       | Internal quality<br>management<br>system (OE) and<br>ISO 9001:2008                  | Internal quality<br>management<br>system (OE) and<br>ISO 9001:2008 and<br>ISO 14001:2015 and<br>RC 14001:2013 and<br>OHSAS: 18001:2007 | Perform internal and 3rd party<br>audits on an annual basis.<br>Preparations ongoing to get ISO<br>9001:2015.                               |
| Health and Safety                 |   |   |  |   |
| i de                              | Fatalities<br>(employee and<br>contractor)                  | 0   | 0  | Maintain zero fatalities for employees and contractors  |
| Employees' and                    | Lost Time Injuries<br>(employee and<br>contractor)          | 2   | 2  | Maintain and reduce injury rates for employees and contractors  |
| Contractors' Health<br>and Safety | Total Recordable<br>Injuries (employee<br>and contractor)   | 2   | 3  | Maintain and reduce injury rates for employees and contractors  |
|                                   | Heat stress events  | 0   | 0  | Summer of Safety (SOS) Program and zero heat stress cases for 9 years   |
|                                   | Loss of contain-<br>ment events                             | 3   | 2  | Zero events of loss of contain-<br>ment   |
| Process Safety                    | Emergency<br>response drills                                | 41  | 42   | Maintain Q-Safe records with<br>each eligible employee recording<br>at least 2 behavioral observations                                      |
|                                   | Process safety event<br>rate, PSER (per 1 MM<br>work hours) | 0.37  | 0.24   | on an annual basis 2) Coordinate with LDAR program to reduce process safety risk 3) Preparation and associated training for TA 2015 to 2022 |

| Material aspects                                     | Key Performance<br>Indicator   | Performance in 2015  | Performance in 2016                           | Plans in place   |
|--|--|--|---|--|
| Health and Safety (                                  | contd.)  |  |   |  |
| General Security                                     | Total HSE training hours   | 19,583   | 22,670  | Maintain the level of HSE training in accordance with the requirements of Q-Chem HSE standards   |
| Environmental Perf                                   | ormance  |  |   |  |
| <b>(4)</b>   | Environmental<br>events (company<br>and upstream)                                      | 19   | 9   | Achieve zero / near-zero water discharge compliance Integrate SDIR sustainability  |
| Resource<br>Conservation and<br>Pollution Prevention | Reportable spills  | 3  | 1   | performance metrics within com-<br>pany performance management<br>system   |
| Human Capital  |  |  |   |  |
| Manpower Training and Development                    | Total workforce<br>(Consists of<br>Employees,<br>Baseload and<br>Call off contractors) | 1,034  | 1,008   | Fill vacant positions within 6 months' maximum, recruit local talent as a priority, and employ top-qualified foreign specialists where necessary |
|  | Total training hours for employees and contractors                                     | 45,682   | 49,474  | Provide all training required for effective and efficient operations of the Company  |
| Social Enrichment                                    |  |  |   |  |
| 3.6  | Qatarization (%)   | 17.82  | 20.36   | Provide all training required for  |
| Qatarization   | Qatari new hires   | 22   | 199   | effective and efficient operations of the Company  |
| Community  | Community investment   | Main Initiatives in 2015 and 2016:  - Beach Clean-up  - "Tree Week" Campaign  - Sponsoring sport activities  - Sponsorship of university students  - Supporting public initiatives related to environmental protection  - Blood donation |   | Continue to participate in various activities directed at supporting the local community   |
| Economic Performa                                    | ince   |  |   |  |
| Customer<br>Satisfaction                             | Brand and<br>trademark   | Transition from<br>Marlex® to<br>Lotrène®  | Working group<br>established with<br>Muntajat | Support the spread of the high-quality 'Made in Qatar' brand throughout the world  |



| Material aspects    | Key Performance<br>Indicator  | Performance in 2015   | Performance in 2016   | Plans in place  |
|---------------------|---|---|---|---|
| Economic Performa   | nce (contd.)  |   |   |   |
| Product Stewardship | Product<br>responsibility   | - GPCA Responsible Care® initiative - Product stewardship summaries available for download on website       | - GPCA Responsible Care® initiative - Product Stewardship Committee established - Product stewardship summaries available for download on website | Adopt "Product Stewardship" and<br>"Product Supply Chain" concepts<br>per Responsible Care® 14001<br>guidelines and GPCA recommend-<br>ed responsible care codes. |
|                     | Total number of<br>students sponsored<br>(Qatar University,<br>Community<br>College, and<br>abroad) | 13  | 17  | Dedicate a team to follow up on<br>trainees and students studying in<br>Qatar and abroad  |
| Indirect Economic   | Internships and trainees at Q-Chem companies  | 30  | 30  | Intensify recruitment of college graduates  |
| Impact              | Local procurement (%)   | - Purchase of raw materials from local companies: 50% - Services contracts awarded for local companies: 95% | - Purchase of raw materials from local companies: 50% - Services contracts awarded for local companies: 95%                                       | Maintain prioritization of local suppliers  |



# **Memberships in Associations**

City (MIC) Environmental Safety, Emergency Response, and Community Outreach Working Subcommittees

Established jointly by MIC companies to communicate and jointly manage issues of common interest in various industry- and community-related areas.

A joint initiative between QP Industrial Cities Directorate and the industries and other stakeholders in Ras Laffan Industrial City, to promote open communication and exchange of ideas among members and to maintain outreach with neighboring communities on environmental issues and social development.

2006

GPCA supports the GCC region's petrochemical and chemical industry through advocacy, networking and thought leadership for companies to connect, share and advance knowledge, contribute to international dialogue and shape the future of the global petrochemicals industry.

2010 Program (COP)

Established jointly by Ras Laffan Industrial City (RLC) and major industries in RLC to support and build a positive relationship with the nearby communities north of Qatar, the COP offers development and capacity building opportunities and holds educational, environmental and social events.

2012

2005

The EPCA is an international nonprofit association that serves a global network of chemical business members, including producers of petrochemicals, their suppliers, customers and service providers. EPCA provides platforms to meet, exchange ideas, and transfer knowledge and also serves as a think tank for the chemical business community and its stakeholders.

2014

Q-Chem representative chaired between 2014 and 2016 a subcommittee team tasked to create a manual to guide GPCA members on hazardous waste management.

# **Operational Excellence**

Q-Chem companies take pride in striving for Operational Excellence (OE), and in advancing people, assets, customers, communities and the environment. Our philosophy is based on the principles expressed in the OE Policy.

