Corporate Environmental Report 2013

National Refinery Limited

Contents

Executive Summary

NRL issues Corporate Environmental Report Annually. The scope of this report is to provide information's about the Health, Safety, Environment and Quality along with the operational performance of National Refinery Limited for the year 2013, to all its stakeholders and Customers for strengthening their trust and to promote better relationship with NRL. This Corporate Environmental Report 2013 has been developed as per specified assessment criteria made by ACCA-WWF. i.e. completeness, credibility and communication.

- This report describes the key elements of the updated approach towards continual improvement and reduction in negative environmental impacts of NRL operational activities and developing the sustainable business strategies.
- We ensure that our manufacturing activities are in line with the government environmental laws and Company's standard operating procedures & safe work practices to support toward environment protection.
- This report gives a brief over view of National Refinery Limited (NRL) operations, manufacturing processes and their associated direct / indirect impact on environment.
- We closely monitor hazardous and non hazardous wastes, energy and water consumption.
- NRL sustainable environmental development action plan is focused on optimization of utilities & energy consumption, stack emissions & Effluent water monitoring.
- Response to the Global environmental initiatives, produce environment friendly clean High Speed Diesel De-Sulphurization (HSD) project to meet Euro- II / IV, Project is in progress for completion.
- Emergency response plans (ERP) & procedures have been established & implemented, periodic drills are conducted in order to train the manpower and removed weaknesses in the system, accordingly corrective and preventive actions are taken for continual improvement as per commitment in NRL HSEQ Policy Statement. The whole mechanism is authenticated by the periodic review of Emergency response plans.
- Monitoring & measurements are carried out at specified intervals for the key characteristics of NRL operations that can have a significant environmental impact. Periodic evaluation of legal, regulatory and others requirement is carried out for compliances. Corrective actions are taken in case of any deviation based on root cause analysis. Results are recorded and reviewed for the effectiveness of corrective actions.
- NRL has achieved 19.38 million Safe Man Hours without Lost Time Injury (LTI) as on December 31, 2013. Continuous efforts to ensure the effective application of operational controls for minimizing Occupational Health & Safety risk's values and environmental impacts.
- On the environmental measure we have addressed critical environmental concerns such as NOx's / SOx's emissions, green house gases, waste and effluent disposal by environmental friendly culture for continual improvement.
- Environmental performance is reviewed at planned intervals to ensure its continuing suitability, adequacy and effectiveness. Opportunities of improvement and need for changes where required are discussed in Management Review, HSE Committees and Steering Committee meetings. Decisions are taken and strategies developed. Management un-deterred commitment towards acquiring excellence in overall performance specially for the conservation of environment, which is evident from implementation of IMS (Integrated Management System) based on ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007 standard and during the Audit by M/S TUV Austria previously known as (Moody) International (Pvt.) Ltd during April, 2013.
- NRL has a well implemented mechanism to evaluate the Contractors and Suppliers to ensure that their activities & performances in accordance with NRL requirement.
- NRL is continuously expanding its diversified oil refining business, which ranges from crude oil refining, lube base oil production and some exports. As a market leader in petroleum refining sector, NRL carries out its environmental care activities to become an environment friendly energy enterprise in the country.

Message
from Chairman

Dr. Ghaith R. Pharaon

Industrialization, although, is an important element in elevating the quality of life concurrently it has significant impact on society in the form of pollution. In an attempt to achieve optimal return and to establish a delicate balance between these two factors, proper care of the environment is essential to maintain in our business activities. NRL being a responsible corporate entity affirms continuity of longstanding commitment to our communities to protect and preserve environment.

Globally petroleum refining has special responsibilities for the preservation and protection of environment to minimize their negative impact through the implementation of good energy and environmental conservation practices. We continue to be among the leaders in proactively managing the impact

of our operation on environment in the form of reduced carbon or greenhouse gaseous emissions, water consumption ratio and volume of solid waste generation during our operational activities.

We at NRL strive for environmental care in all our business operations and encourage promotion of HSE environmental responsibility among our employees and contractors. Our HSEQ policies demonstrate our commitment towards environment. We are proud to take a prominent role in our community by prompting environmental excellence.

We have made considerable progress for the achievement of HSE objectives and targets. NRL not only meets the National Environmental Quality Standards (NEQS) but also endeavors in its persistent efforts to preserve environment. I would like to express my gratitude to all stakeholders and assure that NRL Management is fully cognizant and committed to the continual improvement and development of sustainable environment.

Message
from Deputy Chairman and Chief Executive Officer

Shuaib A. Malik

NRL consistently endeavors to achieve environmental care in its business practices and recognizes the importance of balancing growth. We have taken effective measures to limit the potential negative impact on environment while contributing progressively in stabilizing the economy of the country.

Clean environment is a basic necessity for subsistence. Being a corporate entity, the onus to save the environment is of great significance. In order to keep the surroundings clean and pollution free, NRL adopts effective measures to preserve environment and ensures compliance of all legal obligations as well as environment related requirement of Government regulatory agencies.

Occupational Health and Safety of our employees is the top priority as we believe that safe working environment is a productive environment. Successfully achievement of 19.38 million safe man-hours as on December 31, 2013 without Lost Time Injury (LTI) is an example of our unceasing pursuit of environmental care.

Our environmental policy demonstrates our commitment and clear vision to safeguard the community by promoting environment excellence.

Our Vision

Our passion is to attain distinctive leadership amongst the corporate success stories of tomorrow.

We at NRL recognize that realization of this passion needs superior professional competencies, continuous value addition and improvising, development of human capital and complete commitment to safety, occupational health and environment.

Our Mission

- To remain the premium and preferred supply source for various petroleum products and petrochemicals.

- Offer products that are not only viable in terms of desirability and price but most importantly give true and lasting value to our customers.

- Deliver strong returns on existing and projected investments of our stakeholders by use of specialised and high quality orporate capabilities.

- Business development by adoption of emerging technologies, growth in professional competence, support to innovation, enrichment of human resource and performance recognition.

- Be a responsible corporate citizen by serving the community through a variety of socio-economic acts and maintaining a high level of safety, occupational health and environmental care.

Core Values

Following concepts and ideas guide the Management and staff of National Refinery Limited in conducting its business practices in most ethical ways.

- **Ethical Conduct and Integrity:**

  We value lifestyle in our organization where ethics like truth, honesty, integrity and fair play are basic ingredients while interacting within the organization or dealing with the outside world.

- **Teamwork and Responsibility:**

  We share information and resources and step in to help out other team members. Conflicts are worked out in spite of obstacles and difficulties. We accept responsibility with “can do” attitude.

- **Customer Satisfaction:**

  We endeavor to provide quality products to our customers at competitive prices. We value their satisfaction essential for continued growth of our business.

- **Continuous Improvement:**

  We generate new ideas and creative approaches to upgrade and update our refinery to best available technology and processes so that our products are at the level of internationally accepted standards.

- **Profitability:**

  We believe in enhancing our profitability to the maximum so that Employees, Shareholders and Government all benefits from it.

- **Corporate Citizenship:**

  As a good Corporate Citizen, we are more than willing and happy to meet our social responsibilities towards the community around us. We are also committed to meet requirements of health, safety and environment.

Code of Conduct

National Refinery Limited (the Company) is engaged in the manufacturing of wide range of petroleum products with the objective to achieve sustainable productivity, profitability and high standards of safety, occupational health and environmental care. This entails human resource development, enhancing value addition, implementing conservation measures and growth by up-gradation and addition of newer generation technologies.

The Company requires all its Board Members and Employees to act within the authority conferred upon them and in the best interests of the Company and observe all the Company's policies and procedures as well as relevant laws and regulations, as are applicable in individual capacity or otherwise, including but not limited to the corporate values, business principles and the acceptable and unacceptable behaviour (hereinafter called the Company's Code of Conduct) embodied in this document.

The Company believes that the credibility, goodwill and repute earned over the years can be maintained through continued conviction in our corporate values of honesty, justice, integrity and respect for people. The Company strongly promotes trust, openness, teamwork and professionalism in its entire business activities.

- The business principles are derived from the above stated corporate values and are applied to all facets of business through well-established procedures. These procedures define behavior expected from each employee in the discharge of his/her responsibility.
- NRL recognizes following obligations, which need to be discharged with best efforts, commitment and efficiency:
    - Safeguarding of shareholders' interest and a suitable return on equity.
    - Service customers by providing products, which offer value in terms of price, quality, safety and environmental impact.
    - Respect human rights, provide congenial working environment, offer competitive terms of employment, develop human resource and be an equal opportunity employer.

- Seek mutually beneficial business relationship with contractors, suppliers and investment partners.

- The Company believes that profit is essential for business survival. It is a measure of efficiency and the value that the customer places on products and services produced by the Company.

- The Company requires honesty and fairness in all aspect of its business and in its relationships with all those with whom it does business. The direct or indirect offer, payment, soliciting and accepting of bribe in any form is undesirable.

- The Company is fully committed to reliability and accuracy of financial statements and transparency of transactions in accordance with established procedures and practices.

- The Company does not support any political party or contributes funds to groups having political interests. The Company will however, promote its legitimate business interests through trade associations.

- The Company, consistent with its commitments to sustainable developments, has a systematic approach to the management of health, safety and environment.

- The Company is committed to observe laws of Pakistan and is fully aware of its social responsibility. It would assist the community in activities such as education, sports, environment preservation, training programs, skills development and employment within the parameters of its commercial objectives.

- The Company supports free market system. It seeks to compete fairly and ethically within the framework of applicable competition laws in the country. The Company will not stop others from competing freely with it.

- In view of the critical importance of its business and impact on national economy, the Company provides all relevant information about its activities to legitimate interested parties, subject to any overriding constraints of confidentiality and cost.

- The Company requires all its board members and employees to essentially avoid conflict of interest between private financial and/or other activities and their professional role in the conduct of Company business.

- No board member or employee shall in any manner disclose to any person or cause disclosure of any information or documents, official or otherwise, relating to the Company, except those published, and unless he/she is authorized by the management.

- All papers, books, drawings, sketches, photographs, documents and similar papers containing analysis, formulas, notes or information relating to the Company's business affairs or operations shall always be treated as the Company property, whether prepared by the employee or otherwise and no employee shall be permitted to carry any of these outside business premises unless specifically authorized to do so by the management.

- The Company's property, funds, facilities and services must be used only for authorized purposes.

- The board members or employees of the Company specifically those coming in direct contact with the vendors doing or seeking to do business with the Company shall not receive favours or incur obligations. In case any contractor/supplier to have business relations with the Company happen to be a relative of an official who is entrusted the responsibility of opening/evaluation/award of supply/contract job or with execution or certification of material/services, he/she shall immediately bring the fact to the notice of Managing Director who may entrust the responsibility to another.

- Each employee shall devote his/her full time and energy exclusively to the business and interests of the Company. In particular, no employee (including those on leave) unless otherwise permitted by the Company, shall directly or indirectly engage in any other profession or business or enter the services of or be employed in any capacity for any purpose whatsoever and for any part of his/her time by any other person, government department, firm or company and/or shall not have any private financial dealings with any other persons of firms having business relations with the company for sale or purchase of any materials or equipments or supply of labour or for any other purpose. Every employee shall hold himself in readiness to perform any duties required of him by his/her superiors to the best of his/her ability.

- No board member or employee of the Company shall, directly or indirectly, deal in the shares of the Company in any manner during the closed period, as determined and informed by the Company.

- No board member or employee of the Company shall practice insider trading.

Without prejudice to any penal action defined in any statute, as applicable, against any kind of non-compliances/violations, non-compliance with the Company's Code of Conduct may expose the person involved to disciplinary action as per Company's rules and/or as determined by the management or the Board of Directors of the Company, as the case may be, on case to case basis.

On behalf of the Board

SHUAIB A. MALIK

Deputy Chairman & Chief Executive Officer

June 18, 2012

Corporate Objectives & Development Strategy

National Refinery Limited is a petroleum refining and petrochemical complex engaged in manufacturing and supplying a wide range of fuel products, lubes, BTX, asphalts and specialty products for domestic consumption and export.

NRL objectives and development strategy are aimed at achieving sustainable productivity and profitability and high standards of safety, occupational health and environmental care. This entails human resource re-engineering & development, enhancing value addition, implementing conservation measures and continuing growth through upgradation of existing as well as addition of new facilities. In the changing global environment, corporate objective and development strategy have been defined to meet the challenges of 21st Century.

Corporate Objectives

- Ensure that business policies and targets are in conformity with the national goals.
- Contribute in meeting the country's demand of petroleum and petrochemical products.
- Customer's satisfaction by providing best value and quality products.
- Optimization of the value of barrel of crude oil and cost reduction through conservation measures.
- Achieving and maintaining a high standard of Occupational Health, Safety and Environmental care.
- Ensure reasonable return on the shareholders' existing and projected investments.
- Maintain modern management systems conforming to international standards needed for an efficient organization.

Development Strategy

- Contribute in national efforts towards attaining sustainable self-efficiency in petroleum products.
- Human resource development by upgrading training facilities and exposure to modern technologies / management techniques.
- Balancing and Modernization for energy conservation and enhanced yield of value added products as well as revamping for environment friendly products.
- Expansion of refining capacity by debottlenecking and adding new facilities.
- Acquire newer generation technologies for the efficient refinery operations as well as for attaining highest standards of Occupational Health, Safety and Environmental care.
- Acquiring self-sufficiency in re-engineering, design and fabrication of equipments.

Corporate Information

Board of Directors

Dr. Ghaith R. Pharaon – Chairman
Alternate Director: Abdus Sattar

Laith G. Pharaon
Alternate Director: Jamil A. Khan

Wael G. Pharaon
Alternate Director: Babar Bashir Nawaz

Shuaib A. Malik
Musa Bojang
Bahauddin Khan
Tariq Iqbal Khan

Chief Executive Officer

Shuaib A. Malik

Chief Financial Officer

Anwar A. Shaikh

Company Secretary

Nouman Ahmed Usmani

Audit Committee

Tariq Iqbal Khan	Chairman
Abdus Sattar	Member
Alternate to Dr. Ghaith R. Pharaon	
Babar Bashir Nawaz	Member
Alternate to Wael G. Pharaon	
Bahauddin Khan	Member
Shaikh Ather Ahmed	Secretary

Human Resource and Remuneration Committee

Musa Bojang	Chairman
Bahauddin Khan	Member
Babar Bashir Nawaz	Member
Alternate to Wael G. Pharaon	
Shuaib A. Malik	Member
Nouman Ahmed Usmani	Secretary

Auditors

A.F Ferguson & Co.
Chartered Accountants

Solicitors

Ali Sibtain Fazli & Associates

Bankers

Habib Bank Limited
National Bank of Pakistan
United Bank Limited
Allied Bank Limited
Bank Al-Habib Limited
Faysal Bank Limited
MCB Bank Limited
Habib Metropolitan Bank Limited

Registered Office

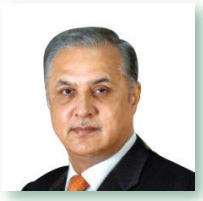
7-B, Korangi Industrial Area,
P.O. Box 8228, Karachi-74900
UAN No. 111-675-675
Fax: +92-21 35054663,
+92-21 35066705
Website: www.nrlpak.com
E-mail: info@nrlpak.com

Share Registrar

THK Associates (Pvt.) Ltd.,
Ground Floor,
State Life Building-3,
Dr. Ziauddin Ahmed Road,
Karachi-75530
P.O. Box. No. 8533
Contact No. +92-21 111-000-322
Fax: +92-21 35655595
Email: secretariat@thk.com.pk
Website: www.thk.com.pk

Board of Directors

Name	Other Engagements
 **Dr. Ghaith R. Pharaon** Chairman and Director (Non-Executive Director)	**Chairman & Director** The Attock Oil Company Limited Attock Petroleum Limited Attock Cement Pakistan Limited **Director** Pakistan Oilfields Limited Attock Gen Limited Attock Leisure & Management Associates (Pvt.) Limited Attock Refinery Limited
 **Mr. Laith G. Pharaon** (Non-Executive Director)	**Director** Attock Petroleum Limited Pakistan Oilfields Limited The Attock Oil Company Limited Attock Refinery Limited Attock Cement Pakistan Limited Attock Gen Limited
 **Mr. Wael G. Pharaon** (Non-Executive Director)	**Director** Attock Petroleum Limited Pakistan Oilfields Limited The Attock Oil Company Limited Attock Refinery Limited Attock Cement Pakistan Limited Attock Gen Limited Attock Leisure & Management Associates (Pvt.) Limited Angoori Heights Development (Pvt.) Limited Margalla Farm Houses Development (Pvt.) Limited Rawal Lodges Development (Pvt.) Limited
 **Mr. Shuaib A. Malik** Deputy Chairman & Chief Executive Officer (Executive Director)	**Director, Chairman & CEO** Pakistan Oilfields Limited **Chairman & Director** Attock Hospital (Pvt.) Limited Attock Refinery Limited **Director & CEO** Attock Petroleum Limited The Attock Oil Company Limited Attock Information Technology Services (Pvt.) Limited Angoori Heights Development (Pvt.) Limited Attock Leisure & Management Associates (Pvt.) Limited Falcon Pakistan (Pvt.) Limited **Director** Attock Cement Pakistan Limited Attock Gen Limited Rawal Lodges Development (Pvt.) Limited Margalla Farm Houses Development (Pvt.) Limited **Resident Director** Pharaon Investment Group Ltd. Holding SAL **Group Regional Chief Executive** **Chairman** NRL Management Staff Pension Fund

	Name	Other Engagements
	**Mr. Musa Bojang** (Independent Director)	**Team Leader** Budget & Performance Management Department- Islamic Development Bank
	**Mr. Tariq Iqbal Khan** (Independent Director)	**Director** Gillette Pakistan Limited International Steels Limited Lucky Cement Limited Packages Limited PICIC Insurance Company Silk Bank Limited FFC Energy Limited - (Government Nominee) Pakistan Electric Agency (Pvt.) Limited - (Government Nominee)
	**Mr. Bahauddin Khan** (Independent Director)	**Chief Operating Officer** Bank Alfalah Limited
	**Mr. Abdus Sattar** Alternate for Dr. Ghaith R. Pharaon (Non-Executive Director)	**Director** Attock Refinery Limited Attock Petroleum Limited Pakistan Oilfields Limited Attock Cement Pakistan Limited
	**Mr. Babar Bashir Nawaz** Alternate for Mr. Wael G. Pharaon (Non-Executive Director)	**Director & Chief Executive** Attock Cement Pakistan Limited Rawal Lodges Development (Pvt.) Limited **Director** Attock Petroleum Limited Angoori Heights Development (Pvt.) Limited Margalla Farm Houses Development (Pvt.) Limited Falcon Pakistan (Pvt.) Limited **Alternate Director** Attock Refinery Limited Attock Leisure & Management Associates (Pvt.) Limited Pakistan Oilfields Limited
	**Mr. Jamil A. Khan** Deputy Managing Director Alternate for Mr. Laith G. Pharaon (Executive Director)	**Chairman** NRL Executive Staff Post Retirement Medical Benefit Fund NRL Non-MPT Staff Gratuity Fund **Trustee** NRL Management Staff Pension Fund NRL Officers Provident Fund NRL Workmen Provident Fund

Statement of Value Added

For the Year Ended June 30, 2013

	2013		2012	
	Rupees in thousand	%	Rupees in thousand	%
Revenue Generated				
Gross sales revenue	216,123,042		207,588,512	
Less: Bought in material and services	175,700,534		172,555,025	
	40,422,508		35,033,487	
Add: Income from Investment	706,234		1,325,872	
Other income	1,473,509		1,810,960	
	2,179,743		3,136,832	
Total Revenue	42,602,251	100.0%	38,170,319	100.0%
Revenue Distributed				
To Employees remuneration as:				
Salaries, wages and benefits	1,581,146	3.7%	1,438,685	3.8%
To Government as:				
Levies	35,848,629	84.1%	31,662,104	82.9%
Company taxation	1,630,350	3.9%	1,833,488	4.8%
Worker's fund	348,275	0.8%	329,946	0.9%
	37,827,254	88.8%	33,825,538	88.6%
To Shareholders as:				
Cash Dividend	1,199,498	2.8%	1,199,498	3.1%
Retained in the business:				
Depreciation	308,200	0.7%	287,364	0.8%
Amortization	1,194	0.0%	348	0.0%
Net earnings	1,684,959	4.0%	1,418,886	3.7%
	1,994,353	4.7%	1,706,598	4.5%
	42,602,251	100.0%	38,170,319	100.0%

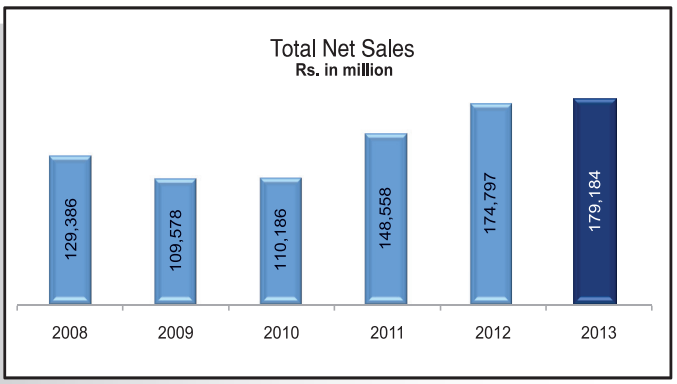
Six Years at A Glance

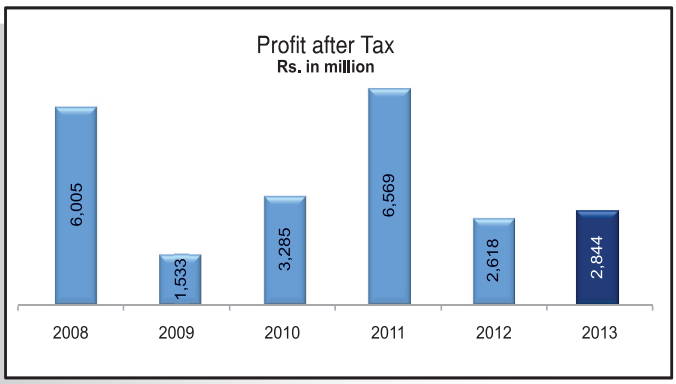
	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
			Rupees in Million			
Profit and Loss Account						
Net Sales	**179,184**	174,797	148,558	110,186	109,578	129,386
Cost of Sales	**174,119**	170,075	138,551	103,854	104,302	118,705
Purchases	**166,130**	171,149	141,383	98,964	99,503	120,599
Gross Profit	**5,066**	4,722	10,007	6,333	5,277	10,681
Operating Profit	**5,345**	5,795	10,179	5,831	5,208	10,163
Profit before tax	**4,475**	4,452	10,029	5,136	2,813	8,831
Profit after tax	**2,844**	2,618	6,569	3,285	1,533	6,005
Balance Sheet						
Share Capital	**800**	800	800	800	800	800
Reserves	**26,072**	24,427	23,808	18,838	16,553	16,619
Shareholder equity	**26,871**	25,226	24,607	19,638	17,353	17,419
Fixed Assets	**4,363**	3,534	3,235	3,248	3,025	2,613
Current Assets	**51,232**	53,485	53,366	47,868	39,156	43,747
Current Liabilities	**28,440**	31,492	31,858	31,862	24,856	28,873
Net current assets / liabilities	**22,792**	21,993	21,508	16,006	14,299	14,874

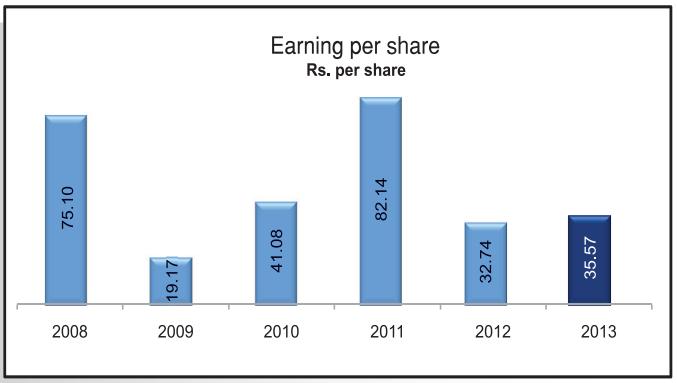
		2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
Profitability Ratios							
Gross profit	%	**2.83**	2.70	6.74	5.75	4.81	8.26
Net profit to sales	%	**1.59**	1.50	4.42	2.98	1.40	4.64
EBITDA Margin to sales	%	**2.68**	2.72	7.02	5.20	2.79	7.08
Return on Equity	%	**10.59**	10.38	26.69	16.73	8.83	34.47
Return on Capital Employed	%	**10.92**	10.51	29.69	17.76	8.82	39.81
Liquidity Ratios							
Current Ratio	Times	**1.80**	1.70	1.68	1.50	1.58	1.52
Quick / Acid test ratio	Times	**1.01**	0.89	1.07	1.13	1.08	1.05
Cash to Current Liabilities	Times	**0.56**	0.32	0.28	0.51	0.31	0.45
Activity / Turnover Ratios							
Inventory Turnover	Days	**49.54**	47.32	40.46	41.68	44.08	31.81
Debtors turnover	Days	**24.35**	28.18	36.82	50.86	41.09	22.68
Creditors turnover	Days	**53.03**	55.47	67.63	88.67	83.61	61.71
Total Assets turnover ratio	Times	**3.22**	3.06	2.62	2.13	2.59	2.78
Fixed assets turnover ratio	Times	**41.07**	49.47	45.93	33.92	36.22	49.51
Investment / Market Ratios							
Earnings per share (EPS) and diluted EPS	Rs.	**35.57**	32.74	82.14	41.08	19.17	75.10
Price earning ratio	Times	**6.76**	7.07	4.29	4.45	11.48	3.96
Dividend yield ratio	Times	**6.23**	6.48	7.10	10.94	5.68	6.72
Cash Dividend payout ratio	Times	**42.17**	45.82	30.44	48.69	65.21	26.63
Dividend cover ratio	Times	**2.37**	2.18	3.29	2.05	1.53	3.76
Cash Dividend per share	Rs. 10/share	**15.00**	15.00	25.00	20.00	12.50	20.00
Market value per share at year end	Rs. 10/share	**241**	231	352	183	220	297
Breakup value per share	Rs. 10/share	**336**	315	308	246	217	218

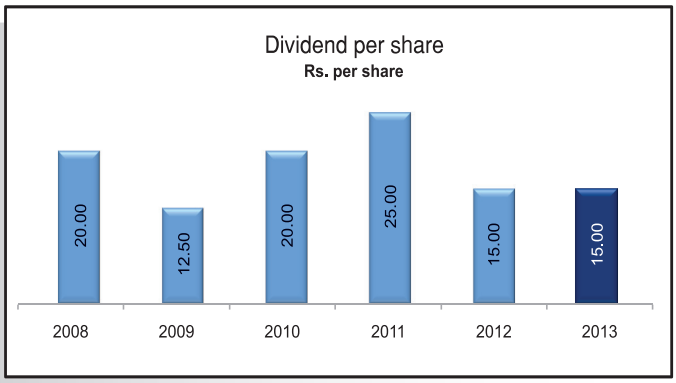
Financial Performance

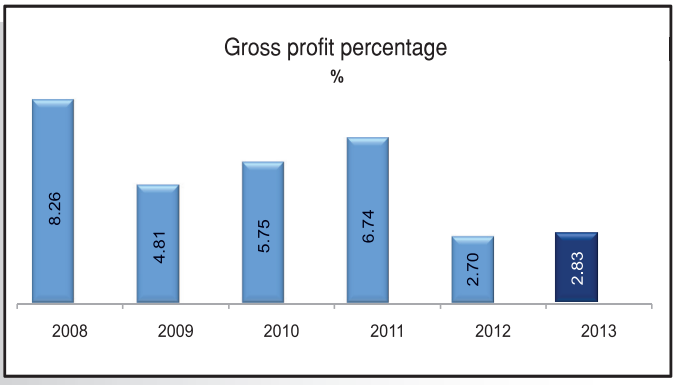
Graphic Presentation

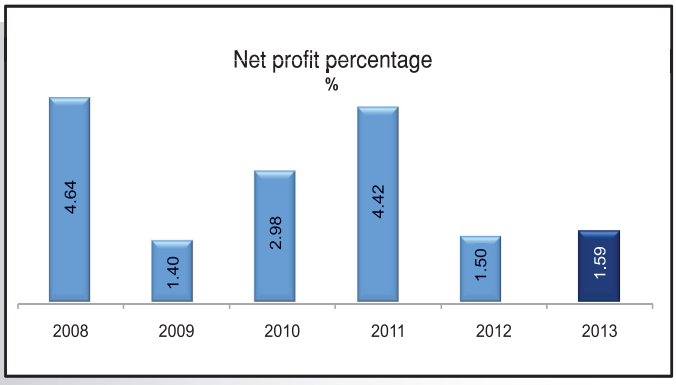








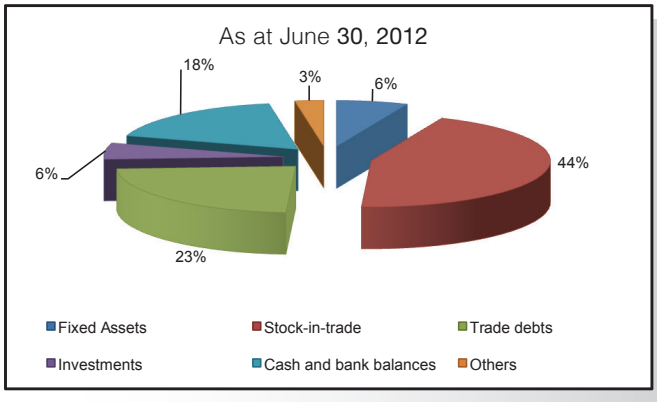


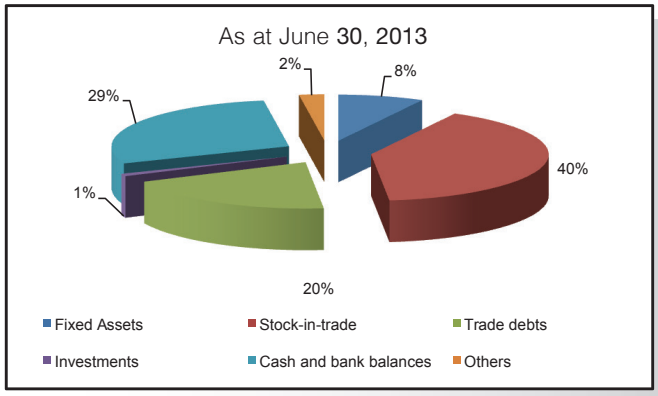


Financial Performance

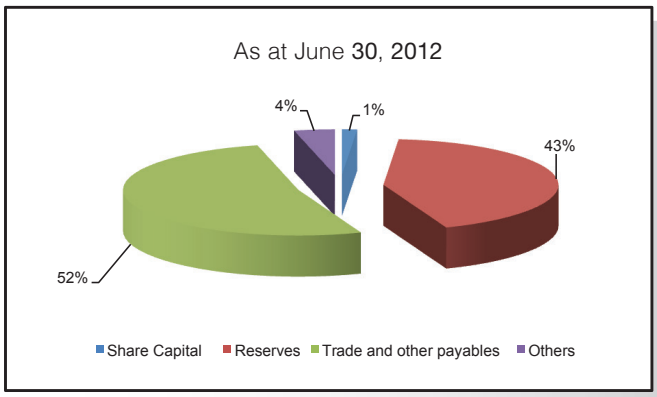
Balance Sheet Composition

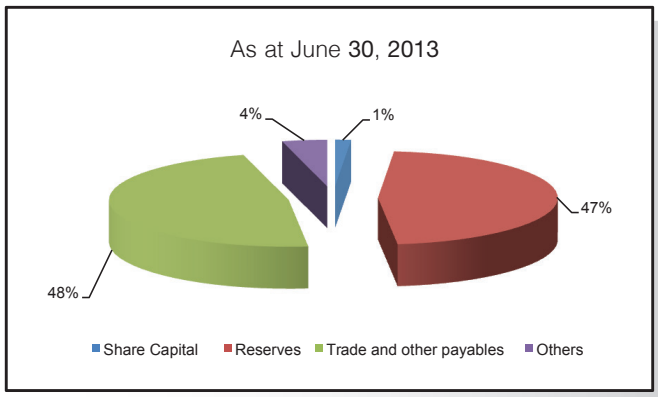
Assets



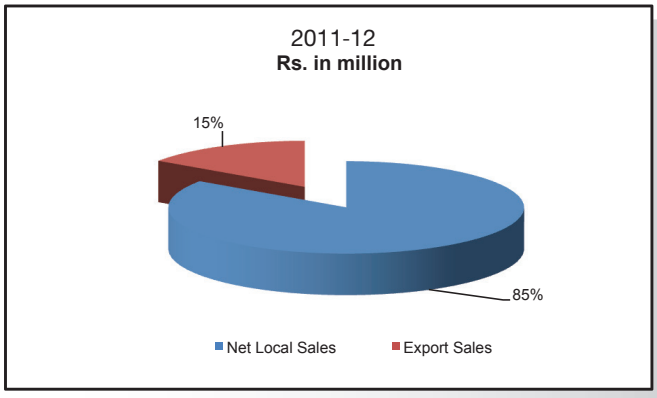


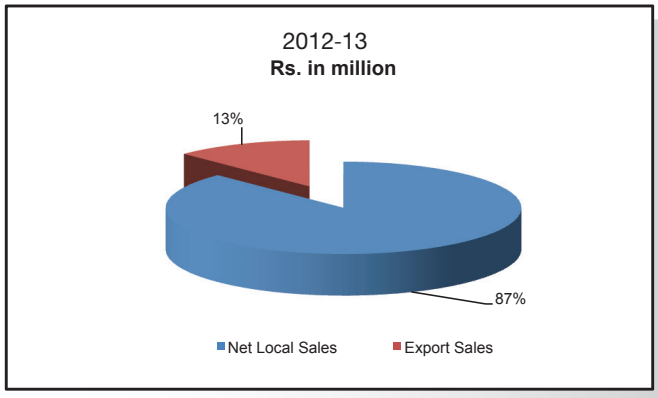
Share capital, reserves and liabilities





Comparison of Local and Export Sales





AUDITORS' REPORT TO THE MEMBERS

We have audited the annexed balance sheet of National Refinery Limited as at June 30, 2013 and the related profit and loss account, cash flow statement and statement of changes in equity together with the notes forming part thereof, for the year then ended and we state that we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

It is the responsibility of the Company's management to establish and maintain a system of internal control, and prepare and present the above said statements in conformity with the approved accounting standards and the requirements of the Companies Ordinance, 1984. Our responsibility is to express an opinion on these statements based on our audit.

We conducted our audit in accordance with the auditing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the above said statements are free of any material misstatement. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the above said statements. An audit also includes assessing the accounting policies and significant estimates made by management, as well as, evaluating the overall presentation of the above said statements. We believe that our audit provides a reasonable basis for our opinion and, after due verification, we report that:

(a) in our opinion, proper books of accounts have been kept by the Company as required by the Companies Ordinance, 1984;

(b) in our opinion:

  (i) the balance sheet and profit and loss account together with the notes thereon have been drawn up in conformity with the Companies Ordinance, 1984, and are in agreement with the books of accounts and are further in accordance with accounting policies consistently applied except for the change as stated in note 2.3 with which we concur;

  (ii) the expenditure incurred during the year was for the purpose of the Company's business; and

  (iii) the business conducted, investments made and the expenditure incurred during the year were in accordance with the objects of the Company;

(c) in our opinion and to the best of our information and according to the explanations given to us, the balance sheet, profit and loss account, cash flow statement and statement of changes in equity together with the notes forming part thereof conform with approved accounting standards as applicable in Pakistan, and, give the information required by the Companies Ordinance, 1984, in the manner so required and respectively give a true and fair view of the state of the Company's affairs as at June 30, 2013 and of the profit, its cash flows and changes in equity for the year then ended; and

(d) in our opinion Zakat deductible at source under the Zakat and Ushr Ordinance, 1980 (XVIII of 1980), was deducted by the Company and deposited in the Central Zakat Fund established under section 7 of that Ordinance.

Chartered Accountants
Karachi

Dated: 15 August 2013

Name of the engagement partner: Farrukh Rehman

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Statement Of Compliance

With The Code of Corporate Governance

This statement is being presented to comply with the Code of Corporate Governance (the Code) contained in listing regulations of Stock Exchanges where the shares of the Company are listed, for the purpose of establishing a framework of good governance, whereby a listed Company is managed in compliance with the best practices of corporate governance.

The Company has applied the principles contained in the Code in the following manner:

1. The Company encourages representation of independent non-executive directors and directors representing minority interests on its Board of Directors. At present the Board includes:

Category	Names
Independent Directors	Mr. Tariq Iqbal Khan Mr. Musa Bojang Mr. Bahauddin Khan
Executive Directors	Mr. Shuaib A. Malik Mr. Jamil A. Khan Alternate to Mr. Laith G. Pharaon, Director
Non-Executive Directors	Dr. Ghaith R. Pharaon Alternate Director: Mr. Abdus Sattar Mr. Laith G. Pharaon Mr. Wael G. Pharaon Alternate Director: Mr. Babar Bashir Nawaz

   The independent directors meet the criteria of independence under clause (i)(b) of the Code.

2. The Directors have confirmed that none of them is serving as a director in more than seven listed companies, including this Company.

3. All the resident directors of the Company are registered as taxpayers and none of them has defaulted in payment of any loan to a banking company, a DFI or an NBFI or, being a member of a stock exchange, has been declared as defaulter by that stock exchange.

4. No casual vacancy occurred in the Board of directors during the year ended June 30, 2013.

5. The Company has prepared a 'Code of Conduct' and has ensured that appropriate steps have been taken to disseminate it throughout the Company along with its supporting policies and procedures.

6. The Board has developed vision and mission statements, overall corporate strategy and significant policies of the Company. A complete record of particulars of significant policies along with the dates on which they were approved or amended has been maintained.

7. All the powers of the Board have been duly exercised and decisions on material transactions, including appointment and determination of remuneration and terms and conditions of employment of the CEO, other executive and non-executive directors, have been taken by the board.

8. The meetings of the Board were presided over by the Chairman or Deputy Chairman, and the Chief Financial Officer and Company Secretary attended all the meetings. The Board meets at least once in every quarter.

   Written notices of the Board meetings along with agenda and working papers were circulated at least seven days before the meetings. The minutes of the meetings were appropriately recorded, circulated and signed by the Chairman of the meeting of the Board of Directors.

9. The Directors were apprised of their duties and responsibilities from time to time.

10. The Board has approved terms of appointment and remunerations of Chief Financial Officer (CFO), Company Secretary and Head of Internal Audit.

11. The directors' report for this year has been prepared in compliance with the requirements of the code and fully describes the salient matters required to be disclosed.

12. The CEO and CFO duly endorsed the financial statements of the Company before approval of the Board.

13. The directors, CEO and executives do not hold any interest in the shares of the Company other than that disclosed in the pattern of shareholding.

14. The Company has complied with all the corporate and financial reporting requirements of the Code.

15. The Board has formed an Audit Committee. It comprises of four members, of whom two are non-executive directors, one is independent director and the Chairman of the committee is also an independent director.

16. The meetings of the audit committee were held at least once every quarter prior to approval of interim and final results of the Company and as required by the Code. The terms of reference of the committee have been formed and advised to the committee for compliance.

17. The Board has formed an HR and Remuneration Committee. It comprises of four members, of whom one is non-executive director, one is independent director and the Chairman of the Committee is also an independent director.

18. The Board has set-up an effective internal audit function and that is involved in the Internal Audit on full time basis relating to the business and other affairs of the Company.

19. The statutory auditors of the Company have confirmed that they have been given a satisfactory rating under the quality control review program of the Institute of Chartered Accountants of Pakistan, that they or any of the partners of the firm, their spouses and minor children do not hold shares of the Company and that the firm and all its partners are in compliance with International Federation of Accountants (IFAC) guidelines on code of ethics as adopted by the Institute of Chartered Accountants of Pakistan.