#### Operational Excellence Policy of Q-Chem

- We shall strive each day to conduct our business in a safe, secure, injury-free, and environmentally responsible manner.
- We are committed to complying with all laws and regulations applicable to our facilities and business activities and to complying with all voluntary programs to which we elect to subscribe (Responsible Care®).
- We shall strive to make optimal use of the resources we consume and minimize emissions and waste.
- We shall strive to limit the risks of our products throughout their lifecycle.
- We are committed to reducing risks in our operations to safeguard our employees, contractors, and the communities where we operate and engage in business activities.
- We shall openly communicate our results and welcome the input of our employees and contractors, regulatory agencies, our communities, our customers, and other interested stakeholders.
- · We shall accomplish our goals by integrating safety, security, health, environmental, reliability, and quality into our management processes using our Operational Excellence System (OE).

We shall use OE to: set goals for continual improvement; provide alignment of activities and resources; assess and manage risks; gain stakeholder input; and rigorously audit our performance against operational objectives and compliance requirements.

# **Q-Chem Operational Excellence Management System**

The OE Management System quides us in and security were recognized by the prestigious integrating all sustainability aspects - safety, health, environmental and quality into our daily operations, the Large Petrochemical Manufacturing Facility optimizing resource consumption while minimizing category of the 2015 Chevron Phillips Chemical emissions and waste is our central ambition. We award program. This distinguished award is continuously work to limit all risks related to our presented annually to the "best of the best" products throughout their lifecycle, and eliminate of Chevron Phillips Chemical's facilities and all possible operational risks. Moreover, we are company affiliates. committed to ensuring that our operations and business activities comply with all applicable laws and regulations.



For the second year in a row, Q-Chem efforts in personal safety, process environmental management, product stewardship, reliability

President's Award for Operational Excellence in

Being bestowed with this prestigious award is a real testament to the safety culture of our employees and contractors. We are proud of this significant accomplishment and wish to convey our deepest thanks and appreciation for everyone's effort in making outstanding Operational Excellence performance one of Q-Chem's strongest values. Nasser J. Al-Kuwari, CEO

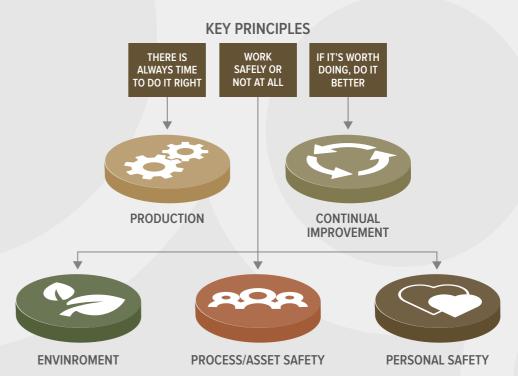
#### **Operations Reliability**

The Q-Chem key principle of reliability is linked water exchangers at RLOC not only helped improve directly to all our operations. It is applied throughout the hierarchy of all company operational priorities, as demonstrated in the diagram, leading to our top goal of continual improvement.

Q-Chem has implemented several projects in the last two years that have optimized production, while improving safety and environmental performance at the same time. For example, upgrading our sea

water management, but also prevented unnecessary shutdowns of the plant due to leaks in the sea water lines. Other projects undertaken with similar benefits for the environment, as well as operational activity, include tackling of emission control, energy efficiency measures, flaring reduction, and increasing efficiency of our production assets.

#### PRIORITY HIERARCHY



#### The key to success lies within its foundation

Qatar Chemical Company Ltd., (Q-Chem)

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# Information Technology (IT)

IT management and security plays an increasingly electronic data management systems to boost of our operational and management processes, and quality products. such as integration of video communication and

important role in ensuring reliability and business efficiency, customized software solutions for better continuity. We dedicate considerable resources to security, as well as data redundancy and recovery continuously improve the automatized functioning systems for data protection, resources conservation,



## **Enterprise Risk Management**

a risk assessment within their scope annually and achieve risk reduction timely.

The Enterprise Risk Management (ERM) process log those into the risk register that is examined by was initiated at Q-Chem in 2015 to establish a the enterprise risk manager. Prioritization framework for integrating risk management into of enterprise risk mitigation efforts helps to corporate governance, values and culture. In 2016, manage the risks that might prevent or delay the first annual identification of enterprise-level the achievement of organizational objectives, risks cycle was carried out. Work groups conduct and manage the resources in best manners to





#### **Certifications**

#### Responsible Care® - RC 14001:2013 and ISO 9001:2008 ISO 14001:2015

International Council of Chemical Associations and adopted by the Gulf Petrochemical and Chemical ISO 9001:2008 requires a periodic review of the Association (GPCA), is practiced today in more than quality management system, helping to improve 65 countries around the globe. This program offers an integrated, structured approach to improve company performance in the following key areas: community awareness and emergency response, security, distribution, employee health and safety, pollution prevention, and process and product across all its manufacturing sites in 2016. OHSAS safety. Q-Chem has adopted the GPCA Responsible 18001 helps an organization to identify and control Care® initiative since 2013 and was recertified on RC14001:2013 and ISO 14001:2015 in 2016. accidents, aid legal compliance, and improve overall Responsible Care® and ISO 14001 certifications are performance. combined into a single, cost-effective process.

Q-Chem has achieved ISO 9001:2008 certification The Responsible Care® program, managed by the of quality management that is verified by the International Accreditation Forum (IAF) since 2012. services, product quality, and operations.

#### OHSAS 18001:2007

Q-Chem has achieved OHSAS 18001 (Occupational Health and Safety Assessment Series) accreditation health and safety risks, reduce the potential for













# HEALTH & SAFETY STEERS THE WAY

- Health and Safety Management
- Safety Programs
- Process Safety





# **Health and Safety**

by providing high-quality and safe products.

We enhance our safety management systems with increasingly direct involvement by company leadership as well as greater inclusion of contractors in safety programs. The company frequently applies innovative technical solutions to ensure process and personnel safety irrespective of the cost. The complex arrangement of our operational facilities located at two industrial sites that are 135 km apart, makes it particularly challenging to organize a coordinated system of safety management. Nevertheless, we are committed to providing the highest levels of safety for our employees and contractors at both operational sites.