20. The statutory auditors or the persons associated with them have not been appointed to provide other services except in accordance with the listing regulations and the auditors have confirmed that they have observed IFAC guidelines in this regard.

21. The related party transactions have been placed before the audit committee and approved by the Board of Directors along with pricing methods for transactions carried out on terms equivalent to those that prevail in the arm's length transactions.

22. The 'closed period', prior to the announcement of interim/final results, and business decisions, which may materially affect the market price of Company's securities, was determined and intimated to directors, employees and stock exchanges.

23. Material/price sensitive information has been disseminated among all market participants at once through stock exchanges.

We confirm that all other material principles contained in the Code have been complied with.

On behalf of the Board

SHUAIB A. MALIK
Deputy Chairman & Chief Executive Officer

August 14, 2013

NRL IMS (HSEQ) Policy

Attock Oil Group

National Refinery Limited

Occupational Health, Safety, Environment & Quality

Policy Statement

National Refinery Limited is committed to the **Occupational Health & Safety** of its employees, protection & continual improvement of the **Environment** and to produce **Quality** products to the satisfaction of customers.

It staunchly believes in the application of this commitment to its customers, contractors, suppliers and the community in which it operates to produce value added products. This guiding principle shall be used to demonstrate through the following:

- Carry out business in a manner to **prevent injury/ ill health** of entire workplace and community.
- Work on the principle that all **incidents can be prevented**. Therefore, vigorously promote a high standard of safety consciousness and permit to work system.
- Provide a safe working environment through **effective leadership** by supporting safety, fire protection & security programs and by protecting assets of the company.
- Develop contingency and **emergency preparedness plans** to minimize harm from any **incident.**
- Comply with **applicable laws and regulations.** Interact with government, industry and community on environmental issues.
- **Prevent pollution** by establishing programs to conserve energy, continually improve production processes, minimize wastes, harmful releases into the air, land and sea.
- **Continual Improvement** in Health, Safety, Environment & Quality Management and its performance by acquiring superior professional competencies, value addition & improvement in development of Human Capital.
- Periodically **evaluate performance** against established objectives.
- Provide **training** and create awareness to ensure that all employees, contractors and all stakeholders are fully informed about HSEQ policy.

Chief Executive Officer

NRL-POL-001 **Rev-03 / April 2008**

NRL at a Glance

First Lube Refinery	
Design Capacity	539,700 Tons per year of Crude processing
Design Capacity	76,200 Tons per year of Lube Base Oils
Date Commissioned	June 1966
Project Cost	Rs. 103.9 million
Fuel Refinery Before Re-Vamp	
Design Capacity	1,500,800 Tons per year of Crude processing
Date Commissioned	April 1977
Project Cost	Rs. 607.5 million
After Re-Vamp	
Design Capacity	2,170,800 Tons per year of Crude processing
Date Commissioned	February 1990
Project Cost of Revamping	Rs. 125.0 million
BTX Unit	
Design Capacity	25,000 Tons per year of BTX
Date Commissioned	April 1979
Project Cost	Rs. 66.7 million
Second Lube Refinery Before Re-Vamp	
Design Capacity	100,000 Tons per year of Lube Base Oils
Date Commissioned	January 1985
Project Cost	Rs. 2,082.4 million
After Re-Vamp	
Design Capacity	115,000 Ton s per year of Lube Base Oils
Date Commissioned	June 2008
Project Cost of Revamping	Rs. 585.0 million
Shareholders' Equity	
June 1966	Rs. 20.0 million
June 2013	Rs. 26,871.4 million

Refinery Upgradation Projects

Following are the projects where Engineering Design has been completed, Project Management Consultant has been appointed and Company is in process of appointing Engineering, Procurement, Construction and Commissioning (EPCC) Contractor:

- **Diesel De-Sulphurization Unit**
  In order to meet the environment standards of Euro-II, the Company is in the process of planning the installation of Diesel De-sulphurization Unit. The engineering design is ready and bid documents are under preparation. The plant is expected to be commissioned by December 2015.

- **Naphtha Isomerization Project**
  To overcome deficit production of Motor Gasoline in the Country, Company has planned to undertake Isomerization Project to increase the production of Motor Gasoline by 192,000 Metric Tons per year. The project is also likely to be completed by December 2015.

- **Two Stage Unit at Lube–I Refinery**
  The project has been planned to enhance the installed crude oil processing capacity from 12,050 Barrel per stream day (bpsd) to 17,000 bpsd and vacuum fractionation capacity from 5,200 bpsd to 6,600 bpsd. Engineering design is complete and the project is likely to be commissioned in 2015.

- **101 Crude Distillation Unit at Fuel Refinery**
  The project has been envisioned, to enhance the installed crude oil processing capacity from 50,000 bpsd to 53,000 bpsd at crude distillation unit of Fuel Refinery. The project is likely to be completed by December 2015.

- **Uniflex**
  The project is envisaged to add value to low cost feed components and produce prime products to improve the profitability of the company. It is considered to be installed along with other deep conversion units.

- **Reverse Osmosis Plant**
  250,000 gallons per day Reverse Osmosis Plant is in process of installation. The plant shall be ready for commissioning by December 2013. After commissioning and testing of this plant another Reverse Osmosis Plant of similar capacity shall be initiated.

- **Upgradation of SAP ERP System version 4.6C to SAP ECC6**
  The Company is in the process of up-gradation of its ERP system to improved Management and Financial Reporting. In this context, Company has purchased the new version of SAP with additional modules and has appointed consultants for the implementation is expected to be completed by mid of next year.

Organization Main Functions

National Refinery Limited:

NRL, is the largest petroleum-refining complex of Pakistan and comprises of three refineries & a BTX plant located in the industrial zone of Korangi in Karachi Metropolitan Area, 15 KM South East of the center of Karachi. The company was incorporated on August 19, 1963 as a public limited company. NRL was nationalized under economic reform order in January 1972 and its corporate matters were entrusted to State Petroleum Refining and Petrochemical Corporation Pvt. Limited (PERAC) under the Ministry of Production. In 1998 the corporate control of NRL was transferred to the Ministry of Petroleum & Natural Resources and in June 2005, NRL was privatized through Privatization Commission of Pakistan and Management control was transferred to Attock Oil Group of Companies through sale of 51% equity stake of the company.

History:
The first Lube Refinery was constructed by SNAM Progetti of Italy in May 1964 having a capacity to process 0.6 Millions Tons of crude oil per year. The refinery commenced its production in 1966 having design capacity 76,200 tons of lube base oil and 110,000 tons asphalt per year.

In 1974, a turnkey agreement was signed between National Refinery Ltd and Industrial Export Import (IEI) of Romania, to design and construct the Fuel Refinery with1.5 million tons per year of crude oil refining capacity. The Fuel Refinery was commissioned in April 1977.

Its processing capacity was further increased to 2.2 million tons per year of crude oil in the year 1990.

In January 1974, NRL entered into an agreement with Nordon et Cie of France for the design and erection of an Aromatics Extraction Unit for the production of Benzene, Toluene and Xylene (BTX). It was the country's first petrochemicals unit integrated with the unit of the Fuel Refinery. The Project was completed and commissioned in April 1979 in order to meet the country's requirements of feedstock for Aromatic solvents and explosives production.

The setting up of BTX plant downstream of the Fuel Refinery has been a valuable product portfolio expansion measure as it provides pure petrochemicals i.e. Benzene, Toluene and Xylene for the specialty chemicals market. Toluene was made available for usage at NRL's own Lube Dewaxing Units, and also the requirements of Toluene for Defence purposes are fulfilled by NRL.

Over the years, the demand for Lube Base Oils (LBO) increased and a need was felt to enhance production of LBO, the value added product from the Furnace Oil, which was exported till 1986. A second Lube Refinery was therefore planned, for which basic engineering and design was carried out by C.E. Lummus of U.K. A turnkey agreement was signed between IEI of Romania and NRL in 1981 to construct a second Lube Refinery to produce 100,000 tons of Lube Base Oils and 100,000 tons of Asphalts. The second Lube Refinery was commissioned in January 1985.

At present NRL is the sole producer of Lube Base Oils, with a combined achieved production capacity of 190,000 tons/year of its two Lube Refineries. Besides, it produces 225,000 tons/year of road Bitumen from its Lube Refineries. NRL has grown and developed with the country and today possesses a key position in oil refining sector of the country. The refinery complex of NRL consists of four production entities:

1-	Lube -I Refinery	Crude Oil Processing 600,000 Tons Per Annum (TPA), Lube Base Oil 76,200 TPA (Designed)
2-	Fuel Refinery	Crude Oil Processing 2.2 Million TPA
3-	BTX Plant	BTX production 25,000 TPA
4-	Lube -II Refinery	Lube Base Oil 100,000 TPA

Recent Development / Future Projects:

Diesel Desulphurization:

NRL has taken initiatives towards production and marketing of environment friendly fuels in Pakistan. A study has already been completed to put up a Diesel Desulphurization unit to produce Ultra Low Sulphur Diesel (ULSD). Existing, Kerosene Hydro treating unit out of service will be utilized for this along with new auxiliary units. Preliminary study indicated that unit could be revamped to Diesel Desulphurization unit of capacity 12,000 Barrel Per Day for ULSD production. Contract for engineering design specifications was awarded to M/s UOP and has been completed.

Raw Material:

Crude oil is the raw material for any refinery. The crude oil processed at NRL includes Arabian Light, Iranian light and local crude. The approximate ratio of imported Crude and Local Crude is 85% and 15% respectively. The crude oil is stored in tanks.

Crude oil is a mixture of different hydrocarbons in liquid form, which is lighter than water. Crude oil of different origins has different compositions and quality. It also contains very small quantities of other elements like Sulphur, Nitrogen and some metals. Some quantity of water and salts are also present in the crude oil.

Chemicals Used:

Various types of chemicals are used in refining processes. Besides refining processes, various types of chemicals are also used in water treatment as well as in finished products. Some of the chemicals used in refining processes or as additives in finished products, with their specific functions are shown in Table I & II respectively.

Table-I

Chemicals Used in Various Processe

Chemical Name / Brand Name	Function
Caustic Soda	For neutralization & removal of Sulphur compounds.
Ammonia	For pH control.
PERC (Perchloroethylene)	Used at plat-forming unit and enhances the acid side reaction.
Sulpholane	At BTX unit Sulpholane is used in the extraction section.
Clay	In the fractionation section of BTX unit, clay is used to remove olefins.
Propane	Used in De-asphalting process. It acts as a solvent & separates the asphalt from the oil.
Furfural	To remove the non-praffinic hydrocarbons from lube oil distillate at Furfural Extraction Unit.
Platinum catalyst	Plat-forming catalyst
Cobalt Molybdenum Catalyst	Hydro treatment catalyst.
Methyl Ethyl Ketone	Used for de-waxing of lube oil.
De-emulsifiers	To break oil water emulsion in desalters.
Corrosion inhibitor	To combat overhead corrosion.
Hydrazine's	Anti oxidants in Boilers.
Anti scaling	To control scale formation
Hydrochloric Acid	Water Treatment Plant.

Table-II
Chemicals Used as Additive in Finished Products

Chemical Name / Brand Name	Function
Pour point depressant	To reduce the pour point
Antioxidants	Used for aviation fuel.

Production Process (Fuel Refinery):
Crude oil is processed at fuel refineries to produce products like LPG, Motor Spirit, Kerosene, Aviation Fuels, High Speed Diesel and Furnace oil. The atmospheric bottom is used as feedstock for producing lube base oil at Lube Refinery. Different processes carried out at refinery are discussed below:

Desalting:
The purpose of desalting is to remove brine, solids and other insoluble impurities from crude oil. To accomplish this, crude is first preheated in heat exchangers in order to have the required viscosity normally in the range of 5-15 centistokes. Salts and sediments are removed in desalter by washing the crude oil with water (typically 2-4% of the total crude feed). These are settled with wash water and tend to form emulsions. The wash water is separated by electrostatic precipitation using de-emulsifiers.

The salts thus removed are mainly chlorides and Carbonates of Magnesium, Sodium and Calcium. They cause corrosion downstream in the heat exchangers, furnaces and distillation units if not removed. The desalting process is an important upstream step to reduce the maintenance cost of the downstream equipments.

Distillation Process:
The desalted crude oil after preheating by heat exchangers and furnaces is fractionated in distillation tower. The distilled fractions of crude oil mainly consist of residue, gas oil and overhead (mixture of gases, light Naphtha, Heavy Naphtha, Kerosene and steam/condensate) products. The gas oil and kerosene are drawn off from side strippers where lighter ends are removed to maintain the flash point.

Naphtha Stabilizer and splitter:
Naphtha stabilizer is provided to remove light ends from full range naphtha. LPG separated during process is sent to storage. Stabilized naphtha is then charged to naphtha splitter where it is splitted into light naphtha and heavy naphtha fractions. Major part of heavy naphtha is upgraded at hydrobon and plat-forming units. Light naphtha is used for gasoline blending.

Merox Sweetening Units:
LPG, Light Naptha, Heavy Naptha and Kerosene are treated at Merox sweetening units in the presence of catalyst and thus Sulphur compounds are removed to make these products suitable for marketing.

Hydro-Treating Unit:
In the Hydro unit, Heavy Naphtha is treated with hydrogen rich gas stream at high pressure and elevated temperature in the presence of catalyst (Cobalt Molybdenum). The Sulphur present in Heavy Naphtha is converted to H2S, Nitrogen to ammonia (NH3), Halide to HCl and oxygen to H2O. In this process hydro treated Naphtha is produced which is feed stock for Plat-Forming Unit.

Plat-Forming Unit:
Plat-forming is a catalytic reforming process to up-grade the Octane Number of the low octane hydro-treated Naphtha to produce High Octane Blending Component (HOBC) for the production of motor gasoline or the feed stock for BTX Extraction Unit.

The treated Naphtha is the feed of plat-forming unit, which consists of a Bi-metallic catalyst (Platinum Rhenium and Aluminum oxide as a carrier). Basically, the plat-forming process is the re-arrangement of the molecules of Naphtha feed by changing the molecular structure of the hydrocarbons. The by-products of plat-forming unit are LPG, hydrogen rich gas (part of which is recycled in the plat-forming process and remaining is used as a refinery fuel). LPG after sweetening goes to storage.

Propane Recovery Unit:
Liquefied Petroleum Gas (LPG) from plat-forming unit is further fractionated for production of high purity refrigeration grade propane. Propane is used In-house as solvent at Propane De-asphalting unit (PDA) and for refrigeration purpose at MEK units.

BTX Plant:
Based on Reformate as feedstock from the Fuel Refinery. The unit is designed to extract the aromatic by SHELL Sulfolane extraction process. This aromatic mixture is fractionated through multi stage distillation for the production of high purity Benzene, Toluene, and Xylene. The BTX unit has two sections:

- Extraction section
- Fractionation section.

In the Extraction Section Aromatics are extracted

from the Reformat using the solvent “Sulfolane”. Non-aromatics are pumped to storage after washing with water. They are used to blend in motor gasoline.

In the Fractionation Section Aromatic extract is clay-treated, to remove Olefins. Thereafter Benzene, Toluene, and Xylene are separated in fractionating columns

Production Process (Lube Refinery):
NRL’s two Lube Refineries were installed with a time gap of nearly 19 years with each other. The starting point of first Lube Refinery is a Crude Distillation Unit (CDU) and subsequent Vacuum Distillation Unit (VDU), whereas the Second Lube Refinery directly starts with a Vacuum Distillation as it takes feedstock from Fuel Refinery’s Crude Distillation Unit (CDU). Whereas the downstream process units are same in basic technology, The second Lube Refinery designed in eighties has more sophisticated, advanced and energy efficient plants.

Atmospheric and Vacuum Distillation Process:
The Reduced Crude oil is usually heated to 395°C and fed to the Vacuum Distillation Tower, which is kept under high vacuum (26-27 inches of Hg). The gases from the top of the vacuum Tower are sucked by means of steam ejectors and condensed along with steam. The oil and water are then separated.

The lubricating oil distillates obtained by vacuum distillation process are about 47% of the feedstock and the remaining 53% is called Vacuum Residue, which is a valuable material as it still contains about 38% lube oil in it, which cannot be taken out by the above distillation process. It is therefore processed at the Propane Deasphalting Unit (PDA).

Propane De-Asphalting Process (PDA):
In this process the Vacuum Residue product i.e the heaviest residual portion of the vacuum distillation, is treated with propane for the production of heavy lubricating oils and asphalts. The process is carried out at a high-pressure approximately 480-525 psig and at a controlled temperature of 55°C to 70°C. Liquid propane acts as a solvent and dissolves higher fractions of oil and rejects the heavier asphalted material from the charge oil. The oil thus extracted from the feedstock is called de-asphalted oil and the material recovered from the bottom of the tower is termed as Asphalt. Propane is recovered from oil using Flash Towers, Stripping Towers.

Furfural Extraction Process:
In this process low viscosity index (LVI) non-paraffinic hydrocarbons of lube oil distillate are extracted from the lubricating oil distillates obtained from vacuum distillation unit & PDA units. In extraction process the charge oil is brought in contact with solvent (Furfural) counter-currently in a Rotating Disc Contractor (RDC) Tower. The RDC tower is operated and is full of oil and solvent. As the Furfural is heavier than oil, it travels to the bottom of the tower along with the extracted non-paraffins, which remain dissolved in it.

Finally the solvent and non-paraffin mix is drawn from the bottom of the RDC tower. The solvent has to be separated from the non-paraffin mix so that it can be reused. The oil available near the top portion of the RDC tower from which non-paraffinic

hydrocarbons have been extracted in the RDC tower is termed as “Raffinate”. This Raffinate also contains about 10-30% of Furfural. This Furfural is separated under a vacuum of 66 cm of Hg at a temperature of 205°C. The Raffinate (Lube oil) is the product from which non-paraffinic hydrocarbons have been extracted and its viscosity index (VI) is raised.

Methyl Ethyl Ketone (MEK) De-Waxing Process:
The de-waxing process is employed to remove the waxes from the raffinate oil by dissolving the raffinate in a solvent mixture containing Methyl Ethyl Ketone (55%) and Toluene (45%). The mixture of oil and waxes is then cooled to crystallize the waxes. The wax is then separated from the oil in the rotary filter.
The wax and the filtrate oil are processed further in separate system in which the solvent is recovered by evaporation and steam stripping.

Hydro Finishing Process:
In this final processing stage, the lube base oils are stabilized and their colour is further improved by hydrogenation reaction in the presence of a catalyst.

The hydro finished lube oils are dispatched to refinery storage tanks for distribution to Oil Marketing and Lube Oil Blending Companies.

Oil Movement And Shipping:
Huge quantity and variety of crude oils i.e about 3 million tons per annum and about equal tonnage distributed in about thirty products are handled at NRL. For this, elaborate system of pumping stations, pipelines, tankage and loading gantries are maintained. The inventory of crude oil and products stored at refinery tankage has enormous monetary value. This operation involves receipt and transfer of crude oil from port terminal, inland domestic crude oil receipts, transfer to and receipts from processing units, product transfer to Oil Marketing Companies and product shipment through tank lorry filling gantries.

About 150 Nos. crude oil and product storage tanks are utilized for this purpose. Shipping, Marketing & Sales Departments work side-by-side with Oil Movement to facilitate documentation’s and coordination with Excise Authorities.

Asphalt Production:
The residual effluents from the two Propane De-Asphalting Units and Furfural Extraction Units are blended here for the production of paving grade asphalts. At asphalt filling unit it is filled in drums or filled in tank lorries for Marketing.

Keamari Terminal:
NRL maintains a port terminal installations located at Keamari Oil peers about 18 Km from the Refinery premises. The Keamari Terminal is connected with the main Refinery through Korangi-Keamari pipelines. Very large Crude Oil storage tanks at Keamari Terminal receive imported Crude from the oil tankers, which is then transferred to the Refinery through pipeline. Huge tankage is available for export of Naphtha, which is also handled at Keamari Terminal. Fuel products from the Refinery are pumped via Keamari Terminal manifolds to Oil Marketing Companies, located adjoining to Keamari Terminal.

Keamari Terminal has the facility to receive the products, to store into the tanks and to distribute the products to OMCs (Oil Marketing Companies).