Q-Chem values employee health and safety above Q-Chem has a track record of safe operations, all. Manpower is the company's main asset and the with zero employee or contractor fatalities. well-being of every employee and contractor matters. In 2015 and 2016 the positive trend continued, Creating safe working conditions ensures business and with low employee and contractor recordable environmental integrity, and sustainable development injuries, zero occupational illnesses, as well as of the company. In addition, it attracts high caliber zero heat stress events for the past 9 years. This is specialists, enhances work capabilities through a a remarkable achievement, given that both locations culture of safety, and maintains customer satisfaction went through the largest Turnarounds<sup>5</sup> in history at RLOC in Ras Laffan Industrial City and Q-Chem II at Mesaieed Industrial City. TA activities have the potential of creating additional hazards due to the higher-risk activities involved, which require a greater focus on safety and risk management. Despite the large scale of TA activities - both plants were shut down for 45 days to overhaul the production lines a highly successful safety performance record was achieved by the contractors, owing to the thorough selection process, constant supervision and extensive training provided.

|  | 2012  | 2013  | 2014  | 2015  | 2016  |  |
|--|-------|-------|-------|-------|-------|--|
| Employee fatalities  | 0     | 0     | 0     | 0     | 0     |  |
| Contractor fatalities  | 0     | 0     | 0     | 0     | 0     |  |
| Employee lost time injuries                                    | 3     | 1     | 0     | 1     | 1     |  |
| Contractor lost time injuries                                  | 2     | 0     | 2     | 1     | 1     |  |
| Employee total reportable injuries                             | 4     | 1     | 0     | 1     | 2     |  |
| Contractor total reportable injuries                           | 3     | 0     | 3     | 1     | 1     |  |
| Employee injury rate (per million man-hours)                   | 1.12  | 0.26  | 0     | 0.28  | 0.61  |  |
| Contractor injury rate (per million man-hours)                 | 0.88  | 0     | 0.85  | 0.15  | 0.29  |  |
| Employee occupational illnesses                                | 0     | 0     | 0     | 0     | 0     |  |
| Heat stress events   | 0     | 0     | 0     | 0     | 0     |  |
| Loss of containment  | 4     | 1     | 0     | 3     | 2     |  |
| Emergency response drills                                      | 42    | 43    | 34    | 41    | 42    |  |
| Process safety event rate (per million man-hours) <sup>6</sup> | 0.595 | 0.155 | 0.000 | 0.370 | 0.240 |  |

### **Health and Safety Management**

The three key principles of our health and safety Derived from these three principles, we operate culture are:

- 1. Work safely or not at all
- 2. There's always time to do it right
- 3. If it's worth doing, do it better

based on our ten "Tenets of Operation", which are focused on ensuring the safety of each person, the reliability of equipment, and the quality of production. Anyone entering and operating at our premises must respect these principles.

#### **Tenets of Operation**

Never operate equipment outside of design or environmental limits.

> **Intent:** To reduce the risk of personal Injury, equipment failure, and / or release to the environment by staying within the specified limits.

Always move to a safe, controlled condition, and seek assistance when a situation is not understood

> **Intent:** To reduce the risk to yourself, your peers, equipment, and the environment by not working in an unfamiliar situation.

Always operate with safety and environmental protection devices enabled.

**Intent:** To require the use of safety/environmental devices when they exist. If they are inoperable, report the condition, establish safeguards and correct the situation as soon as possible.

Always follow all safe/environmental work practices/procedures and act to stop unsafe conditions/actions immediately.

**Intent:** To establish expectations that each employee is to identify and correct unsafe conditions/actions immediately. If you see it, you own it.

Always produce a product that meets or exceeds your customers' requirements.

**Intent:** To emphasize that each employee is responsible and accountable for the quality of the products and services he/she provides to internal/external customers.

Never contaminate or compromise a dedicated system.

> **Intent:** To maintain the integrity of our product and utility systems.

Always report environmental/safety compliance information accurately and on time.

**Intent:** To achieve 100% compliance by reporting the right information to the right personnel in a timely manner.

Always address abnormal conditions and clarify/ understand procedures before proceeding.

**Intent:** To identify abnormal conditions, evaluate associated risks, and begin resolution immediately.

Always develop and follow written procedures for high risk or unusual situations.

**Intent:** To review/use/develop clear written procedures for all non-routine, critical, and/or complex operations to ensure consistent / stable operations.

Always involve people with expertise and firsthand knowledge in decisions, improvements and changes that affect procedures and equipment.

**Intent:** To utilize diverse teams which include individuals with appropriate expertise for implementing changes and improvements.

<sup>&</sup>lt;sup>5</sup>A "Turnaround" is a scheduled event wherein an entire processing unit of an industrial plant is taken off stream for an extended period for

<sup>&</sup>lt;sup>6</sup> Process Safety Events are unplanned or uncontrolled releases of hazardous materials from primary containment in a volume exceeding

#### **Safety Programs**

One of the success factors in Q-Chem's exceptional health and safety management is the employment of various programs and campaigns, which focus on maintaining a well-established safety culture among employees and contractors alike. Following are few examples:

#### **QSafe**

QSafe is a Behavioral Based Safety (BBS)<sup>7</sup> program, establishing a framework for employees and contractors to observe and report on any noncompliance or at-risk behaviors during operations. The "no name and no blame" approach encourages "act-on-the-spot" action, emphasizing that personnel should undertake immediate corrective action whenever possible.

During the Turnaround in 2015, QSafe team operated a dedicated in-house station to spread safety awareness by organizing various contests, demonstrating certified tools for conducting work in a safely, delivering messages on safe behaviors in various work areas, and providing safety toolbox materials.

Remarkably, in 2016 more than 70% of employees provided observations for QSafe on a monthly average. Contractors were also invited to provide observations to bring in valuable external feedback on internal processes and operations.

#### **Leadership Participation**

In line with Operational Excellence principles, management "walkthrough" events are organized on a weekly basis, with senior leadership participating in monthly walkthroughs. By visiting all operating, maintenance, and administrative areas of the manufacturing facilities, these walkthroughs provide an opportunity for management and senior leadership teams to observe daily working conditions and directly engage with workforce on the ground. Subsequently, senior management can personally evaluate adherence to the requirements of the OE system, and compliance with regulations applicable to our manufacturing facilities. At the same, this hands-on monitoring by senior management and leadership teams incentives all staff to adhere to the highest levels of performance.

During a walkthrough, if any condition is identified as unsafe, an immediate mitigating action will take place (e.g. stop work or area barricading) to prevent harm. Other identified gaps in safety compliance are corrected on the spot, where possible, and are recorded in the Unsafe Condition Identification and Tracking (UCIT) System. The trends in safety compliance and results of the Leadership Walkthroughs are used as an input for the annual proactive enterprise risk evaluation process.

#### Health, Safety and Environment (HSE) Requirements for Contractors

Contractors are equally important in ensuring safe working conditions, which is why we are keen to ensure contractors are operating at the same the level of a contractor's awareness in relation to level of HSE preparedness as our own employees. To achieve that, we filter the potential contractors of compliance. (i.e., bidders) according to their HSE performance during the contractor selection process, and provide additional HSE training as necessary.

a self-assessment questionnaire including topics such as safety records, their own HSE requirements, commitment towards ensuring safe working and major turnarounds.

practices, as well as HSE trainings provided to their employees. This questionnaire helps us understand our health and safety programs as well as their level

To engage contractors in our safety practices and corporate safety culture, we have established a special awareness-raising channel by distributing All potential contractors are required to complete a periodical HSE newsletter to contractors. Safe behavior of contractors is given extra recognition through special raffle draws during safety campaigns

## **Process Safety**

We have a comprehensive system for evaluating • Process control measures, focused on undertaking operational hazards and undertaking timely measures for preventing any potential process safety risks. Our proactive measures include programs focused on modifying workforce behaviors, unsafe conditions and projects targeting physical improvements of safety in operational assets. We strictly follow the USA Occupational Safety and Health Administration (OSHA) guidelines in regulating both the handling of equipment by personnel and workforce behaviors in our processes.

In 2016, Q-Chem received OHSAS 18001 certification, and experienced one of its best years to date in terms of environmentally reportable events, with only three reportable company responsible events. This positive result is directly linked to the company's tremendous efforts to ensure a high level of process safety, and the constant monitoring of Key Performance Indicators (KPIs) related to personnel and process safety.

To identify potential hazards and assess ways to mitigate probable risks, Q-Chem leadership takes the following actions:

 Administrative measures, focused on adjusting safety, operational and maintenance procedures requirements. and establishing necessary safety awareness through additional training, campaigns or programs.

- preventive and corrective maintenance measures and improving process control logics and procedures.
- Engineering modifications, involving systems upgrades or installing new systems in accordance with the latest process safety requirements or best

To obtain a more comprehensive view of all possible sources of safety risks, we adopted the Chevron Phillips Chemical Corporate Process Safety Management Metrics as a baseline in 2015. As a result, a number of important indicators related to asset integrity were added and are currently being monitored by a larger group of supervisors.

In addition, we implemented several projects during 2015-2016, which significantly increased the process safety of our plants, such as constructing a new chemicals storage warehouse at RLOC to safely store hazardous chemicals, enhancing personnel safety by providing an immediate shelter area in the Central Control Room in the event of a hydrocarbon or other toxic release, and providing new field operation shelters that meet the building siting



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<sup>&</sup>lt;sup>7</sup>BBS is a safety process that creates a partnership between management and employees that continually focuses people's attentions and actions on their and others' daily safety behavior. This occurs through peer monitoring of safety behavior, thus deliberately involving those most likely to be hurt by

# GREEN ACTIONS. CLEAN WORLD.

- Environmental Performance
- Environmental Management
- Reducing Flaring and Emissions
- Energy Efficiency and Conservation
- Waste Management and Reduction
- Hazardous Waste Management
- Non-hazardous Waste Management
- Water Reuse and Conservation
- Environmental Requirements for Contractors



# **Environmental Performance**

consumption required to manufacture our products, while avoiding any negative impacts on the environment from our operations. This includes environmental and process safety performance. utilizing energy, water, chemicals, additives, catalysts and other raw materials efficiently, reducing waste, flaring and emissions, and preventing environmental spills or other forms of pollution.

company responsible reportable environmental events<sup>8</sup>, staying well below the ten-event target. upstream suppliers.

We constantly strive to minimize the resources We completed the year with only three events, even better than the total of six events in 2015. These results reflect an exemplary achievement in terms of

Q-Chem also experienced a 50% reduction in environmental events that were beyond the company's control (i.e. upstream responsible events<sup>9</sup>). Only six events were registered in 2016, compared to In 2016, Q-Chem achieved its best record yet of thirteen in 2015. This can be attributed to Q-Chem's improved communication and coordination with

|   | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|
| Environmental events (Company responsible)  | 9    | 7    | 9    | 6    | 3    |
| Environmental events (Upstream responsible) | 18   | 12   | 8    | 13   | 6    |

### **Environmental Management**

robust environmental management system that us to successfully meet the stringent criteria satisfies local regulations and meet international required to receive the distinguished Chevron standards. In 2015, we established the Pollution Phillips Chemical President's Award for Operational Prevention Core Team, including representatives Excellence. Q-Chem's outstanding efforts were also from the Technical, Production, and Environmental recognized with the prestigious second-prize award departments of all our production facilities, in the ARADO Award for Environmental Management The team informs management about the 2014-2015<sup>10</sup>. This award is dedicated to those company's performance in pollution prevention companies that make substantial contributions recommended actions that are necessary to development through a holistic approach that improve performance. The overall role of this advances the 2030 Sustainable Development Goals<sup>11</sup> team is to meet the company's strategic goals as well as Islamic principles. and targets related to flaring and emissions reduction, efficient water usage, wastewater reuse, waste minimization, chemicals management and energy optimization.

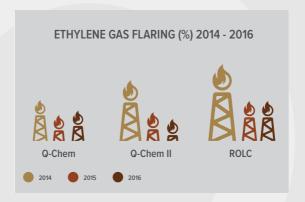
For over a decade, we have been building a In 2016, our environmental performance helped challenges, and to reconciling environment and socio-economic

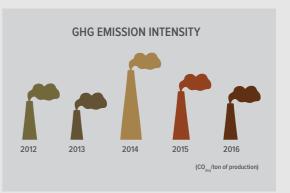
#### **Reducing Flaring and Emissions**

of SO<sub>2</sub>, NO<sub>2</sub> and CO<sub>2</sub> into the atmosphere. To minimize 2010 levels. flaring and emissions, Q-Chem has developed the Flaring Reduction Program in line with National Development Strategy 2011-2016 targets focused on flaring reduction<sup>12</sup>.

Our production process requires the flaring of in 2016, all relative to 2010 levels. Acid gas flaring ethylene gas and acid gas, which leads to emissions at Q-Chem decreased by 35% in 2015 relative to

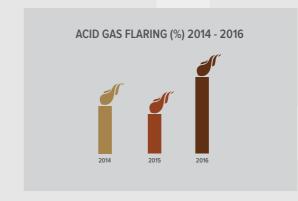
> Another team formed last year was the Pollution Prevention Core Team, to ensure that the company implements all possible actions to minimize the

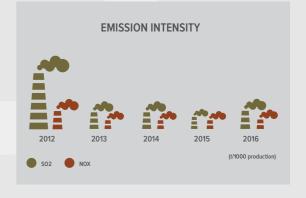




and manage certain measures to reduce flaring. One of the engineering improvements, for example, directed at upgrading the acetylene reactor, has introduced a state-of-the-art video conferencing reduced flaring events while providing longer life system for distant communication among all for the catalyst and improving process reliability. These and other efforts resulted in the reduction cost and time of travel and subsequently Scope 3 of ethylene gas flaring at RLOC by 82% in 2015 and GHG emissions<sup>14</sup>. 2016, and at Q-Chem by 81% in 2015 and by 34%

A Flare Minimization Team was created to execute emission of criteria pollutants<sup>13</sup>. Furthermore, to reduce additional greenhouse gas (GHG) emissions resulting from administrative operations, we have parties, which has already significantly reduced the





<sup>&</sup>lt;sup>8</sup> Company-responsible events are any exceedances in flaring and emissions events, CEMS NO<sub>v</sub> exceedances, water discharges, and spills that are

<sup>&</sup>lt;sup>9</sup>Upstream-responsible events are related to flaring and emissions caused by feed rate or feed composition interruptions or power interruptions from upstream operations, which can then affect Q-Chem unit operations and cause flaring beyond company's control.