Korangi-Keamari Pipeline:
Finished oil products are stored separately in premises at Korangi. The Lube base oil, Asphalt, and BTX are transported by road either in drums or in tankers. Fuel products are dispatched through Korangi-Keamari (KK) pipeline to Keamari Terminal and finally to OMCs (Oil Marketing Companies). Similarly imported crude oil received at Keamari terminal is pumped to crude storage tanks at Korangi site.

Utilities At Refineries:
The major utilities required for the operation of refineries are fuel oil / Natural gas, water, steam, and electricity.

The steam is used for the following purposes:

- To operate the turbine driven pumps and compressors.
- As process steam.
- As atomizing steam for oil fired burners of furnaces
- For heating purposes.
- To pull vacuum by steam ejectors.

Water before feeding into boiler is treated at water treatment units to remove salts like calcium sulphate, calcium nitrates, magnesium-sulphate, and magnesium nitrates. Ion-exchange method is used to remove these salts.

The cooling water is used for the following purpose:

- Cooling the products.
- Condensing the vapors.
- Cooling of the equipments.

Cooling water cycle is a closed circuit system in which hot water from different sections of plant is collected, cooled in cooling tower in which heat is transferred from the water to the air by direct contact and again utilized with the addition of make up water.

Reverse Osmosis Plant:
The shortfall in water supply from Karachi Water & Sewerage Board has been partially managed by installation of 100,000 and 200,000 Gallons per day two R.O Plants. It is designed on underground brackish water source for which wells have been made to supply raw water.

Power Generation:
Self-Power Generation plant has a 7.5 MW steam turbo-generator and a 4.0 MW Diesel-Fuel Oil Engine Power Generator.

The self-power generation is meant for continuous uninterrupted power supply and to avoid plant shutdown and production loss due to power breakdown.

Quality Control And R & D:
Each and every product leaving the refinery has to conform to stringent international specifications. In order to achieve this fine degree of control, extensive monitoring of crude oils, feed stocks, intermediates, finished products and utilities is carried out with the aid of modern sophisticated instruments.

The role of the laboratory is, however, not limited to this activity alone. Research and Development work is carried out to give a basis for innovations in processes and products.

NRL strives to satisfy the customer by providing best value products within specifications. Close monitoring of refinery operations is coupled with testing of samples of intermediates and finished products on round the clock basis. Strict quality controls are ensured through testing and certification of each petroleum product before pumping to marketing companies

Safety And Fire Fighting:
Crude oil and petroleum products are highly inflammable and dangerous materials. Therefore adequate precautionary and preventive measures

are mandatory for safe operation. Safety and Fire Fighting personnel are responsible to ensure implementation of safety procedures developed to maintain safe conditions at plant during operation and maintenance to avoid accidents.

A fully equipped and well trained Fire fighting contingent is available round the clock with fleet of fire fighting trucks and adequate inventory of foam to handle emergencies.

Maintenance And Workshop:
Petroleum refining involves high temperature and high-pressure technologies utilizing high-pressure reactors, vessels, towers, heat exchangers, furnaces, pipelines, pumps and compressors along with sophisticated instrumentation and electrical

installations. Reliability of Refinery equipments running round the clock basis is ensured through regular monitoring, preventive maintenance and repairs by the Maintenance Departments.

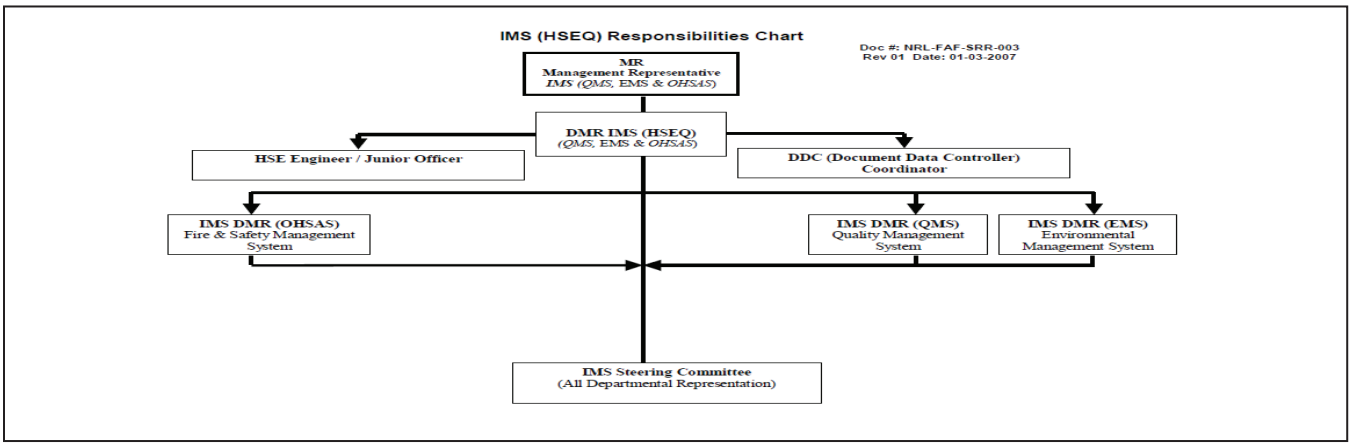
Operational history of each equipment is maintained for diagnosis and to plan the future needs.

Complete shutdowns of units are planned for preventive maintenance and replacements to avoid breakdowns and forced shutdowns.

The Workshop, a vital unit of Maintenance department provides support to the production by undertaking necessary repair in case of contingencies. The Workshop possesses sophisticated machinery for undertaking repair work and fabrication of parts to ensure continuous refinery operation.

Ware House:
National Refinery Limited maintains a large Warehouse for storing mechanical spares and supplies for the maintenance of refinery equipment. Warehouse is also responsible for storing and supply of chemicals used in refinery processes. A large number of different parts and supplies of high value are stored and maintained in NRL Warehouse. An elaborated re-ordering system is followed so that quality product supply is ensured at all points in time.

NRL IMS (HSEQ) Management System



IMS Governing Procedures:-

S.No	System Procedure No	System Procedure Title
01	NRL-SPR-DDC-001	Document Data Control And Record Management
02	NRL-SPR-MRM-002	Management Review Meeting
03	NRL-SPR-SRR-003	Structure, Roles, Responsibilities and Accountabilities
04	NRL-SPR-CPA-004	Corrective and Preventive Action
05	NRL-SPR-AWT-005	Awareness, Training and Competence
06	NRL-SPR-CAC-006	Communications, Consultation and Participation
07	NRL-SPR-MAM-007	Calibration, Monitoring and Measurement
08	NRL-SPR-EVC-008	Evaluation of Compliance
09	NRL-SPR-AUD-009	Internal Audit
10	NRL-SPR-EPR-010	Emergency Preparedness and Response
11	NRL-SPR-TRR-011	Tracking of Regulations and other Requirements
12	NRL-SPR-AAP-012	Agency Approvals for EMS & OHSAS
13	NRL-SPR-OCP-013	Operational Control
14	NRL-SPR-CCP-014	Contractor Control
15	NRL-SPR-AIA-015	Environmental Aspects & Impacts Analysis
16	NRL-SPR-EOT-016	Environmental Objectives, Targets and Management Programs
17	NRL-SPR-HRA-017	Occupational Health & Safety Hazards Identification and Risks Assessment
18	NRL-SPR-OTM-018	Occupational Health & Safety Objectives and Management Programs
19	NRL-SPR-RIP-019	Review of (HSEQ) Identified Projects
20	NRL-SPR-NCR-020	Control of Non-Conforming Product
21	NRL-SPR-QOB-021	Quality Objectives, Targets and Analysis of Data

ISO 9001, ISO 14001 & Ohsas 18001 Compliance Mechanism

Standard Clauses / Requirement	Compliance Mechanism Description
HSEQ Policy awareness (NRL-SPR-CAC-006 / NRL-SPR-AWT-005) ISO 9001:2008 Clause 5.3 ISO 14001:2004 Clause 4.2 OHSAS 18001:2007 Clause 4.2	HSEQ policy defined, awareness commitment, effectiveness, compliance, legislation
HSEQ Manual ISO 9001:2008 Clause 4.2.2 ISO 14001:2004 Clause 4.4.4 OHSAS 18001:2007 Clause 4.4.4	HSEQ manual defined, describe process of interaction, any exclusion
Responsibilities and Authorities (NRL-SPR-SRR-003) ISO 9001:2008 Clause 5.5.1 ISO 14001:2004 Clause 4.4.1 OHSAS 18001:2007 Clause 4.4.1	Organization chart, Job Descriptions, Roles, responsibilities and authorities defined.
Training Awareness and Competence (NRL-SPR-AWT-005) ISO 9001:2008 Clause 6.2.2 ISO 14001:2004 Clause 4.4.2 OHSAS 18001:2007 Clause 4.4.2	Documented procedure, List of courses, Course Evaluation, Attendance Record, Training Schedule, Training Need Matrix, Record of Individual.
EMS, Aspects & Impacts Identification (NRL-SPR-AIA-015) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.3.1 OHSAS 18001:2007 Clause N/A	Environmental aspects procedure, Environmental Risk Assessment, Significant Environmental Aspects identified (NRL-FAF-AIA-007).
Environmental Objective Targets and Management Program (NRL-SPR-EOT-016) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.3.3 OHSAS 18001:2007 Clause N/A	Environmental Objectives procedure, Selected Objective Planning, Awareness of responsibility, Environmental Management Program.
Environment Load Summary (NRL-SPR-AIA-015) (NRL-SPR-EOT-016) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.3.3 OHSAS 18001:2007 Clause N/A	Environmental Load identification available, Environmental Load Summary, Total Environmental Load Normal / Turnaround
Legal and other requirement (NRL-SPR-TRR-011) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.3.2 OHSAS 18001:2007 Clause 4.3.2	Documented procedure, list of laws and regulation regarding HSEQ, legal requirement for Environment / Occupational Health & Safety, Trace ability identification legal documents
OHSAS Risk Assessment (NRL-SPR-HRA-017) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause 4.3.1	Documented procedure, OHSAS Risk Assessment, Hazard identification check sheet, Reduction of Risks from un-tolerable to tolerable

Standard Clauses / Requirement	Compliance Mechanism Description
OHSAS Objective and Target (NRL-SPR-OTM-018) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause 4.3.3	Selected objectives planning for OHSAS, Awareness of responsibility, Objectives reviewed.
OHSAS Management Program (NRL-SPR-OTM-018) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause 4.3.4	Documented procedure, Management Program, Awareness responsibility, Management Program review
Communication and consultation (NRL-SPR-CAC-006) ISO 9001:2008 Clause 5.5.3 ISO 14001:2004 Clause 4.4.3 OHSAS 18001:2007 Clause 4.4.3	Documented procedure , External Communication, Internal communication Log, Record of communication
Documentation and Records (NRL-SPR-DDC-001) ISO 9001:2008 Clause 4.2.3 / 4.2.4 ISO 14001:2004 Clause 4.4.5 / 4.5.4 OHSAS 18001:2007 Clause 4.4.5 / 4.5.3	Documented procedure defined, Document Master List, Document Distribution, Document Change Request (Obsolete file), Control of Record Forms (Indexing, Filing, Storing), Master list of external documented, Documents approval, Documents review, Current version of document.
Operational Control (NRL-SPR-OCP-013) (NRL-SPR-MAM-007) ISO 9001:2008 Clause 7.5.1 ISO 14001:2004 Clause 4.4.6 OHSAS 18001:2007 Clause 4.4.6	Concerned SOP's available, Department identify and control hazardous material, Relevant MSDS sheet, PPE's, Exhaust ventilation system, First aid available, Safe handling operation equipments, Authorize for start up / shutdown, Maintenance effectively, Maintenance schedule and records, HSE related issues effectively manage, Emission testing, Solid Waste, Waste Disposal, Hygienic Condition, Vaccination & Hygienic Cards, Medical examination, Work permit.
EMS & OHSAS Project (NRL-SPR-RIP-019) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.3.1 OHSAS 18001:2007 Clause 4.3.1	Documented procedures, HSEQ related project aspect / impact, Awareness responsibilities, IEE, EIA, permits approval, Legal requirements compliance, Agencies approval
Evaluation of Compliance (NRL-SPR-EVC-008) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.5.2 OHSAS 18001:2007 Clause N/A	Documented procedure, Evaluation of compliance, Awareness of their responsibilities, NEQs periodic monitoring, Reviews, Legal, regulatory and other compliance
Accident / Incident (NRL-SPR-EPR-010) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.4.7 OHSAS 18001:2007 Clause 4.5.2	Documented procedure defined, Awareness of responsibilities, Record of Accident / Incident, Action taken, Accident / incident investigation, Root cause Analysis, Hierarchy of Controls,
Identification & Traceability ISO 9001:2008 Clause 7.5.3 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Corrective & preventive action, Status of Accident / Incidents. Identify product through suitable means, Trace ability, Identification, Reproducibility, Record management
Customer Property ISO 9001:2008 Clause 7.5.4 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Customer property preservation, Communication for lost of customer property, Record management.
Customer Satisfaction & Dissatisfaction ISO 9001:2008 Clause 8.2.1 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Feedback, Customer complaint, Record of customer complaint

Standard Clauses / Requirement	Compliance Mechanism Description
Customer Related Process ISO 9001:2008 Clause 7.2 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Customer requirement, Information, Specification, Change in requirement, Changes in customer order, Review of requirement, Confirmation of requirement.
Preservation of product ISO 9001:2008 Clause 7.5.5 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Preserve product before deliver, Suitable identification, Means, Trace ability, Identification, Handling, Storage, Protection
Product realization ISO 9001:2008 Clause 7.1 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Quality plan, Criteria for acceptance, Records, Process flow, Process mapping, Interrelated and interactive activities.
Purchasing ISO 9001:2008 Clause 7.4 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Purchasing procedure defined, Specified requirements, Purchasing information, Awareness of purchasing, Verification of purchased product, Inspection of purchase product
Emergency Preparedness and Response (NRL-SPR-EPR-010) ISO 9001:2008 Clause N/A ISO 14001:2004 Clause 4.4.7 OHSAS 18001:2007 Clause 4.4.7	Documented procedure of ERP, Awareness of Emergency Response Plan, Emergency situation handling equipments, Test regarding the emergency situation, Periodic test regarding emergency situation, Mock drills, Fire drills, Evacuation procedures.
Validation of process ISO 9001:2008 Clause 7.5.2 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Validation procedure defined, Criteria for review, Process approval, Records,
Quality Objective (NRL-SPR-QOB-021) ISO 9001:2008 Clause 5.4 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Documented procedure, Quality Objective defined, Quality Objective communicated, Awareness of responsibilities, Target, Time, Means, Resources
Data Analysis (NRL-SPR-QOB-021) ISO 9001:2008 Clause 8.4 ISO 14001:2004 Clause N/A OHSAS 18001:2007 Clause N/A	Documented procedure, Data analysis, Data analyzed, Awareness of responsibilities, CPA,, Audit, Test results, Customer feed back, Monitoring and measurement, Purchased verification / rejection
Monitoring and Measurement (NRL-SPR-MAM-007) ISO 9001:2008 Clause 8.2.3 / 8.2.4 / 7.6 ISO 14001:2004 Clause 4.5.1 OHSAS 18001:2007 Clause 4.5.1	Documented procedure, Monitoring and measuring equipments, Calibration schedule, Calibration record maintained, Record management, Calibration frequency, Trace ability identification and reproducibility, Suitable methods for monitoring and measurement of process & product.
Control of Non Conforming Product (NRL-SPR-NCR-020) ISO 9001:2008 Clause 8.3 ISO 14001:2004 Clause 4.5.3 OHSAS 18001:2007 Clause 4.5.2	Documented procedure, Non conforming reports, Identify non conformity, corrective action, Rejection report, Verification report, Testing results, Deviation results, Record management
Internal Audit (NRL-SPR-AUD-009) ISO 9001:2008 Clause 8.2.2 ISO 14001:2004 Clause 4.5.5 OHSAS 18001:2007 Clause 4.5.4	Documented procedure, Audit schedule, Previous Audit Report, External Audit Report, Audit Report communication, Root cause analysis, Corrective action request, Audit frequency, Audit checklist, CAR follow-up
Corrective and Preventive Actions (NRL-SPR-CPA-004) ISO 9001:2008 Clause 8.5.2 / 8.5.3 ISO 14001:2004 Clause 4.5.3 OHSAS 18001:2007 Clause 4.5.2	Documented procedure, Awareness CPA , Corrective / Preventive action, Causes of non conformity, Log Corrective & Preventive Action, Root cause analysis, Recommendations, Legal and regulatory and other requirements
Management Review (NRL-SPR-MRM-002) ISO 9001:2008 Clause 5.6 ISO 14001:2004 Clause 4.6 OHSAS 18001:2007 Clause 4.6	Documented procedure, MRM records, MRM record distribution, MRM Schedule, Awareness of responsibilities MRM, decision, Recommendations, time, Means, Resources, Approvals, Previous MRM, reporting

IMS (HSEQ) Management System

This document defines the scope of NRL's Occupational Health & Safety, Environmental and Quality Management Systems IMS (HSEQ) and provides linkages of system documents to the elements of the ISO 9001:2008, ISO 14001:2004 and OH&SMS 18001:2007 Standards.

NRL Integrated Management System IMS (HSEQ) provides a mechanism for Occupational Health & Safety, Environment and Quality Management Systems throughout all areas, units and departments of NRL Korangi Refinery, Keamari Terminal and Korangi-Keamari Pipeline.

EXCLUSION:
No design and development activity is required while producing products.

Therefore ISO 9001:2008 clause 7.3 and its subsequent clauses 7.3.1, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 7.3.6, 7.3.7 are excluded from the scope.

IMS (HSEQ) MANAGEMENT SYSTEM:
GENERAL REQUIREMENTS:
NRL has established, documented, implemented and maintained a Occupational Health & Safety, Environment and Quality Management Systems IMS (HSEQ) and continually improves its effectiveness according to the requirements of ISO 9001:2008, ISO 14001:2004 and OH&SMS 18001:2007.

To implement and continually improve the effectiveness of the IMS (HSEQ) Management Systems, NRL has managed to:

a) Determine the processes needed for the IMS (HSEQ) Management System and their applications throughout the organization,

b) Determine the sequence and interaction of these processes,

c) Determine criteria and methods required to ensure the effective operations and controls of these processes,

d) Ensure the availability of resources and information's necessary to support the operations and monitoring of these processes,

e) Monitor, measure where applicable and analyse these processes,

f) Implement actions necessary to achieve the planned results and continual improvement of these processes.

NRL ensures control over outsource processes that affects product conformity to the requirements. The type and extent of control applied at outsourced processes are well defined within the IMS (HSEQ) Management System.

Note 1: Processes needed for the IMS (HSEQ) Management System referred to above include processes for management activities, provision of resources, product realization, measurement, analysis and improvements.

Note 2: An "outsourced process" is a process that the organization needs for its IMS (HSEQ) Management System and which the organization chooses to have performed by an external party.

Note 3: Ensuring controls over outsourced processes does not absolve the organization of the responsibility of conformity to all customers, statutory and regulatory requirements. The type and extent of control to be applied to the outsourced process can be influenced by factors such as:

a) The potential impact of the outsourced process on the organization's capability to provide product that conforms to the requirements.

b) The degree to which the control for the process is shared.

c) The capability of achieving the necessary control through the application.

DOCUMENTATION REQUIREMENTS:
NRL has prepared its IMS (HSEQ) Management System documentation, which includes:

a) IMS (HSEQ) Manual:
NRL has established and maintained a IMS (HSEQ) Manual in principles of Occupational Health & Safety, Environment and Quality Management System that includes:

1) The scope of the IMS (HSEQ) Management System including details of and justification for any exclusion.

2) The documented procedures established for IMS (HSEQ) Management System or reference to them and A description of the interaction between the processes of the IMS (HSEQ) Management System.

b) IMS (HSEQ) Policy:

c) IMS (HSEQ) Objectives and Targets:

d) System Procedures (SPRs):

The system procedures (SPRs) are the second level documents, which serves as a guide for all to ensure that operations are carried out in a controlled and systematic manner, contain a detailed description of IMS (HSEQ) Management System requirement, as specified by ISO 9001:2008, ISO 14001:2004 and OH&SMS 18001:2007.

e) Quality Plans:
Quality Plans are second level documents that describe the systematic identification and management of the processes within the department(s).