The Arab Administrative Development Organization (ARADO) award was given in July 2015 by the Presidency of Meteorology and Environment of Saudi Arabia at the Moroccan headquarters of the Islamic Education, Scientific and Cultural Organization.

<sup>&</sup>lt;sup>11</sup>The Sustainable Development Goals (SDGs) is a set of 17 "Global Goals" with 169 targets covering a broad range of sustainable development issues. On 25 September 2015, the 194 countries of the UN General Assembly adopted the 2030 Development Agenda. The UN Global Compact asks companies to first do business responsibly and then pursue opportunities to solve societal challenges through business innovation and collaboration https://sustainabledevelopment.un.org/post2015/transformingourworld

<sup>&</sup>lt;sup>12</sup> Qatar National Development Strategy 2011-2016, p.224.

http://www.mdps.gov.ga/en/knowledge/HomePagePublications/Qatar\_NDS\_reprint\_complete\_lowres\_16May.pdf

E Criteria Pollutants include particulate matter (PM), sulfur dioxide (SO2), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), and carbon monoxide (CO).

<sup>&</sup>lt;sup>14</sup> Under the GHG Protocol, Scope 3 emissions are related to the use of transportation for business travel.

City and Mesaieed Industrial City.

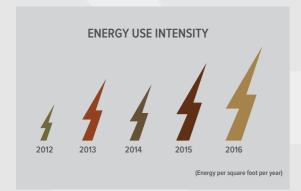
We continue to adopt the most progressive technologies. One successful initiative is the state-

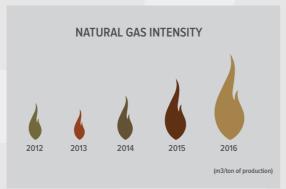
We are proud that our record achievements in of-the-art Leak Detection and Repair (LDAR) Program, several areas were recognized by the Ministry of which resulted in zero leaks and minimized the Municipality and Environment and Industrial Cities number of LDAR shutdown items. On top of LDAR, in Qatar. We were invited to present our success we are following Qatar Petroleum (QP) requirements stories to the other industries in Ras Laffan Industrial for GHG monitoring, which involve third-party verification. In addition, a GHG and Criteria Pollutant Accounting and Reporting Plan Tool<sup>15</sup> has been prepared and will be assessed for feasibility in practical use in 2017.

### **Energy Efficiency and Conservation**

is operating steam turbines or using auxiliary achieved in that year.

In response to the increases in Energy Use Intensity blowers, which resulted in electricity savings of (expresses a building's energy use per square almost 8 million kWh and has consequently reduced foot per year, including both fuel and electricity), GHG emissions. Additionally, shutting down one we have implemented numerous measures focused of the seawater pumps during cooler months has on energy conservation. Among the key measures contributed to 68% of all the energy conservation





## **Waste Management and Reduction**

hierarchy of waste management:

- 1. Eliminate waste generation
- 2. Reduce waste
- 3. Reuse waste internally
- 4. Exchange waste with others that would use it as raw material
- 5. Recycle waste internally or externally
- 6. Recover waste for energy
- 7. Treat generated waste
- 8. Incinerate, and
- 9. Dispose safely if no other waste management practice is achievable

Q-Chem aims for the efficient and environmentally We also participate in regional initiatives focused responsible management of hazardous, non- on sharing best practices in waste management, hazardous and inert wastes, implementing its waste e.g. chairing the GPCA Industrial Waste management in accordance with the following Management Subcommittee, which provides an opportunity to share experiences and learn from other regional companies.



<sup>15</sup> Based on EU/ICCP Guidelines for National Greenhouse Gas Inventories in conjunction with QP's requirements for GHG reporting.

#### Hazardous waste management

Q-Chem facilities in MIC have used a hazardous in a 15% reduction in the intensity of catalyst waste waste incinerator since the start of operations. generation. This reduces not only cost by extending At the time, it was the first solid and liquid hazardous the catalyst life, but also contributes to the reduction waste incinerator with a destruction efficiency of of hazardous waste generation. minimum 99.999%. RLOC also commissioned a new hazardous waste storage yard in 2015, which can store hazardous waste for up to 90 days, replacing the previously used temporary yard and providing an improved engineering and administrative control on waste segregation, storage, and preparation for transportation for safe handling of hazardous waste.

Moreover, we are recycling the batteries of machinery and uninterrupted power supply units. We recycle the hydrocarbon waste that undergoes the pyrolysis treatment process, and partially reuse the chrome catalyst waste internally, which has resulted





<sup>16</sup> As well as Fuel (Natural) Gas Intensity

#### Non-hazardous waste management

waste collection and further utilization. Many empty

Our objective is to maximize waste reuse and containers and wooden pallets are reused for recycling. This is accomplished either through material delivery and handling of waste. Q-Chem cooperation with waste management contractors, is currently evaluating further options for waste or by finding internal ways to increase efficiency in exchange within industrial cities, where the waste waste management, thereby minimizing harm to the product of one industry process can become a environment and reducing the cost of materials. We valuable raw material for a second industry process, are proud that 100% of the plastic waste generated thus resulting in a circular economy, promoting is recycled. Metal waste is recycled locally for greater resource efficiency, and waste reduction.







#### **Water Reuse and Conservation**

Our water management approach is focused These efforts will bring us closer to the Ministry of on water reuse and water conservation. Municipality and Environment (MME) requirement to We implemented several measures in our operations, meet a near-zero level of wastewater discharge into and the results were impressive. In 2016, the volume the sea by 2020. of water conserved reached more than 30.000 m<sup>3</sup>.

In addition, a Recovery and Reuse of Treated Industrial Wastewater (RRTIW) Program was established at Q-Chem and RLOC. This program focuses on installing facilities that ensure enhanced recovery of treated industrial water for utilization in existing plant and irrigation purposes. Through the RRTIW program, we aim to install additional wastewater treatment solutions that will minimize wastewater discharged to the sea to around 15% of the total industrial wastewater by the end of 2018<sup>17</sup>.

| REC                           | YCLED W  | ASTES - AG                 | CCUMULA  | TED                        |  |
|-------------------------------|--|----------------------------|--|----------------------------|--|
| <b>&amp; &amp; &amp;</b> 2012 | <b>&amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp;</b> | <b>A A A A A A A A A A</b> | <b>&amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp; &amp;</b> | <b>A A A A A A A A A A</b> |  |

#### **Environmental Requirements for Contractors**

procedures, channels of communication, and regulations. training related to the environmental management

Each contractor is selected through a process that of work performed. We also require contractors includes an evaluation in relation to health, safety to complete the 'Environmental Management and environmental (HSE) capabilities. This allows the System Audit Checklist', which allows us to assess company to evaluate a contractor's past performance the policies that contractors follow in preventing in terms of any environmental damage caused, environmental events and ensuring compliance with as well as to determine a contractor's programs, applicable national and international environmental

<sup>&</sup>lt;sup>17</sup> This level of discharge is most feasible from technical and environmental perspectives in accordance with the Environmental Impact Assessment (EIA) of the RRTIW. Technical solutions of the RRTIW Program include pre-treatment, ultrafiltration (UF) and one or two stages of Reverse Osmosis (RO).