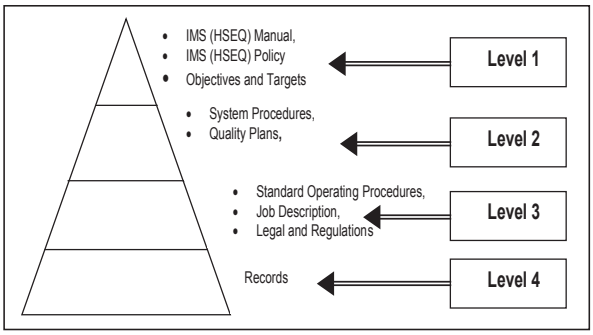
f) Standard Operating Procedures (SOPs):
The Standard Operating Procedures are third level IMS (HSEQ) documents, which contains the Purpose, Scope, Definition, Abbreviation & Concept, Responsibilities & Authorities, Requirement of Environment, Health & Safety & Quality Standard, Procedure, Precautionary steps, Records, References, Procedure distribution and Record of revision.

g) Job Description:
These are third level IMS (HSEQ) documents, which defines roles, responsibilities, accountabilities and delegating authorities etc.

h) Regulations and Standards:
These are third level IMS (HSEQ) document which covers legal and regulatory requirements that apply to all aspects i.e activities, services, processes, equipment, material and personnel.

i) Records:
Records are fourth level IMS (HSEQ) documents, required to ensure an effective planning, operation and control of the processes.

The IMS (HSEQ) Management System documentation:



Control of Documents:
NRL has established, implemented and maintained a system procedure (NRL-SPR-DDC-001) for controlling documents used in its IMS (HSEQ) Management System. This control ensures that the:

a) Documents are approved for adequacy prior to issue;
b) Documents are reviewed, updated as necessary and re-approved;
c) Documents are identified with current revision status;
d) The relevant versions of documents are available at points of use;
e) Documents remain legible and readily identifiable;
f) Documents of external origin necessary for the planning and operation;
g) Prevent the unintended use of obsolete documents, apply suitable identification to retain for any purpose

The copies of this Manual not marked CONTROL DOCUMENT are considered as UN-CONTROLLED DOCUMENT. Each page of IMS (HSEQ) Manual has separate revision Number for controlling purpose. After 20 changes the manual should be revised with next issue.

Reference Documents:
o Document Data Control and Record Management (NRL-SPR-DDC-001)

Control of Records:
Records are established and controlled to demonstrate conformance to requirements and effective operation of the IMS (HSEQ) Management System. The organization has established and maintained a System Procedure for record identification, storage, retrieval, protection, retention and disposition of records. Records remain legible, readily identifiable and retrievable.

Reference Documents:
- o Document Data Control and Record Management (NRL-SPR-DDC-001)
- o SOPs Information Technology Services

Management Responsibility:
Management Commitment:
Management is committed to Health and Safety of employees, Environment protection and Products quality and demonstrates its commitment to the development and improvement of the IMS (HSEQ) Management System by:

a) Communicating at all levels, the importance of meeting customer, Health & Safety and Environment requirements as well as statuary and regulatory requirements;
b) Establishing the IMS (HSEQ) policy and IMS (HSEQ) objectives;
c) Conducting Management reviews;
d) Ensuring the availability of resources.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)
- o IMS (HSEQ) Policy (NRL-POL-001)
  IMS (HSEQ) Objectives

Customer Focus:
Management ensures that customer requirements are determined and are met with the aim of enhancing customer satisfaction.

Reference Documents:
- o Communication, Consultation and Participation (NRL-SPR-CAC-006)
- o SOP's Marketing & Sales Support
- o SOP's Supply & Trade Relation
- o SOP's Keamari Terminal
- o SOP's Shipping

IMS (HSEQ) Policy:

NRL has established its policy for Health, Safety, Environment & Quality and ensures that it:

a) Is appropriate to the purpose, nature and scale of the organization,
b) Includes a commitment to prevention of injury and ill health and continual improvement in IMS (HSEQ) Management and performance.
c) Provides a framework for setting and reviewing IMS (HSEQ) objectives and targets.
d) Includes a commitment for prevention of pollution and to comply with applicable legal and other requirements.
e) Is communicated to all persons working under the control of the organization.
f) Is available to interested parties.
g) Is periodically reviewed for continuing suitability at appropriate level of the organization.

The IMS (HSEQ) Policy is communicated and enforced through management reviews, training, displayed at appropriate locations.

The IMS (HSEQ) policy is reviewed in the Management review meetings for its continuous suitability and improvement.

Reference Documents:
- o Communication, Consultation and Participation (NRL-SPR-CAC-006)
- o IMS (HSEQ) Policy (NRL-POL-001)

Planning:
Environmental Aspects and Impacts:
NRL has established, implemented and maintained a system procedure (NRL-SPR-AIA-015) for identifying environmental aspect and impact.

Reference Documents:
- o Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- o Environmental Objectives, Targets and Management Programs (NRL-SPR-EOT-016)

Occupational Health & Safety Hazards and Risks:

NRL has established, implemented and maintained a system procedure (NRL-SPR-HRA-017) for identifying OH&S Hazards, risks determine necessary controls.

Reference Documents:
- o Occupation Health and Safety Hazards Identification and Risks Assessment (NRL-SPR-HRA-017)
- o Occupational health and Safety Objectives & Management Programs (NRL-SPR-OTM-018)

Legal, Regulatory & Other Requirements:
NRL has established and maintained a System Procedure (NRL-SPR-TRR-011) for the purpose of identifying, accessing and communicating legal and other requirements that are applicable for Health, Safety, Environment and Product Quality.

Reference Documents:
- o Tracking of Regulations and other requirements (NRL-SPR-TRR-011)
- o Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- o Environmental Objectives, Targets and Management Programs (NRL-SPR-EOT-016)
- o Occupation Health and Safety Hazards Identification and Risks Assessment (NRL-SPR-HRA-017)
- o Occupational Health and Safety Objectives & Management Programs (NRL-SPR-OTM-018)

Evaluation of Compliance:
NRL has established, implemented and maintained a system procedure (NRL-SPR-EVC-008) to evaluate compliance of applicable legal requirements in relation to Health, Safety, Environment and Product quality. Records of periodic evaluation are maintained and discussed in Management Review meeting.

Reference Documents:
- o Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- o Environmental Objectives, Targets and Management Programs (NRL-SPR-EOT-016)
- o Occupational health and Safety Hazards Identification and Risks Assessment (NRL-SPR-HRA-017)
- o Occupational Health and Safety Objectives & Management Programs (NRL-SPR-OTM-018)
- o Evaluation of Compliance (NRL-SPR-EVC-008)

Objectives and Targets:

a) Quality Objectives:
NRL has established, implemented and maintained a system procedure (NRL-SPR-QOB-021) for developing quality objective at appropriate / relevant functions and levels to meet the product requirements. These objectives are defined, measurable and consistent with the IMS (HSEQ) policy.

Quality Management System Planning:
The planning of Quality Management System is carried out to meet the requirements in ISO 9001:2008 clause 4.1 as well as the Quality Objectives and the integrity of the Quality Management System is maintained when changes to the Quality Management system are planned and implemented.

Reference Documents:
- o Quality Objectives, Targets and Analysis of Data (NRL-SPR-QOB-021)
- o Quality Plan

b) Environmental Objectives and Targets:
NRL has established, implemented and maintained a system procedure
(NRL-SPR-EOT-016) for environmental objectives and targets at relevant function and level.

The Environmental objective consistent with the IMS (HSEQ) Policy, including commitment to prevention of pollution, shall be measurable (where practicable) to compliance with applicable legal and other requirements, which organization subscribes for continual improvement.

Reference Documents:
- o Environmental Aspect and Impact Assessment (NRL-SPR-AIA-015)
- o Environmental Objectives & Targets and Management Programs (NRL-SPR-EOT-016)
- o IMS (HSEQ) Review of Identified Projects (NRL-SPR-RIP-019)
- o Communication, Consultation and participation (NRL-SPR-CAC-006)

c) Occupational Health & Safety Objectives and Targets:
NRL has established, implemented and maintained a system procedure (NRL-SPR-OTM-018) for Occupational Health & safety objectives and targets at relevant function and level.

The OH&S objectives are consistent with IMS (HSEQ) Policy, including commitments to the prevention of injury and ill health, shall be measurable (where practicable) to compliance with applicable legal and other requirements which organization subscribes for continual improvement.

Reference Documents:
- o Occupational Health and Safety Hazard Identification and Risk assessment (NRL-SPR-HRA-017)
- o Occupational Health and Safety Objectives & Management Programs (NRL-SPR-OTM-018)
- o IMS (HSEQ) Review of Identified Projects (NRL-SPR-RIP-019)
- o Communication, Consultation and participation (NRL-SPR-CAC-006)

MANAGEMENT PROGRAMS:

a) Environmental Management Programs:
NRL has established, implemented and maintained a system procedure (NRL-SPR-EOT-016). This shall include:

- o Designation of responsibility for achieving objectives and targets at relevant functions and levels of the organizations and
- o The means and time frame by which objectives are to be achieved.

Reference Documents:
- o Environmental Aspect, Impact Assessment (NRL-SPR-AIA-015)
- o Setting of Objectives & Targets and Management Programs (NRL-SPR-EOT-016)
- o Agency Approvals for IMS (HSEQ) (NRL-SPR-AAP-012)

a) Occupational Health & Safety Management Programs:

NRL has established, implemented and maintained a system procedure (NRL-SPR-OTM-018). This shall include:

- o The designation of responsibility and authority for achieving objectives at relevant functions and levels of the organization; and
- o The means and time- frame by which objectives are to be achieved.

Reference Documents:
- o Occupational Health and Safety Hazard Identification and Risk (NRL-SPR-HRA-017)
- o Occupational Health and Safety Objectives & Management Programs (NRL-SPR-OTM-018)
- o Agency Approvals for IMS (HSEQ) (NRL-SPR-AAP-012)

Roles, Responsibility, Accountability and Authority:

NRL has established, implemented and maintained a system procedure (NRL-SPR-SRR-003). Functions and their interrelationships within the NRL including responsibilities, accountabilities and authorities are defined and communicated in order to facilitate an effective IMS (HSEQ) Management System.

a) The organizational charts (Organogram) describe the hierarchy structure of NRL.
b) The Job descriptions of individuals describe the responsibilities, accountabilities and authorities of the NRL personnel for effective IMS (HSEQ) Management System.
c) The System Procedures, Quality Plans and Standard Operating Procedures describe the roles, responsibilities and accountabilities as well as authorities of personnel in relation to IMS (HSEQ) Management System requirements.
d) NRL has IMS (HSEQ) Management Representative (MR) and Deputy Management Representatives (DMRs) for effective coordination and execution of IMS (HSEQ) Management System.
e) NRL has IMS (HSEQ) Council for review and Steering Committee for implementation of IMS (HSEQ) Management System.

Reference Documents:
- o Organogram (NRL-ORG-001)
- o Structure Roles, Responsibilities Accountabilities and Authorities (NRL-SPR-SRR-003)
- o System procedures
- o Standard Operating Procedures
- o Quality Plans
- o SOP's Human Resource

Management Representative:

NRL management has appointed a member of organization's management as a IMS (HSEQ) Management Representative, who irrespective of other responsibilities has defined responsibility, accountability and authority for the IMS (HSEQ) Management System as defined in the System procedure (NRL-SPR-SRR-003).

Reference Documents:
- o Structure Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)
- o List of Steering Committee (NRL-FAF-SRR-002)
- o Nomination Letters

Communication, Participation and Consultation:

NRL has established, implemented and maintained a system procedure (NRL-SPR-CAC-006) for internal & external communications and consultation.

Reference Documents:
- o Communication, Consultation and Participation (NRL-SPR-CAC-006)
- o Structure Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)
- o List of Steering Committee (NRL-FAF-SRR-002)

Management Review:

National Refinery Limited has established, implemented and maintained a system procedure (NRL-SPR-MRM-002) to ensure its continuing suitability, adequacy and effectiveness for continual improvement.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)
- o Structure Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)

Resource Management:

Provision of Resources:
Management of NRL is determined to provide all resources needed to:

a) Implement and maintain the IMS (HSEQ) Management System and continually improve its effectiveness,
b) Implement Health, Safety and Environmental Management Programs.
c) Enhance customer satisfaction by meeting customer requirements.

Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)

Human Resources:
Personnel performing work affecting conformity to product requirements are competent on the basis of appropriate education, training, skills and experience.
Defining roles, allocating responsibilities and accountabilities, and delegating authorities, to facilitate effective IMS (HSEQ) Management; roles, responsibilities, accountabilities, and authorities are documented and communicated.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)
- o SOP's Human Resource Department

Competence, Training and Awareness:
NRL has established, implemented and maintained a System Procedure (NRL-SPR-AWT-005) for competence, training and awareness.

a) The OH&S consequences, actual or potential, of their work activities, their behavior, and the OH&S benefits of improved personnel performance;
b) Their roles and responsibilities and importance in achieving conformity to the IMS (HSEQ) policy and procedures and to the requirements of the IMS (HSEQ) management system including Emergency preparedness and response requirements.
c) The significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,
d) The necessary competence for personnel performing work affecting conformity to product requirements,
e) Personal are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objective,
f) The potential consequences of departure from specified procedures.

Reference Documents:
- o Competence, Training, & Awareness (NRL-SPR-AWT-005)
- o Structure Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)
- o Communication, Consultation and Participation (NRL-SPR-CAC-006)
- o Emergency Preparedness and Response (NRL-SPR-EPR-010)
- o Quality Objectives, Target and Analysis of Data (NRL-SPR-QOB-021)
- o Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- o Occupational Health and Safety Hazard identification and Risk Assessment (NRL-SPR-HRA-017)
- o SOP's Concerned department

Infrastructure and Work Environment:
NRL has provided and maintained the infrastructure and work environment needed to achieve conformity of product requirements through effective implementation of IMS (HSEQ) Management System. Infrastructure may include but not limited to:

- o Building, workspace and associated utilities
- o Process equipment (both hardware and software)
- o Supporting services (such as transport, communication and information systems)

Note: The Work environment relates to those conditions under which work is performed that includes physical, environmental and other factors (such as noise, temperature, humidity, lighting or weather)

Reference Documents:
- o Management Review meeting (NRL-SPR-MRM-002)
- o Structural Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)
- o SOP's Concerned Departments

Product Realization / Operational Control:

Planning of Product Realization:
NRL has established, implemented and maintained a System procedure (NRL-SPR-OCP-013) for Operational control and Product realization requirements. Planning of product realization, is consistent with the requirements of the other processes of IMS (HSEQ) Management System.

a) Quality objectives and requirements for the product;
b) The need to establish processes and documents, and to provide resources specific to the product acceptance;
c) The required verification, validation, monitoring, measurement, inspection and test activities specific to the product and the criteria for product acceptance;
d) Records needed to provide evidences that the realization processes and resulting products meet requirements.

NRL has identified and planned those operations and activities and that are associated with identified significant environmental aspect, hazards where the implementation of operational controls is necessary to manage the OH&S risk and significant environmental aspects.

This includes the management of change.

a) Operational controls, applicable to its activities; integrate those operational control into overall IMS (HSEQ) Management System;
b) Controls related to purchased goods, equipments and services;
c) Controls related to contractors and other visitors to the workplace;
d) SOPs, to cover situations where their absence could lead to deviations from IMS (HSEQ) policy and the objectives;
e) Stipulated operating criteria where their absence could lead to deviations from IMS (HSEQ) policy and objectives.

Reference Documents:
- o Operational Control (NRL-SPR-OCP-013)
- o Quality Objectives, Target and Analysis of Data (NRL-SPR-QOB-021)
- o Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- o Occupational Health and Safety Hazard identification and Risk Assessment (NRL-SPR-HRA-017)
- o Occupational Health & Safety Objectives, Targets and Management Programs (NRL-SPR-OTM-018)
- o Environmental Objectives, Targets and Management Programs (NRL-SPR-EOT-016)
- o SOP's Concerned department
- o QPLs Concerned department

Customer Related Process:

Determination of Requirements Related to the Product:

a) Requirements specified by the customer, including the requirements for delivery and post-delivery activities.
b) Requirements not stated by the customer but necessary for specified or intended use, where known
c) Statutory and regulatory requirements applicable to the product and
d) Any additional requirements considered necessary.

Note: Post delivery activities include warranty provisions, contractual obligations such as maintenance services and supplementary services such as recycling or final disposal.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)

- o Tracking of Regulations and other Requirements (NRL-SPR-TRR-011)
- o SOP's Shipping
- o SOP's Keamari Terminal
- o SOP's Supply & Trade Relation
- o SOP's Marketing & Sales Support
- o SOP's Quality Control

Review of Requirements Related to Product:
NRL reviews the requirements related to the products. This review is conduct prior to the NRL commitment to supply a product to the customer (such as submission of tenders, acceptance of contracts or orders, acceptance of changes to contracts or orders) and to ensures that:

a) Products requirements are defined;
b) Contract or order requirements differing from those previously expressed are resolved, and
c) NRL has the ability to meet the defined requirements.

Records of the results of the review and actions arising from the review are maintained.

Where the customer provides no documented statement of requirement, the customer requirements are confirmed by the NRL before acceptance.

Where product requirements are changed, NRL ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements.

Reference Documents:
- o Management Review Meeting (NRL-SPR-MRM-002)
- o SOPs of Marketing & Sales Support, Shipping, Supply & Trade Relations, Quality Control, Production Planning & Economics, Technical. Services, Lube-I Refinery, Lube-II Refinery, Fuel Refinery

Customer Communication:
NRL has determined and implemented effective arrangements for communicating with customers in relation to:

a) Product information,
b) Enquiries, contracts or order handling, including amendments, and
c) Customer feedback, including customer complaints.

Reference Documents:
- o Communication, Consultation and Participation (NRL-SPR-CAC-006)
- o Management Review Meeting (NRL-SPR-MRM-002)
- o SOPs of Marketing & Sales Support, Shipping, Supply & Trade Relation and Keamari Terminal Departments

Design and Development:
Permissible exclusion in this section is undertaken, as company does not involve in the activity of design and development (Refer Clause 7.3 of ISO 9001:2008 and Section 3.0 scope of this manual).

Purchasing:

Purchasing Process:
NRL ensures that purchased product and service conforms to specified purchase requirements. The type and extent of control applies to the supplier and the purchased product / service on subsequent product realization or the final product.

NRL evaluates and selects suppliers based on their ability to supply product / service in accordance with the their requirements. Criteria for selection, evaluation and re-evaluation are established. Records of the results of evaluations and any necessary actions arising from the evaluation are maintained.

Reference Documents:
- o Quality Plan concerned department
- o SOP's Local Purchase
- o SOP's Import
- o SOP's concerned department

Purchasing Information:
Purchasing information describe, the product/ service to be purchased, including, where appropriate,

a) Requirements for approval of product, procedures, processes and equipments,
b) Requirements for qualification of personnel, and
c) IMS (HSEQ) Management System requirements.

NRL ensures the adequacy of specified purchase requirements prior to their communication to the supplier.

Reference Documents:
- o Quality Plan of concerned departments
- o SOP's Local Purchase
- o SOP's Import
- o SOP's concerned department

Verification of Purchased Product / Service:
NRL establishes and implements the inspection or other activities necessary for ensuring that purchased product / service meets specified purchase requirements.

Where NRL or its customer intends to perform verification at the supplier's premises, NRL has intended verification arrangements and methods of products release in the purchasing information.

Reference Documents:
- o SOPs of Local Purchase, Import, Quality Control, Inspection Departments
- o SOP's Concerned Departments.

Production and Service Provision:

Control of Production and Service Provision:
NRL plans and carries out production and service provision under controlled conditions. Controlled conditions include, as applicable:

a) The availability of information that describes the characteristics of the products,

b) The availability of Standard Operating Procedures, as necessary
c) The use of suitable equipments,
d) The availability and use of monitoring and measuring equipments,
e) The implementation of monitoring and measurement, and
f) The implementation of product release, delivery and post-delivery activities

Reference Documents:
- o SOPs Quality Control
- o SOPs Fuel Refinery, Lube-I Refinery, Lube-II Refinery
- o SOPs Utility, Oil Movement , Keamari Terminal
- o SOPs Instrument, Inspection
- o SOP's Technical Services
- o SOP's Maintenance
- o SOP's Marketing & Sales Support
- o SOP's Supply & Trade Relations
- o SOP's Shipping

Validation of Process for Production and Service Provision:
NRL validates any processes for production and service provision where resulting output cannot be verified by subsequent monitoring or measurement and, as a consequence, deficiencies becomes apparent only after the product is in use or the service has been delivered.

Validation demonstrates the ability of these processes to achieve planned results.
a) Defined criteria for review and approval of the processes.
b) Approval of equipments and qualification of personnel.
c) Use of specific methods and procedures,
d) Requirements for records, and
e) Revalidation.

Reference Documents:
SOPs of Engineering, Inspection and Turnaround Planning / Local manufacturing and Workshop Department

Identification and Traceability:
Where appropriate, NRL identifies the product by suitable means throughout product realization. NRL identifies the product status with respect to monitoring and measurement requirements throughout product realization. Where traceability is a requirement, NRL controls the unique identification of the product and maintain records.

Reference Documents:
- o Quality Plans concerned Departments
- o SOP's concerned department

Customer Property:
NRL exercises care with customer property while it is under the control or being used. NRL identifies, verifies, protects and safeguards customer property provided for use or incorporation into the product. If any customer property is lost, damaged or otherwise found to be unsuitable for use, NRL reports to this to the customer and maintain records.

Note: Customer property can include intellectual property and personal data.

Reference Documents:
- o SOPs Supply & Trade Relation, Marketing & Sales Support, Shipping, Technical Services, Import , Quality Control, Inspection, Maintenance

Preservation of Product:
NRL preserves the product during internal processing and delivery to the intended destination in order to maintain conformity to requirements. As applicable, preservation includes identification, handling, packaging, storage and protection. Preservation also apply to the constituent parts of a product.

Reference Documents:
- o SOPs Oil Movement, Lube-I Refinery, Lube-II Refinery, Fuel Refinery, Production Planning & Economics, Keamari Terminal, Quality Control

Control of Monitoring and Measurement Equipment / Control of Monitoring and Measurement Performance:
NRL has established, implemented and maintained a system procedure (NRL-SPR-MAM-007) for monitoring and measurement to be undertaken and the monitoring and measuring equipment needed to provide evidence of conformity of product to determined requirements.

NRL has established processes to ensure that monitoring and measurements are carried out in a manner that it is consistent with the monitoring and measurement requirements. Where necessary to ensure valid results,

- o Be calibrated or verified or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exists, the basis use for calibration or verification recorded;

- o Be adjusted or re-adjusted as necessary;
- o Have identification in order to determine its calibration status;
- o Be safeguarded from adjustments that would invalidate the measurement result;
- o Be protected from damage and deterioration during handling, maintenance and storage.

To monitor and measure IMS (HSEQ) performance on a regular basis:

- o Both qualitative and quantitative measures, appropriate to the needs;
- o Monitoring of the extent to which the IMS (HSEQ) objectives are met;
- o Monitoring the effectiveness of control for IMS (HSEQ) requirements;
- o Proactive measures of performance that monitor conformance with environmental, occupational health & safety program, control and operational criteria.

- o Re-active measures of performance that monitor ill health, incidents (including accidents, near misses etc) and other historical evidence of deficient IMS (HSEQ) performance;
- o Recording of data and result of monitoring and measurement sufficient to facilitate subsequent corrective action and preventive action analysis.

NRL assesses and records the validity of previous measuring results when the equipment is found not to conform to requirements. NRL takes appropriate action on the equipment and any product affected. Records of the result of calibration and verification are properly maintained.

Reference Documents:

- o Calibration, Maintenance of Monitoring Measuring Equipments (NRL-SPR-MAM-007)
- o SOP's Concerned Department

Measurement, Analysis and Improvement:

General:

NRL has established, implemented and maintained a System Procedure (NRL-SPR-QOB-021) to plan and implement the monitoring, measurement, analysis and improvement processes needed: -

a) To demonstrate conformity to product requirements,
b) To ensure conformity of the IMS (HSEQ) Management System, and
c) To continually improve the effectiveness of the IMS (HSEQ) Management System.

This includes determination of applicable methods, including statistical techniques, and the extent of their use.

Reference Documents:

- o Quality Objectives, Target and Analysis of Data (NRL-SPR-QOB-021)

Monitoring and Measurement:

Customer Satisfaction:

The measurement of the performance of the IMS (HSEQ) Management System, NRL has monitored information relating to customer perception as to whether the NRL has met the customer requirements, The methods for obtaining and using this information is determined.

Note: Monitoring customer perception can include obtaining input from sources such as customer satisfaction surveys, customer data on delivered product quality, user opinion surveys, lost business analysis, compliments, warranty claims and dealer reports.

Reference Documents:

- o SOP's Marketing & Sales Support
- o SOP's Shipping
- o SOP's Keamari Terminal
- o SOP's Oil Movement
- o SOP's Supply & Trade Relations Economics
- o SOP's Production Planning and Economics
- o SOP's Quality Control

Internal Audit:

NRL has established, implemented and maintained a system Procedure (NRL-SPR-AUD-009) to conduct internal audits at planned intervals to determine the IMS (HSEQ) Management System.

a) Conforms to the planned arrangements, to the requirements of ISO 9001:2008, ISO 14001:2004 and OH&SMS 18001:2007 and to the IMS (HSEQ) Management system requirements;
b) Is effectively implemented and maintained;
c) Is effective in meeting the IMS (HSEQ) policy and objectives;
d) Provide information on the result of audits to management.

Records of the audit and their results are maintained.

Reference Documents:

- o Internal Audit (NRL-SPR-AUD-009)

- o Management Review meeting (NRL-SPR-MRM-002)
- o Structural Roles, Responsibilities and Accountabilities (NRL-SPR-SRR-003)
- o SOP's Concerned Department

Monitoring and Measurement of Processes:
NRL applies suitable methods for monitoring and, where applicable, measurement of the IMS (HSEQ) management system processes. These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective actions are taken, as appropriate.

Note: When determining suitable methods, it is advisable to consider the type and extent of monitoring or measurement appropriate to each of its processes in relation to their impact on the conformity to product requirements and on the effectiveness of the IMS (HSEQ) Management System.

Reference Documents:
- o Calibration, Maintenance of Monitoring Measuring Equipments (NRL-SPR-MAM-007)
- o Operational Control (NRL-SPR-OCP-013) Quality Plan
- o SOPs Quality Control
- o SOPs Oil Movement
- o SOPs Lube-I Refinery, Lube-II Refinery, Fuel Refinery, Utilities, Keamari Terminal, Technical Services.

Monitoring and Measurement of Products:
NRL monitors and measures characteristics of the product to verify that product requirements have been met. This is carried out at appropriate stages of the product realization process. Evidence of conformity with the acceptance criteria are maintained.

Records indicates the person(s) authorizing release of product for delivery to the customer.

The release of products and delivery of services to the customer are not processed until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable, by the customer.

Reference Documents:
- o Calibration, Maintenance of Monitoring Measuring Equipments (NRL-SPR-MAM-007)
- o Operational Control (NRL-SPR-OCP-013)
- o Quality Plan
- o SOPs Quality Control
- o SOPs Oil Movement
- o SOPs Lube-I Refinery, Lube-II Refinery, Fuel Refinery, Utilities, Keamari Terminal, Technical Services

Control of Non-Conformity / Control of Non-Conforming Products:
NRL ensures that product that does not conform to requirements is identified and controlled to prevent its unintended use or delivery. A defined & documented system procedure (NRL-SPR-NCR-020) has established, Implemented and maintained to define the controls related responsibilities and authorities for dealing with non conforming product / service. NRL deals non-conforming products / services:

- o By taking action to eliminate the detected non-conformity;
- o By authorizing its use, release or acceptance under concession by a relevant authority and, where applicable by the customer;
- o Identifying and correcting non-conformity(ies) and taking action(s) to mitigate their Environment, health, Safety and Quality consequences;
- o Investigating non-conformities, determining their causes and taking actions in order to avoid their recurrences;
- o By taking action to preclude its original intended use or application;
- o By taking actions appropriate to the effects, or potential effects, of the nonconformity when nonconforming product is detected after delivery or use has started.
- o Evaluating the need for action(s) to prevent non conformity(ies) and implementing appropriate actions designed to avoid their occurrences.

Nonconforming products are corrected subject to re-verification in order to demonstrate conformity to the requirements. Records of the nature of the nonconformities and any subsequent actions taken, including concessions obtained, are maintained.

Reference Documents:
- o Control of Non Conforming Product (NRL-SPR-NCR-020)
- o SOP's Dispensary, Local Purchase, Warehouse, Import, Inspection department

Emergency Preparedness and Response:
NRL has established, implemented and maintained a system procedure (NRL-SPR-EPR-010) to identify potential emergency situations and potential accidents have an impact on the Environment and Occupational Health & Safety:

a) To identify the potential for emergency situations;
b) To respond to such emergency situations.

NRL responds to actual emergency situations and prevent or mitigate associated adverse OH&S consequences and environmental impacts.

NRL periodically tests its procedure(s) to respond to emergency situations, where practicable, involving relevant interested parties as appropriate.

NRL periodically reviews and where, necessary, revises its emergency preparedness and response procedure(s), in particular, after periodical testing and after the occurrence of emergency situations.

Reference Documents:
- o Emergency Preparedness and Response (NRL-SPR-EPR-010)
- o SOP's Health Safety & Environment, Fire Protection department
- o Departmental Emergency Response Plan Procedure

Analysis of Data:
NRL has established, implemented and maintained a system procedure (NRL-SPR-QOB-021) to collect and analyze appropriate data to demonstrate the suitability and effectiveness of the IMS (HSEQ) Management System and to evaluate where continual improvement of the effectiveness of the IMS (HSEQ) Management System can be made. This includes data generated as a result of monitoring and measurement and from other relevant sources.

The analysis of data provide information relating to:

a) Customer satisfaction,
b) Conformity to product requirements,
c) Characteristics and trends of processes and products, including opportunities for preventive action and
d) Suppliers

Reference Documents:
- o Quality Objectives, Target and Analysis of Data (NRL-SPR-QOB-021)
- o SOP's Concerned department

Improvement:

Continual Improvement:
NRL continually improves the effectiveness of IMS (HSEQ) Management System through the use of IMS (HSEQ) policy, IMS (HSEQ) objectives, audit results, analysis of data, corrective and preventive action and management review.

Reference Documents:
- o Internal Audit (NRL-SPR-AUD-009) Corrective & Preventive action (NRL-SPR-CPA-004)
- o Management Review Meeting (NRL-SPR-MRM-002)
- o Competence, Training and Awareness (NRL-SPR-AWT-005)
- o IMS (HSEQ) Policy (NRL-POL-001)
- o Quality objectives, Target and analysis of Data (NRL-SPR-QOB-021)
- o Evaluation of Compliance (NRL-SPR-EVC-008)
- o IMS (HSEQ) Objectives Procedure (NRL-SPR-EOT-016) (NRL-SPR-QOB-021) (NRL-SPR-OTM-018)

Incident Investigation:
NRL has established, implemented and maintained a procedure (NRL-SOP-HSE-016) to record, investigate and analyze incidents in order to:

- o Determine underlying OH&S deficiencies and other factors that might be causing or contributing to the occurrence of incidents;
- o Determine underlying OH&S deficiencies
- o Identify the need for corrective action(s);
- o Identify opportunities for preventive action;
- o Identify opportunities for continual improvement;
- o Communicate the results of investigations.

All investigations are performed in a timely manner.

Reference Documents:
- o Operational Control (NRL-SPR-OCP-013)
- o Emergency Preparedness & Response (NRL-SPR-EPR-010)
- o SOP of HSE Department (NRL-SOP-HSE-016)

Corrective Action:
NRL has established, implemented and maintained a system procedure (NRL-SPR-CPA-004) to take actions for eliminating the causes of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the non-conformities encountered.

A system procedure (NRL-SPR-CPA-004) define requirements for:

a) Reviewing the non conformities (including customer complaints),
b) Determining the causes of nonconformities, Determining and implementing action needed,

c) Evaluating the need for action to ensure that nonconformities do not recur,
d) Determining and implementing action needed,
e) Records of the results action taken and
f) Reviewing the effectiveness of the corrective action.

Where the corrective and preventive actions identifies new or changed hazards or the need for new or changed controls, the proposed actions are taken through a risk assessment prior to implementation. Corrective Actions taken are appropriate to the magnitude of the problems and commensurate with the OH&S risk, Environmental Impact and customer requirement.

Reference Documents:
- Corrective & Preventive Action (NRL-SPR-CPA-004)
- Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- Occupational Health and Safety Hazard identification and Risk Assessment (NRL-SPR-HRA-017)

Preventive Action:
NRL has established, implemented and maintained a system procedure (NRL-SPR-CPA-004) to determine actions to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions are appropriate to the effects of the potential problems. A system procedure (NRL-SPR-CPA-004) defines requirements for:

a) Determining potential nonconformities and their causes,
b) Evaluating the need of action to prevent occurrence of non conformities,
c) Determining and implementing action needed,
d) Records of results of action taken,
e) Reviewing the effectiveness of the preventive action.

Where the corrective and preventive actions identifies new or changed hazards or the need for new or changed controls, the proposed actions are taken through risk assessment prior to implementation. Preventive actions taken are appropriate to the magnitude of the problems and commensurate with the OH&S risk, Environmental Impact and customer requirements.

Reference Documents:
- Corrective & Preventive Action (NRL-SPR-CPA-004)
- Environmental Aspects & Impacts Assessment (NRL-SPR-AIA-015)
- Occupational Health and Safety Hazard identification and Risk Assessment (NRL-SPR-HRA-017)

Hazards, Evaluation and Risk Assessment

Frame Work

- OH&S hazards of Normal Operation
- OH&S Turnaround / Shutdown Operation
- Routine activities
- Non Routine activities
- Access to the work place
- Facilities at work place
- Absence of control measures

Hazards Categories

- Ergonomics Hazards
- Mechanical hazards
- Electrical hazards
- Pressure hazards
- Pneumatic hazards
- Falling hazards
- Biological hazards
- Noise hazards
- Vibration hazards
- Toxic hazards
- Radiation hazards
- Explosion hazards
- Chemical hazards
- Fire hazards
- Psychological hazards
- Traffic hazards
- Others

OH&S Hazards Impacts Categories

- Injury / Illness
- Disability / Death
- Production delays and interruption
- Asset Loss
- Property damage
- Tools and equipment damage
- Product and material damage

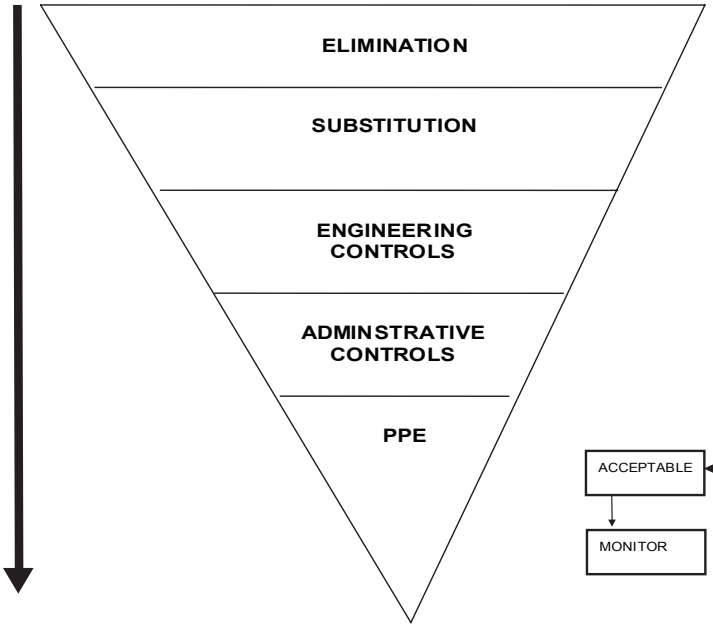
Evaluation of Risks Assessment for identified hazard

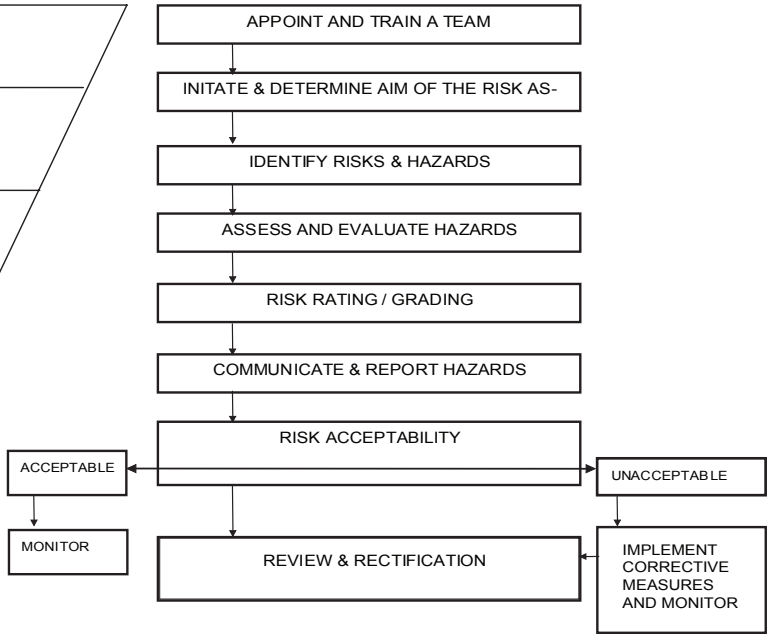
- Legislative and regulatory requirements
- Identification of the OH&S Risks face by NRL
- Review OH&S practices, process and procedures
- Evaluation of feed back from the investigation
- Audit results & Recommendations
- Direct inspection and measurement

Risks Control

- Residential hazard identified, even after current control measures, will be assessed for risk and classified under tolerable risks and un-tolerable risks.

- Measure taken with the principal of Eliminate, Substitute, Engineering Control, Administrative Control, Personal Protective Equipment If risk can not be converted into tolerable risk than PPE's used to reduce the impact





Emergency Preparedness

and Resposne Planning and Risk Management

The Fire Protection and HSE Manager are responsible for developing and implementing an emergency prevention, mitigation and response plan. Emergency situation may be of any one or combination of two or more included Flood / Territorial Rains / Typhoons or Cyclone, Terrorist Attacks, Fire, Earth Quake, Oil Leakage /Spills, Chemical Leakage / Spills, LPG Emergencies, Flammable / Toxic gas release, Explosion, Loss of utility services, Epidemic, Failure of Fire Alarm and monitoring devices, Serious injuries & Traffic Accidents.

Environmental, health and Safety emergency methods and communication are tested at least biannually basis if practicable or whenever required and maintain records of these drills. Schedule drills conducted aim to ensure capability, effectiveness and completeness of Emergency response plans. The records of emergency drills are audited / evaluate by selected experienced auditors.