# ACHIEVING MORE. TOGETHER.

- Our Human Captia
- Recruiting Talents
- · Prioritizing and Enhancing Employee Satisfaction
- Turnover
- Cultivating Employee Loyalty
- Manpower Training and Development



# **Our Human Capital**

At Q-Chem, we recognize that our workforce drives outcome for Qatar's sustainable development. a "capable and motivated workforce" as a critical planning processes<sup>18</sup>.

our performance, and is therefore central to our In line with this objective, Q-Chem has set strategic sustainability journey. The Qatar National Vision targets for Qatarization within its own workforce. 2030 (QNV2030) emphasizes human development We give priority to suitably qualified Qatari nationals as one of its four pillars, highlighting the creation of in our recruitment, development, and succession

| Q-Chem workforce  | 2012  | 2013  | 2014  | 2015  | 2016  |
|---|-------|-------|-------|-------|-------|
| Total workforce<br>(Consists of Employees, Baseload and Call off contractors) | 1,063 | 1,131 | 1,156 | 1,034 | 1,008 |

## **Recruiting Talents**

and talented candidates available not only in the Committee with the advice of Human Capital regional market but world-wide as well. Our first department reviews CVs, interviews candidates and priority is to internally identify existing employees as recommends the best fits. In addition, the whole potential candidates for higher positions. For each internal selection process is complemented by a case an internal selection team (Talent Stewardship succession planning program that creates clear Committee) is formed in order to identify the best career paths for nationals and expatriate employees.

We seek to identify and attract the most qualified possible candidates. The Talent Stewardship

## **Prioritizing and Enhancing Employee Satisfaction**

encourages a high performing culture, where effective action planning.

Q-Chem's senior management strongly believes frequent face-to-face discussions and honest and and supports that employee satisfaction and constructive feedback is provided. Furthermore, engagement is the best measure of the company's one of our core values refers to "Communicating success in human capital management. In order to well, empowering and engaging individuals and ensure consistently ethical, transparent, and fair teams, and recognizing superior performance". treatment of all our employees, Q-Chem has adopted As a result, Q-Chem is currently in the process of an 'open door policy' to facilitate easy access by all introducing a new way of measuring employee employees. Moreover, through the implementation engagement in order to strengthen its good practices of the performance management system, Q-Chem and improve on areas that require attention through

#### **Cultivating Employee Loyalty**

Employee loyalty is vital to the stability and continuity of our business. We have thus adopted a multi-dimensional approach to cultivate loyalty among our employees. We offer highly competitive remuneration for our industry in Qatar, provide an enriching and stimulating work environment, and empower our employees to take ownership of their career development.

#### **TAQDEER - Celebrating Employees'** Long Service

We are proud that the number of long-term employees at Q-Chem continues to grow each year. As a gesture of gratitude, we celebrate the contribution of our long-serving employees with appreciation certificates and long-service bonuses.



Tagdeer – Long Serving Employees Award Ceremony

Through our efforts for continuous improvement, we are currently developing a new initiative, "Tagdeer", to award outstanding performance, exemplary behavior or safety ethics in the workplace<sup>20</sup>. The initiative will recognize the valuable contributions of our employees, and foster alignment of employee performance and achievements with our corporate values and objectives<sup>21</sup>.

Q-Chem employees are the source of our pride and inspiration. We're achieving our strategic goals due to our qualified and diversified workforce. The well-being of employees forms an integral part of our values within Q-Chem companies. As a pioneer in the petrochemical industry, we regard our employees as the key asset to our success.

Nasser J. Al-Kuwari, CEO

#### Turnover

levels in the organization on a yearly basis. This

Our key target is to retain low attrition rates for all planning program. Moreover, through an efficient Qatarization planning, national employees are has been achieved by selecting candidates that fit aware of the responsibilities, duties and milestones well with Q-Chem's culture and values, providing that they have to accomplish in order to reach the targeted training and development opportunities, targeted roles within the organization. Our aim is recruiting candidates that fit well with Q-Chem's to build an organization that will be an employer of culture and values and by deploying a succession choice for both nationals and expatriate employees.

# **Manpower Training and Development**

Professional training and development increase hours provided in the past two years in our efforts to the efficiency and effectiveness of our workforce, optimize costs, we continue to ensure the provision thereby contributing to the success of our operations. of all training necessary to meet the operational Although we have reduced the number of training needs of the company.

| Hours of Training by Employment Level –<br>Professional training only | 2012   | 2013   | 2014   | 2015   | 2016   |
|---|--------|--------|--------|--------|--------|
| Total training hours for employees and contractors                    | 68,440 | 79,142 | 92,818 | 45,682 | 49,474 |

In order to improve the quality of our training, we have courses into one comprehensive package, which has redesigning the training delivery plan accordingly. training results. For example, we have merged a number of training

been reviewing our training needs since 2014 and led to a reduction in training hours without affecting

<sup>&</sup>lt;sup>18</sup> For more details please refer to the section 'Qatarization', on page 49 in this report.

<sup>&</sup>lt;sup>19</sup> "Global Human Capital Trends 2016. The new organization: Different by design", Deloitte University Press, at p. 3-4. https://www2.deloitte.com/content/dam/ Deloitte/global/Documents/HumanCapital/gx-dup-global-human-capital-trends-2016.pdf

<sup>&</sup>lt;sup>20</sup> "Taqdeer" in Arabic means recognition, or appreciation.

<sup>&</sup>lt;sup>21</sup> Implementation day is planned for Jan 1<sup>st</sup> 2017.

# FOR THE NATION'S WELL-BEING

- Social Enrichment
- Qatarization
- Research & Development
- Community Outreach



# **Social Enrichment**

We are committed to having a positive impact on society by attracting and developing the local workforce, promoting sports, research and education, reaching out to local communities, and helping those in need.

#### **Qatarization**

Increasing the number of Qatari nationals in the Despite organizational restructuring in mid-2016, country's workforce is a priority of QNV 2030. we maintained our commitment to Qatarization. At Q-Chem we have responded to this national During 2016, we attracted almost 200 Qatari concern. We have created the principle of Total nationals to join our workforce as employees, Quality Qatarization, which aims for enhancing the trainees or developees<sup>22</sup>. Our Qatarization rate in recruitment, training, development and retention 2016 was just above 20%, exceeding both our target of quality Qatari nationals. We not only focus on of 19% and the 15% target set by the Qatar National professionals, but also provide new graduates and Development Strategy (NDS 2011-2016). trainees with the opportunity to fill vacant positions.

#### **Nurturing Qatari Talent**

The petrochemical industry is facing a critical eligible to join one of Q-Chem's international in areas of expertise identified as crucial for our studying both locally and abroad. operations. High-achieving Qatari students are

challenge in the long-term retention of reliable sponsorship programs. By the end of 2016, technical expertise. We have taken a proactive we were proud to have 25 Qatari developees, approach, by sponsoring educational programs 36 Qatari trainees, 28 diploma-sponsored students for talented Qataris to study in Qatar or abroad, and a total of 21 undergraduate-sponsored students,

#### Attracting and Preparing a Qatari Workforce

There are a wide range of capacity-building programs available to prepare, attract and develop Qatari nationals for careers at Q-Chem. In 2015 Q-Chem participated in the inaugural Education City Career Fair at Qatar's Hamad bin Khalifa University Student Center. We also actively participated in the "Discover Your Career" activities organized annually by Qatar University. The central goal of such events is to help students gain an in-depth understanding of professional career requirements in different industry sectors and roles.





Q-Chem sponsored the 'Life Is Engineering' Contest to promote innovation



We collaborate with several Qatari educational institutions and community initiatives to provide essential information about career opportunities in the petrochemical industry. This strengthens our Qatarization efforts by attracting Qatari nationals who would like to be sponsored or hired by Q-Chem.

Our "Job Shadowing" program directly engages students and introduces them to industrial life. It helps first and second-year university students align their theoretical studies with the practical requirements of the industry. Several leading educational institutions and communities actively participated in plant visits, presentations, and joint research or graduation projects.

We are proud that our efforts with higher education institutions are being recognized. In 2016, we were honored in the annual Employer Recognition Ceremony by Qatar University (QU) for collaborating with various colleges to train or sponsor QU students.

#### **Engaging Local Educational Institutions**

As part of our corporate social responsibility (CSR) program, we support students at schools and academic institutions in developing their potential and achieving success in their specialties. This entails sponsorships, summer school programs, internships, and school visits by Q-Chem engineers, as well as supporting the development of academic research programs. We also invite students from primary schools to visit our operational facilities.

In addition, our sponsorship of QU's "Life is Engineering Project" (LIEP) aims to engage

secondary school students in scientific and engineering subjects and raise their awareness of different engineering majors available.



CNA-Q students visit Q-Chem Plant

|   | 2014 | 2015 | 2016 |
|---|------|------|------|
| Students and trainees that have done summer internships at Q-Chem | 107  | 80   | 68   |
| Students sponsored to study in universities abroad                | 5    | 0    | 7    |
| Trainees and interns at Q-Chem                                    | 107  | 30   | 18   |
| Students beginning TPP at CNA-Q <sup>23</sup>                     | 33   | 18   | 0    |
| Students sponsored at Qatar University                            | 3    | 12   | 7    |
| Students sponsored at Community College                           | 1    | 1    | 3    |

<sup>&</sup>lt;sup>22</sup> A trainee is an individual still studying in a higher educational institution, following an individual development plan to gather practical experience in line with his/her studies. A developee is an employee, recently graduated from a higher educational institution that follows an individual development plan to gain practical experience and skills requested for a specific job position

<sup>&</sup>lt;sup>23</sup> Technician Preparatory Program at the College of North Atlantic- Qatar.

# **Research and Development**

the cornerstone for innovative product and process at the Texas A&M University Qatar (TAMUQ). The solutions. Q-Chem is a member of the Technical Center's mission is to promote industry safety around Advisory Board of the Mary Kay Oconnor Process the world in order to prevent future accidents.

We consider research and development efforts to be Safety Center (Qatar Consortium), which operates

## **Community Outreach**

Local communities are major stakeholders of Q-Chem, and the company is committed to understand and respond to the needs and concern of all members of those communities. Our community engagement activities range from health-related blood donation days to raising environmental awareness and promoting sports and an active lifestyle.







Blood Donation Drives at Q-Chem

#### Contributing to Health, Safety and Well-being of **Local Communities**

We partnered with the Hamad Medical Center (HMC) to sponsor the World Blood Donor Day and to support efforts to educate the community on the importance of blood donations.

Qatar Chemical Company Ltd. (Q-Chem) has prioritized health and human well-being in its corporate social responsibility initiatives. The blood donation awareness program is a noble cause as it involves saving people's lives.

Nasser Al Naemi, Manager, PR & Communications



#### **Raising Environmental Awareness**

At Q-Chem we believe that active engagement In 2016, Q-Chem organized its fourth annual raises awareness of environmental responsibility among employees, volunteers and the wider Agriculture Department at the Ministry of community. We care about the local environment, Municipality and Environment, planting 1,000 which is why we organized a beach clean-up and more native trees in support of the "One Million preservation campaign. Hundreds of volunteers, Trees Campaign" announced by the ministry during including Q-Chem and RLOC management teams the COP18 Conference in December 2012. Tree and other employees, participated in this annual Week has so far doubled the green belt around event by cleaning more than two kilometers of beach. 
the company's premises in Mesaieed

"Tree Week Campaign" together with the



Beach Cleaning campaign



Senior Management with the ministry officials planting trees at Q-Chem site



'Tree Week' at Q-Chem

#### Supporting an Active Lifestyle

popular events among our employees. We are and football to promote sportsmanship within the committed to sports and the well-being of our company. Interested Q-Chem and RLOC employees employees, and invest in teams for several sports were invited to participate. Q-Chem teams are and tournaments in more than twenty different participating in various organized community activities. In 2015 and 2016 we organized children's tournaments and the Q-Chem team won Al-Khaliji contests and games that drew a large turnout. cup in 2016. Children had the opportunity to participate in sports such as football and basketball, as well as many contests.

The National Sports Day is always one of the most 
Q-Chem also formed teams for basketball, cricket







#### **Helping Those in Need**

Driven by our strategic sustainability goals and our This not only helps preserve the environment by commitment to good corporate citizenship, we have recycling used IT equipment which would otherwise launched several programs in collaboration with be discarded, but it has a significant positive impact community institutions. In our CEO's words, "It's on the individual lives of many under-privileged an integral part of Q-Chem's strategic objectives to families. extend a helping hand to charity organizations."

Rehabilitation of Special Needs (QSRSN) to serve our employees donated more than QAR 55,000 to help communities. In line with the NDS 2011-2016 target to enable a suitable workplace for persons with disabilities, we signed an agreement with QSRSN to finance the purchase of wheelchair lifts. The equipment is mounted on vehicles to achieve higher levels of mobility for disabled people with minimal help from others.

We have also donated over a hundred pieces of IT equipment and devices to charity foundations.

We support charitable efforts around the world. When We are honored to partner with the Qatar Society for in 2015 two massive earthquakes struck Nepal, our relieve those affected by the earthquakes.