Emergency Preparedness and Response Procedures

Departmental Procedure #	Procedure Title / Situation Description
NRL-SPR-EPR-010	Emergency Preparedness and Response
NRL-SPR-OCP-013	Operational Control
NRL-SOP-ADM-005	Emergency Response Plan for Telecommunication failure internal / external
NRL-SOP-PGR-006	Procedure for Power Supply arrangement during failure of TG/DG
NRL-SOP-HSE-006	Emergency Response Plan for Oil Spillage from a storage tanks
NRL-SOP-HSE-007	Emergency Response Plan for Chemical Spillage
NRL-SOP-HSE-008	Emergency Response Plan for K-K pipeline leakages
NRL-SOP-HSE-009	Contingency Plan for Terrorist Attack (Bomb Threat)
NRL-SOP-HSE-010	Emergency Response Plan for Flood Control
NRL-SOP-HSE-017	Evacuation Procedure for Lube-I
NRL-SOP-HSE-018	Evacuation Procedure for Lube-II
NRL-SOP-HSE-019	Evacuation procedure for Fuel Refinery
NRL-SOP-HSE-020	Evacuation Procedure for Old Boiler House Utilities
NRL-SOP-HSE-021	Evacuation procedure for Boiler-V / Power Generation
NRL-SOP-HSE-022	Emergency Response Plan for Earthquakes
NRL-SOP-HSE-024	Procedure for Management Block evacuation in case of Fire, Bomb Threat, or other emergencies like earthquake
NRL-SOP-HSE-025	Procedure for Mock Drill (Fire) Korangi and Keamari Terminal
NRL-SOP-HSE-026	Emergency Response Plan for handling spillage of oil due to leakage of pipelines in pipe alley, all tank lorries, including JP-I / JP-8 Bowzers
NRL-SOP-HSE-027	Evacuation procedure for Shipping & Excise Building
NRL-SOP-HSE-028	Procedure for Operation Block evacuation in case of Fire, Bomb Threat or other emergencies like earthquake
NRL-SOP-HSE-029	Evacuation procedure for O.M-I office
NRL-SOP-FPR-005	Safety requirements & guidelines for the execution of Excavation procedure
NRL-SOP-FPR-006	Live Fire Drills / Exercise at Korangi Refinery

Departmental Procedure #	Procedure Title / Situation Description
NRL-SOP-FPR-007	Emergency Response Plan of Handling or Establishing Fire Fighting arrangement for Combating Fire like situation at KK pipelines
NRL-SOP-FPR-008	Fire Fighting Plan for Korangi Refinery
NRL-SOP-FPR-009	Fire Fighting for NRL Keamari Terminal
NRL-SOP-FPR-010	Fire Drill / Exercise at Kaeamari Terminal
NRL-SOP-FPR-012	Ensuring the fire water Network Operability and Reliability Testing to ensure the integrity & sustainability to meet emergencies.
NRL-SOP-OKR-024	Emergency Response plan for oil spills from carrying crude oil (Having heavy leakage from its body)
NRL-SOP-OKR-025	Emergency Response Plan to control the leakage from Bottom / Shell of a storage tank to recover spilled oil from the area
NRL-SOP-OKR-026	Emergency Response plan increase of overflow of a storage tank
NRL-SOP-OKR-032	Emergency Response Plan for un-loading of asphalt tank lorry having leakage from its body
NRL-SOP-OKR-036	Handling of field & empty chemical drums / container, contingency plan of chemical drums / container
NRL-SOP-OKR-046	Emergency Response Plan for handling spillage of JP-8 tank lorry having leakage from its body
NRL-SOP-LR1-001	Emergency Shutdown Procedure for PDA-I Unit
NRL-SOP-LR1-008	Emergency shutdown procedure for Two-Stage / Bender Unit
NRL-SOP-LR1-012	Emergency Shutdown Procedure for FEU-I Unit
NRL-SOP-LR1-017	Emergency shutdown procedure for BTX unit
NRL-SOP-LR1-026	Emergency shutdown procedure for MEK/HFU Unit
NRL-SOP-LR1-031	Haling of filled chemical drums contingency plan.
NRL-SOP-LR2-001	Emergency shutdown of Vacuum Distillation unit incase of power failure
NRL-SOP-LR2-008	Emergency shutdown procedure of Propane De-Asphalting unit
NRL-SOP-LR2-016	Emergency shutdown operating procedure for FEU unit of Lube-II Refinery
NRL-SOP-LR2-025	Emergency shutdown operating procedure for MEK unit of Lube-II Refinery
NRL-SOP-LR2-036	Mitigation plan / Procedure for Heat Exchanger leakage from flanges
NRL-SOP-LR2-042	Emergency Shutdown procedure for MEK Dilchill Dewaxing unit
NRL-SOP-FRE-007	Emergency shutdown procedure of 101-Crude Distillation Unit
NRL-SOP-FRE-034	Mitigation plan / Procedure for heat Exchanger leakage from flanges
NRL-SOP-FRE-041	Emergency shutdown procedure of naphtha Hydrobon and Platforming unit in case of power failure, steam failure, cooling water failure, charge oil pump failure, instrument air failure, 102-F1/F2 Tube Rupture
NRL-SOP-FRE-046	Emergency shutdown procedure of Propane Recovery unit in case of steam failure, cooling water failure, instrument air failure
NRL-SOP-TLW-009	Evacuation procedure for Workshop
NRL-SOP-TLW-015	Emergency Response Plan for malfunctioning of workshop machine
NRL-SOP-OKT-014	Procedure for Evacuation of Keamari Terminal
NRLSOP-WHS-010	Procedure for Contingency plan for Chemical spillage
NRL-SOP-WHS-011	Procedure of Evacuation for Warehouse

IMS (HSEQ) Objectives

and Management Program

S.#	Department	Description	L.C	F.C	Total Rs. (000'0)
01	Maint-I	Replacement of Pump 101-P-18 A / B with Motors (2 Nos.).	94	1,043	1,137
02	Maint-II	Overhauling of 4 MW Diesel Generator of Self Power Generation.	20,000	-	20,000
03	Inspection	Transducer & Cable for Ultrasonic Thickness Meter.	300	-	300
04	Project	Reverse Osmosis Desalination Plant IV.	50,000	-	50,000
05	Production Fuel	Conversion of Steam Driven Pump 101-TP-1B to Motor Driven. The conversion is required due to the scarcity of Water resulting in insufficient Steam Generation from Boilers for proper operation of the Pump.	11,702	-	11,702
06	Production Lube-I	Replacement of Old Recorders with Paperless Graphic Recorders (5 Nos.).	76	832	908
07	Production Lube-II	Replacement of Old Recorders with Paperless Graphic Recorders (30 Nos.).	452	4,993	5,445
08	Technical Services	Separate Pump for Cooling Water Supply line for Two Stage & Propane De-asphalting Units of Lube-I Refinery.	10,000	-	10,000
09	Technical Services	Chemical Dosing Pumps for Boilers, Cooling Water Towers & Reverse Osmosis Plants (10 Nos.).	300	-	300
10	Technical Services	Sodium Hypo Chloride Dosing Pumps for Boilers, Cooling Water Towers & Reverse Osmosis Plant (6 Nos.).	300	-	300
11	Oil Movement	Repair & Maintenance of RTG System of Storage Tanks S-11, S-12, S-18, S-21 & T□-7B.	5,500	-	5,500
12	Utilities	Upgradation of Instruments of Boiler □ VII.	1,050	2,671	3,721
13	□eamari Terminal	Procurement & Installation of Radar Gauging system for storage Tank 155-S-15 to replace the current out of order ATG System.	1,900	-	1,900
14	□uality Control	Sulfur Analy□er for LPG.	2,000	5,451	7,451
15	Fire Protection	Fog & □et No□□□les for Fire Tenders (2 Nos.).	160	-	160
16	Fire Protection	Replacement of VHF Base Set for Fire Station at □eamari Terminal (1 No.).	60	-	60
17	Administration	Leveling / Road Carpeting of Parking Area for Bowsers / Tankers at □ast Side near Union Barrier Gate.	10,000	-	10,000
18	IT & S	Procurement □vent Log Management System.	1,500	-	1,500
19	IT & S	Procurement of Adobe Photoshop Software (1 No.).	100	-	100

IMS (HSEQ) Management System

The overall goal of IMS (HSEQ) operational control is to manage the environmental aspect its impact OH&S Risk to fulfill the IMS(HSEQ) policy and objective, information be consider when establishing and implementing operation control includes:

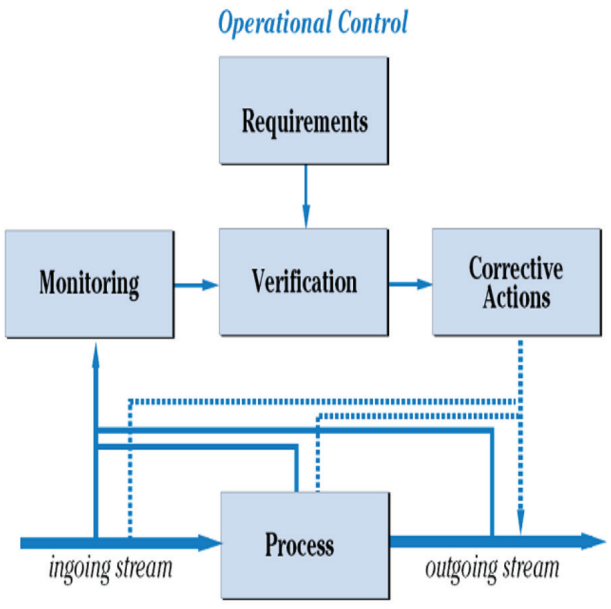
- IMS (HSEQ) policy and objectives
- Hazards identification and Risk assessment
- Environmental aspect / impact and Risk assessment
- Management of change
- SOP's
- Legal and other requirement
- Products supply chain control
- Feedback
- Contractor Control
- Access to work place

Further Consideration Taken into Account

- The need for a combination of engineering and administrative control
- Established good practice in the control of the particular hazard under consideration
- Adapting work to individual
- Taking advantage of technical progress to improve controls
- Using measures that protect everyone
- Human behaviour and whether a particular control measure will be accepted and can be effectively implemented
- Typical basic types of human failure
- The need to introduce planned maintenance of for example machinery safeguards
- The possible need for emergency / contingency arrangements where risk controls fail.
- The potential lack of familiarity with the workplace and existing controls of those not in the direction and employment of the organization e.g. visitors, contractor personnel

Operational control established and implemented as necessary to manage the IMS (HSEQ) Risk to an acceptable level for operational areas and activities. Controls should be reviewed on a periodic basis to evaluate their ongoing suitability and effectiveness.

- Operational control Environmental Aspect / Impact
- Emergencies Control measures
- Hazardous Tasks
- Hazardous Material
- Safe Operation of Plant and Equipment
- Safe maintenance of Plant and Equipment
- Safety inspections
- Training & Communication
- Monitoring & measurement
- Contractor method statement
- Standard Operating procedures
- Hazards and Risk Assessment
- MSDS
- Housekeeping
- Continual improvement
- Legal regulatory and other Compliance
- Corrective and Preventive action
- Objective Targets and follow up
- Working Environment
- Permit System
- Training Need Assessment



Monitoring & Evaluation

of Legal Regulatory and Other Requirements

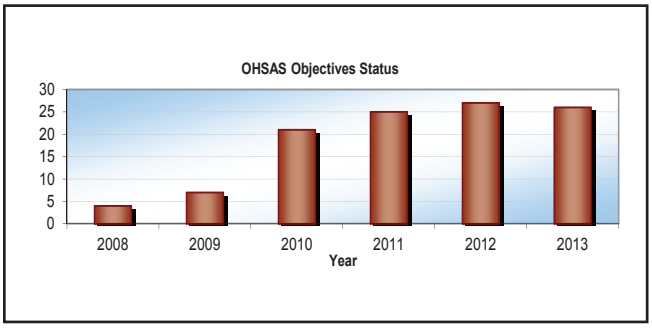
Legal Requirement	Applicable Mechanism
Working Environment • Sindh Factory Act 1934 • Sindh Rules 1975	Monitoring of Labor Laws (NRL-SOP-CON-002) Solid Waste Disposal (NRL-SOP-ADM-003) Sanitation Management (NRL-SOP-ADM-004) EOBI Scheme (NRL-SOP-HUR-006) Leave Policy (NRL-SOP-HUR-007) Working Hours (NRL-SOP-HUR-008) Social Security Scheme (NRL-SOP-HUR-010) Labor Laws (NRL-SOP-HUR-011) Monitoring of Labor Canteen (NRL-SOP-HUR-019) Solid Waste management (NRL-SOP-HSE-031)
Air Emissions / Air Pollution • The Pakistan Panel Code 1860 • The Factories Act 1934 • Pakistan Environmental Act • NEQS	Monitoring Effluent water (NRL-SOP-HSE-032) Monitoring Gaseous Emission (NRL-SOP-HSE-033) Storm water channel (NRL-SOP-HSE-035) Evaluation of Compliance (NRL-SPR-EVC-008)
Medical Waste • The Pakistan Environmental Protection Act 1997	Solid Waste Disposal (NRL-SOP-ADM-003) Dispensary waste (NRL-SOP-DIS-002) Incinerator (NRL-SOP-OKR-033) Solid Waste management (NRL-SOP-HSE-031)
Soil & Effluent Waste • The Factories Act 1934 section 14 • The Pakistan Environmental Protection Act 1997	Compliance of NEQS (NRL-SOP-HSE-032) Storm water drain (NRL-SOP-ENG-006) API Sewer Network (NRL-SOP-ENG-007) Solid Waste Disposal (NRL-SOP-ADM-003) Sanitation management (NRL-SOP-ADM-004)
Marine Pollution • The Pakistan Environmental Protection Act 1997 • Pakistan Territorial Waters 1976 • Maritime Security Act 1994 • Environment 1973 constitution • Port Act 1908 Section 21	Compliance of NEQS (NRL-SOP-HSE-032) Effluent water from API (NRL-SOP-OKT-008) Procedure for pumping of liquid effluent from effluent treatment plant to sea (NRL-SOP-OKR-030)
Noise Pollution • Environment, 1973 constitution Environmental Protection Act • Motor Vehicle Ordinance 1965 • Motor Vehicles Rules 1969	Procedure for monitoring of noise level (NRL-SOP-HSE-034) Transport Management for company maintained vehicle (NRL-SOP-ADM-001)
Water Pollution • The Factories Act 1934 • Sindh Fisheries Ordinance 1980 • The Pakistan Environmental Protection Act 1997 • Environment and the 1973 constitution • NEQs	Compliance of NEQS (NRL-SOP-HSE-032) Sanitation management (NRL-SOP-ADM-004) Effluent water from API (NRL-SOP-OKT-008) Liquid effluent (NRL-SOP-OKR-030) Laboratory waste procedure (NRL-SOP-QCL-001) Evaluation of compliance (NRL-SPR-EVC-008)

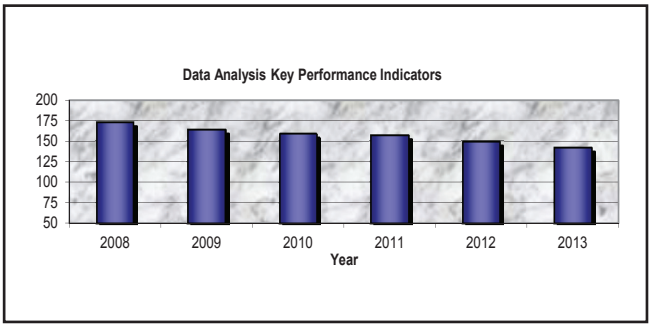
Legal Requirement	Applicable Mechanism
Hazardous Substance and Waste • The Explosive Act 1884 • The Factories Act 1934 • The Pakistan Environmental Protection Act 1997 • The Factory Act 1934 • The Hazardous Substance Rules 1999	Handling / storage of materials (NRL-SOP-HSE-014) Empty chemical container (NRL-SOP-HSE-036) Solid Waste Disposal (NRL-SOP-ADM-003) Sanitation management (NRL-SOP-ADM-004) Dispensary waste (NRL-SOP-DIS-002) Laboratory waste (NRL-SOP-QCL-001) De-sludging of storage tank (NRL-SOP-OKR-021) De-sludging of asphalt tank (NRL-SOP-OKR-035) Contingency plan, chemical drums (NRL-SOP-OKR-036) Contingency plan (NRL-SOP-LR1-031) Contingency plan (NRL-SOP-LR2-037) Disposal of solid waste (NRL-SOP-MT3-011) Storage of HSD / Lube oil drums (NRL-SOP-OKT-015) Monitoring of chemical drums (NRL-SOP-WHS-008) Storage of filled gas cylinder (NRL-SOP-WHS-013)
Energy • The Electricity Act 1910 • KESC Control Order 1978 • Electricity Rules 1937 • Electricity Rules 1978 (Sindh) • Electricity Duty Rules 1964 • Electricity Ordinance 1965 • Electricity Control Act 1952 • Regulation of Generation, Transmission and Distribution of Electric Power Act 1997	License
Sand Blasting • The West Pakistan Hazardous Occupations (Sand Blasting) Rules, 1963	Sand blasting Procedure (NRL-SOP-HSE-004)
Emergency Response Plan • Spill Prevention • Containment and Clean-up (SPCC) Plans • The Pakistan Environmental Protection Ordinance, 1997; and Article VI, Section 6.9 (g)	(SPR-EPR-010), (SPR-OCP-013), (SOP-HSE-006), (SOP-HSE-007), (SOP-HSE-008), (SOP-HSE-009), (SOP-HSE-010), (SOP-HSE-017), (SOP-HSE-018), (SOP-HSE-019), (SOP-HSE-020), (SOP-HSE-021), (SOP-HSE-022), (SOP-HSE-024), (SOP-HSE-025), (SOP-HSE-026), (SOP-HSE-027), (SOP-HSE-028), (SOP-FPR-007), (SOP-FPR-008), (SOP-OKR-024), (SOP-OKR-025), (SOP-OKR-026), (SOP-OKR-032) (SOP-OKR-046), (SOP-OKT-014), (SOP-WHS-010), (SOP-WHS-011), (SOP-LR1-001), (SOP-LR1-008), (SOP-LR1-012), (SOP-LR1-017), (SOP-LR1-026), (SOP-LR1-031), (SOP-LR2-001), (SOP-LR2-008), (SOP-LR2-025), (SOP-LR2-016), (SOP-LR2-036), (SOP-LR2-042), (SOP-FRE-007), (SOP-FRE-034), (SOP-FRE-041), (SOP-FRE-046), (SOP-TLW-009)

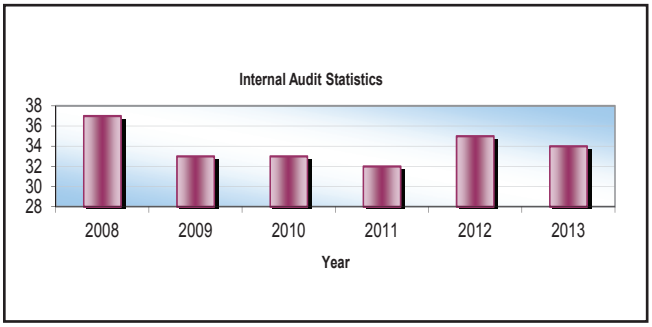
Legal Requirement	Applicable Mechanism
Petroleum Storage / Refining / Transportation, • The Petroleum Act 1934 • Pakistan Petroleum Rules 1971 • The Petroleum Rules 1985 • LPG (Production and Distribution) Rules 1971	Plot plan from explosive department SOP's Oil Movement SOP's K.T SOP's STR SOP's Shipping
Boiler and Pressure Vessel • The Boilers and Pressure Vessels Ordinance 2002	Boiler Certificate
Gaseous Emissions • The Pakistan Environmental Protection Act 1997 • NEQs • The Pakistan Environmental Protection Ordinance 1983	Procedure for Monitoring API effulent for Compliance of NEQS (NRL-SOP-HSE-032) Procedure for Monitoring Gaseous Emission for compliance of NEQS (NRL-SOP-HSE-033) Procedure for Cleaning and maintenance of Storm water channel Evaluation of Compliance (NRL-SOP-HSE-035) (NRL-SPR-EVC-008)
New Projects • Pakistan Environmental Protection Agency (Review of IEE and EIA) Regulations 2000	EIA Reports IEE Reports Review identified projects (NRL-SPR-RIP-019) Agency approvals (NRL-SPR-AAP-012)
The Sindh Standard Weight and measures enforcement Rules, 1976	Lube Base Oil Shipment Procedure (NRL-SOP-SHG-002) Maintenance of Weigh Bridge System (NRL-SOP-INS-019)
License to establish, maintain and work wireless telegraph in Pakistan Telegraph Act-1885 and telegraph (Amendment) Act 1914.	License Maintenance of Wireless Communication System (NRL-SOP-INS-018)