> Helping persons with special needs not only assists this segment of society in meeting their aspirations in life, but also strengthens social bonds and is the very essence of our cultural foundation. Nasser J. Al-Kuwari, CEO



Certificate of Appreciation presented to Q-Chem for charitable activities

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# MAXIMIZING ECONOMIC VALUE

- Economic Performance and Product Responsibility
- Economic Performance
- Product Stewardship



# **Economic Performance and Product** Responsibility

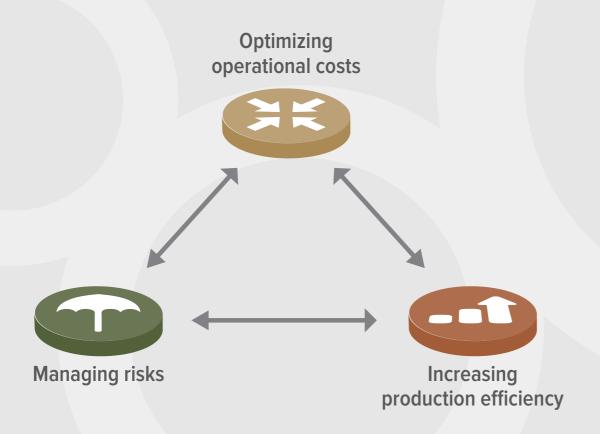
Q-Chem's petrochemical production has more than doubled since the start of its operations. We are proud to generate valuable revenue that enables Qatar to achieve sustainable development through economic diversification.

#### **Economic Performance**

we need to adapt by increasing our operational and cost efficiencies. Therefore, we adhere to an remained attentive to its strategic objectives without integrated approach in the management of our compromising safe performance and our impact on business using three main strategic pillars:

We have managed to maintain a healthy financial performance, despite the global downtrend of

In order to sustain a healthy financial performance, oil prices that affected hydrocarbon derivative products over the past few years. The company the environment. This is evident from our sustained production capacity and sales levels.



#### **Indirect Economic Impact**

We are committed to having a positive impact on the local economy. The local procurement of the raw material reached 50%, where as more than 95% of the service contracts were awarded to local companies in 2016. The local procurement spending will have a long-term, indirect beneficial economic impact on the Qatari economy.

95.3% of our service contracts were awarded to local companies

### **Product Stewardship**

other products. Therefore, our focus on product for many other companies.

Q-Chem products are building blocks for numerous quality and sustainable production generates value

#### **Product Responsibility**

Many of our efforts have been focused on keeping (PRMT) is responsible for addressing the safety our company up to international standards and accreditations. All our facilities have been accredited 14001® Responsible Care standards<sup>24</sup>.

We have created internal teams to help us proactively manage the adverse impacts of poor handling of our products inside or outside the boundaries of our facilities. The Product Risk Management Team

impacts of all new and existing products. The team also provides trainings to support risk evaluation and for ISO 14001 Environmental Management and RC management. The Product Stewardship Committee has been established to ensure that information on the safe use and handling of our products is always provided, and meets costumer requirements. Our product Safety Data Sheets (SDS) are available for download on our website.

#### Establishing a "Made in Qatar" Brand

In 2016, we transitioned from Marlex® brand to by Muntajat, the company is responsible for the Lotrène®. This move brings in many benefits to our marketing, sale and distribution of all petrochemical company and the State of Qatar, offering another products produced in Qatar. Muntajat has a strong world-class quality product that is "Made in Qatar". global network, ensuring our products are serving The new brand is a Qatari trademark fully owned the needs of customers in Asia, Africa and Europe.



<sup>&</sup>lt;sup>24</sup>For further details please refer to the Certification section, page 27.



# **Annexure I. Abbreviations and Acronyms**

| ARADO  | Arab Administrative Development Organization               |
|--------|--|
| API    | Air Pollutant Index  |
| CPChem | Chevron Phillips Chemical International Qatar Holdings LLC |
| CSR    | Corporate Social Responsibility                            |
| СТО    | Consent-to-Operate   |
| EPCA   | European Petrochemical Association                         |
| ERM    | Enterprise Risk Management                                 |
| GCC    | Gulf Cooperation Council                                   |
| GHG    | Greenhouse Gas   |
| GPCA   | Gulf Petrochemicals & Chemicals Association                |
| HDPE   | high-density polyethylene                                  |
| НМС    | Hamad Medical Center                                       |
| HSE    | Health, Safety, Environment                                |
| IAF    | International Accreditation Forum                          |
| ISO    | International Organization for Standardization             |
| IT     | Information Technology                                     |
| KPI    | Key Performance Indicators                                 |
| LDAR   | Leak Detection and Repair                                  |
| LES    | Laffan Environmental Society                               |
| LIEP   | "Life is Engineering Project"                              |
| MDPE   | medium-density polyethylene                                |
| MIC    | Mesaieed Industrial City                                   |
| MM     | Million  |
| MME    | Ministry of Municipality and Environment                   |
| MPHC   | Mesaieed Petrochemical Holding Company Q.S.C.              |

| MTA       | metric tons per annum                               |
|-----------|---|
| NAO       | Normal Alpha Olefins                                |
| NDS       | National Development Strategy                       |
| OE        | Operational Excellence                              |
| OHSAS     | Occupational Health and Safety Assessment Series    |
| OSHA      | Occupational Safety and Health Administration       |
| PRMT      | Product Risk Management Team                        |
| PSER      | Process Safety Event Rate                           |
| PSI       | Pollutant Standards Index                           |
| Q-Chem    | Qatar Chemical Co. Ltd.                             |
| Q-Chem II | Qatar Chemical Co. II Ltd.                          |
| QNV       | Qatar National Vision                               |
| QP        | Qatar Petroleum                                     |
| QSRSN     | Qatar Society for Rehabilitation of Special Needs   |
| QU        | Qatar University                                    |
| RC        | Responsible Care                                    |
| RIR       | Recordable Injury Rate                              |
| RLC       | Ras Laffan Industrial City                          |
| RLOC      | Ras Laffan Olefins Co. Ltd.                         |
| RRTIW     | Recovery and Reuse of Treated Industrial Wastewater |
| SDGs      | Sustainable Development Goals                       |
| SDS       | Safety Data Sheets                                  |
| SOS       | Summer of Safety (Program)                          |
| TA        | Turnaround  |
| TAMUQ     | Texas A&M University Qatar                          |
| UCIT      | Unsafe Condition Identification and Tracking        |

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شركة راس لفان للاوليفنس المحدودة Ras Laffan Olefins Company Ltd. **Qatar Chemical Company Ltd.** 

Ph: +974 4484 7111 Fax: +974 4483 7379 info@qchem.com.qa www.qchem.com.qa

Amwal Tower, Omar Al Mukhtar St Al Dafna, Doha, Qatar, PO Box 24646 Chem