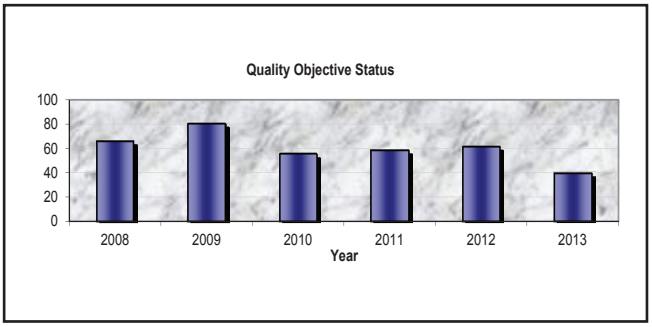
Continual Improvement

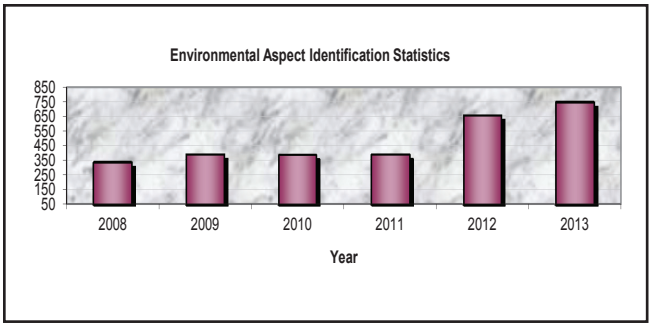
Through Effective Monitoring

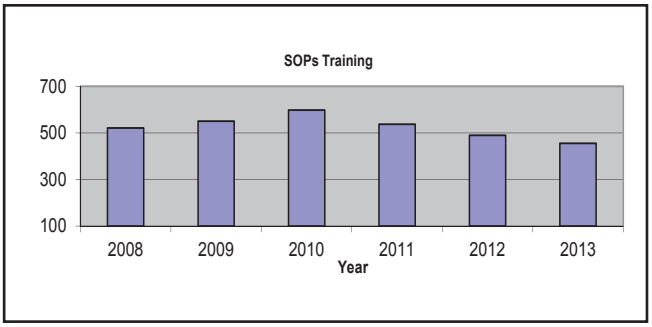


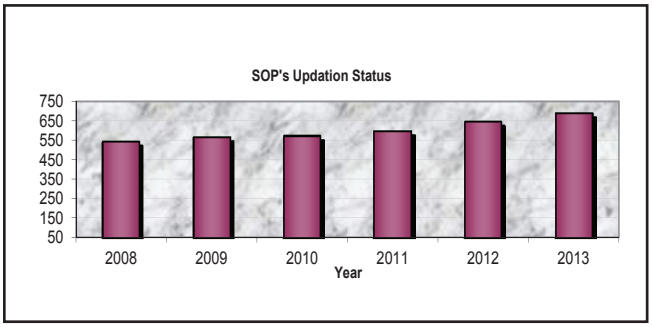


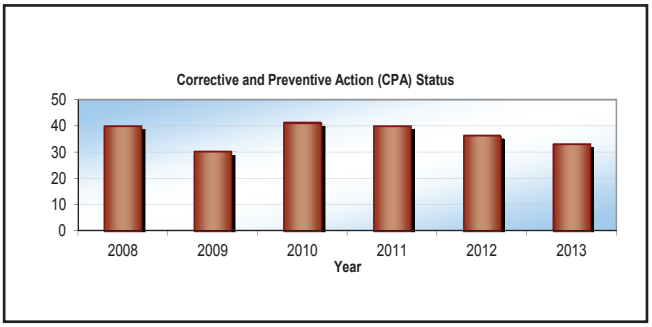




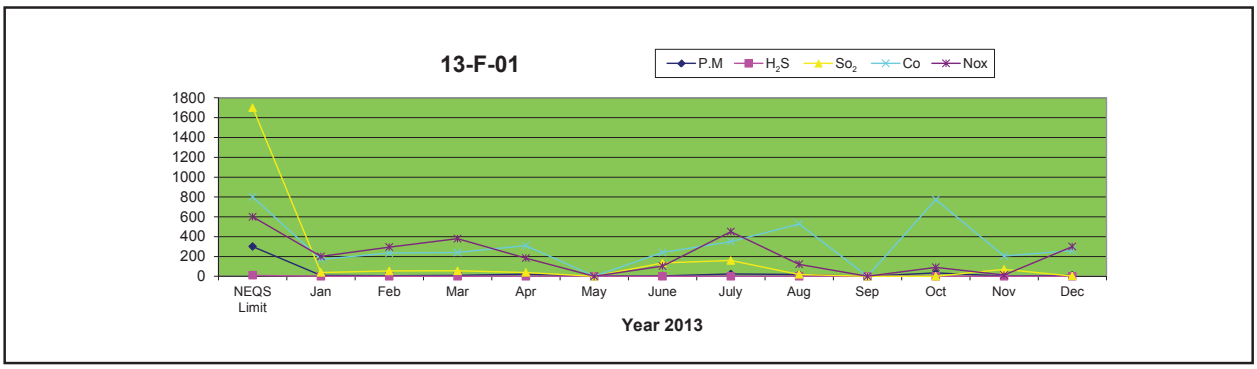


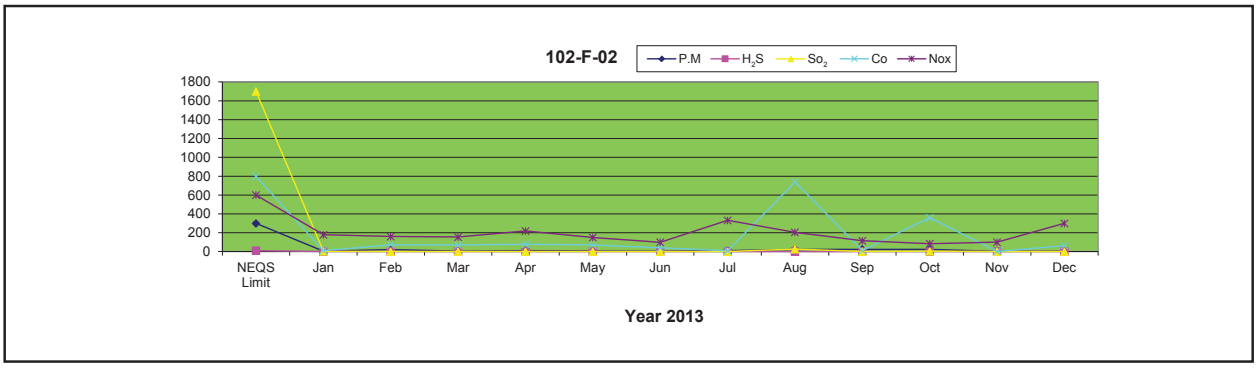


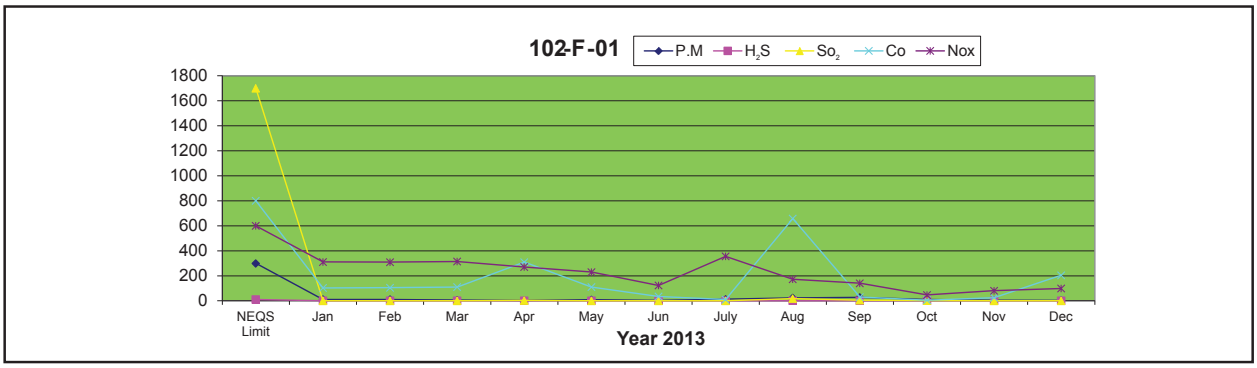


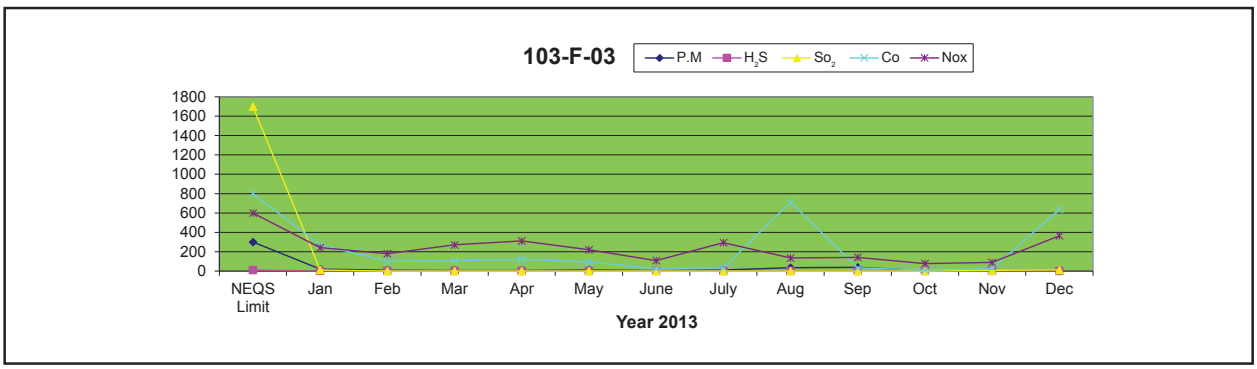


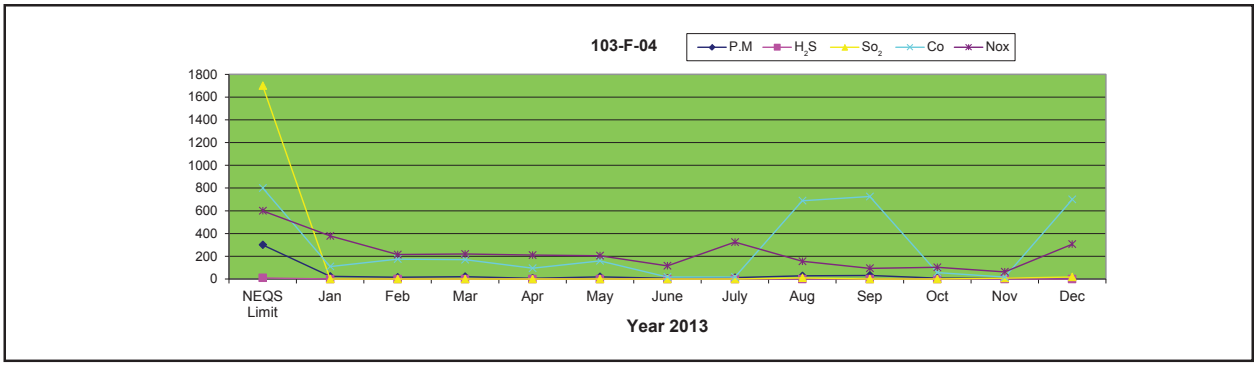
Emission Monitoring







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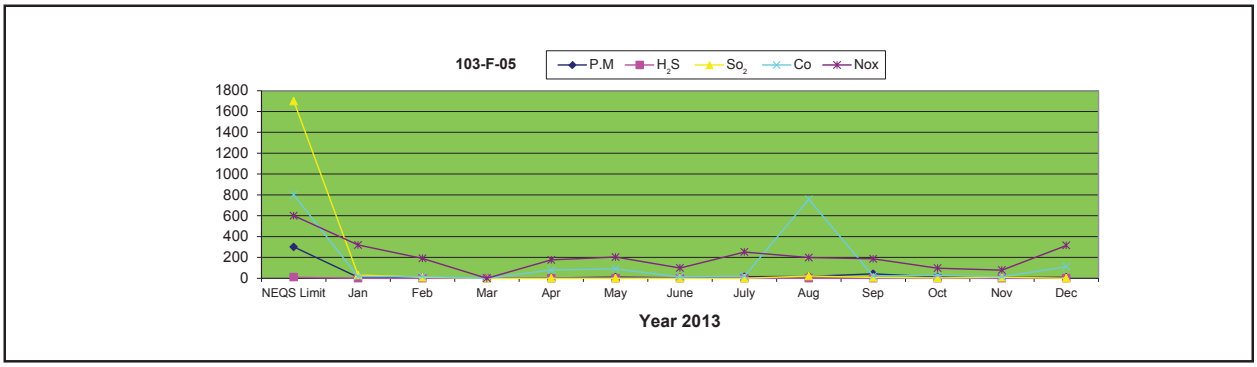
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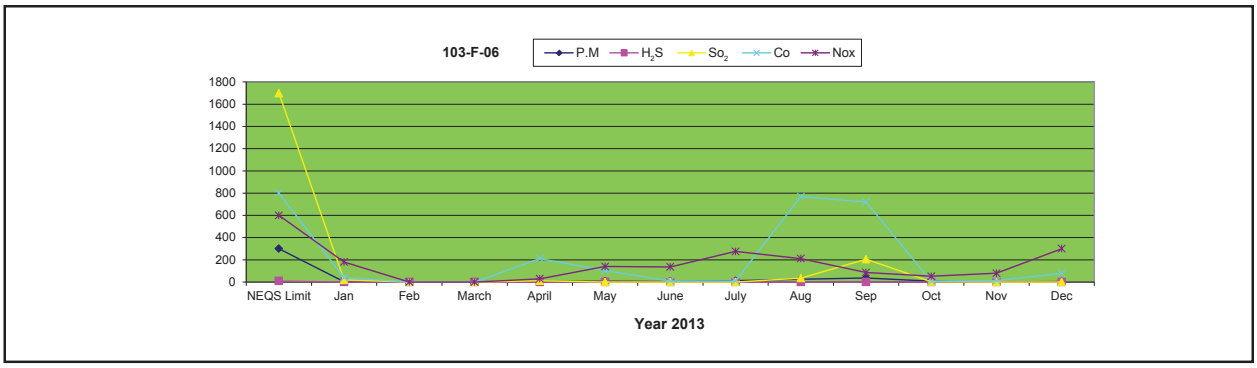
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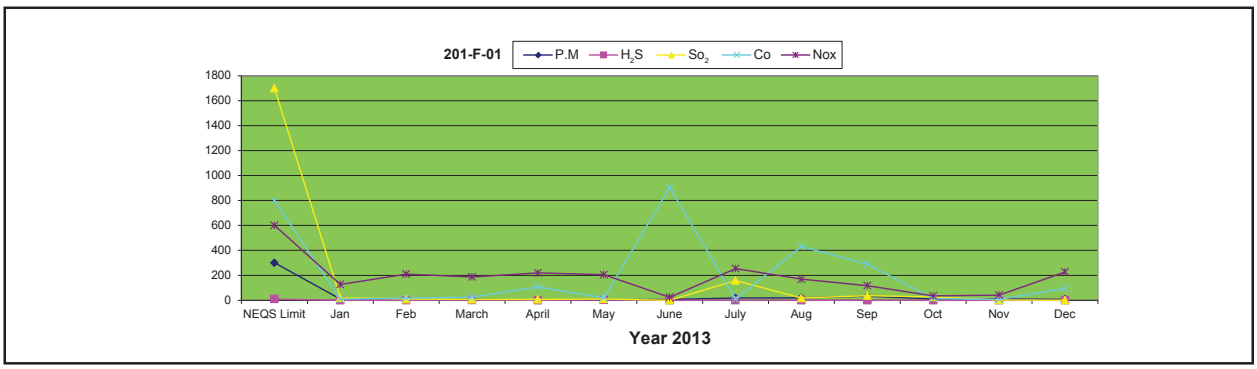
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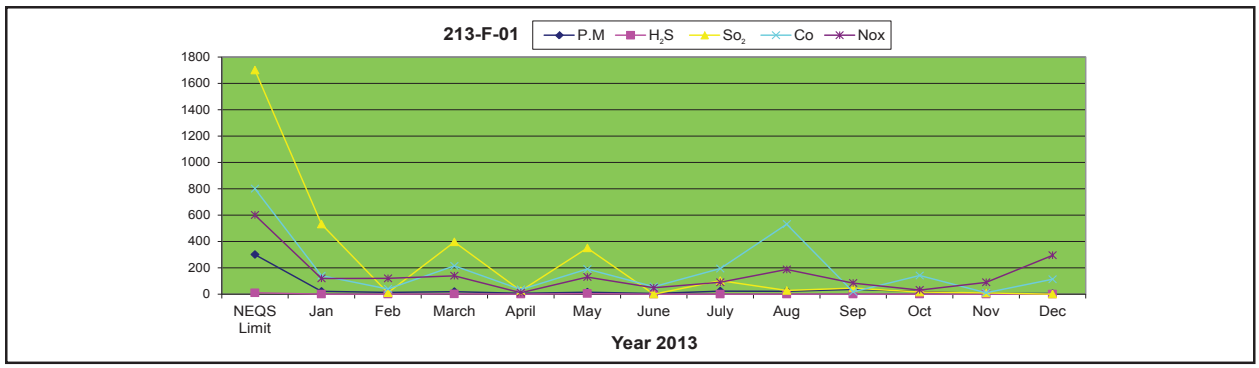
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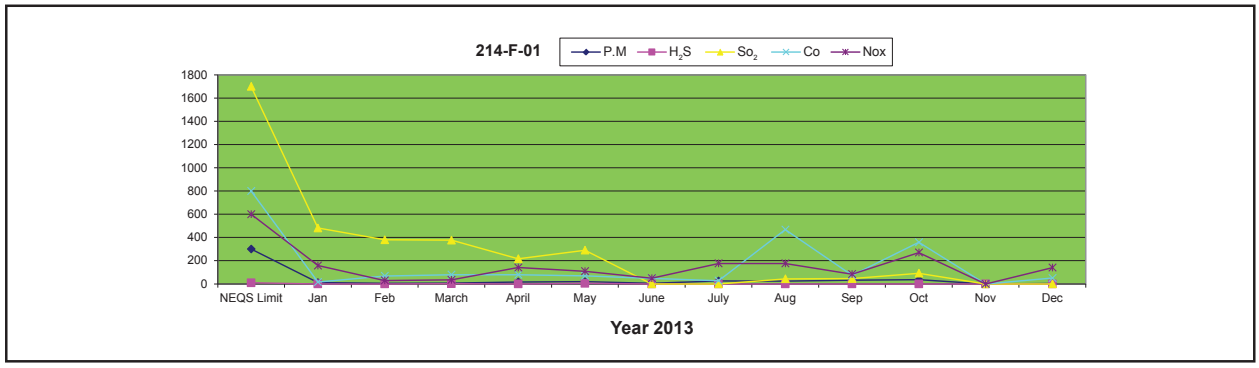
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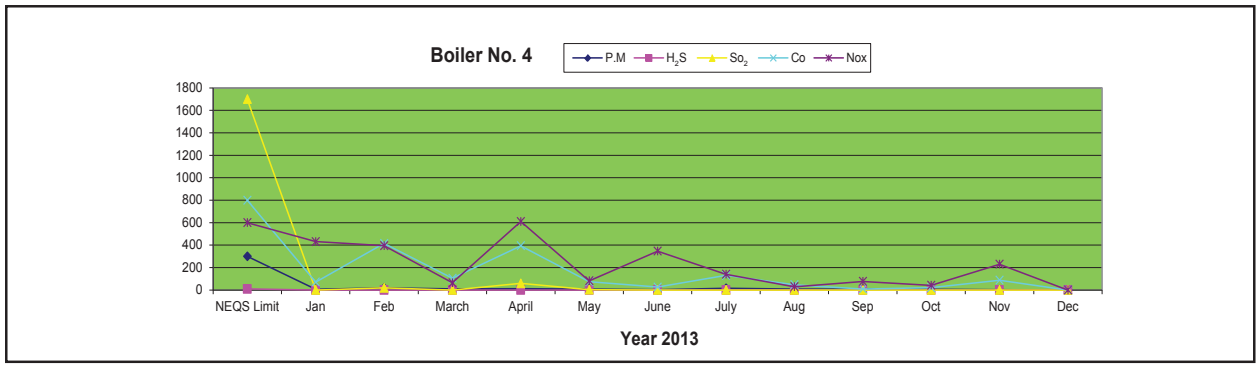
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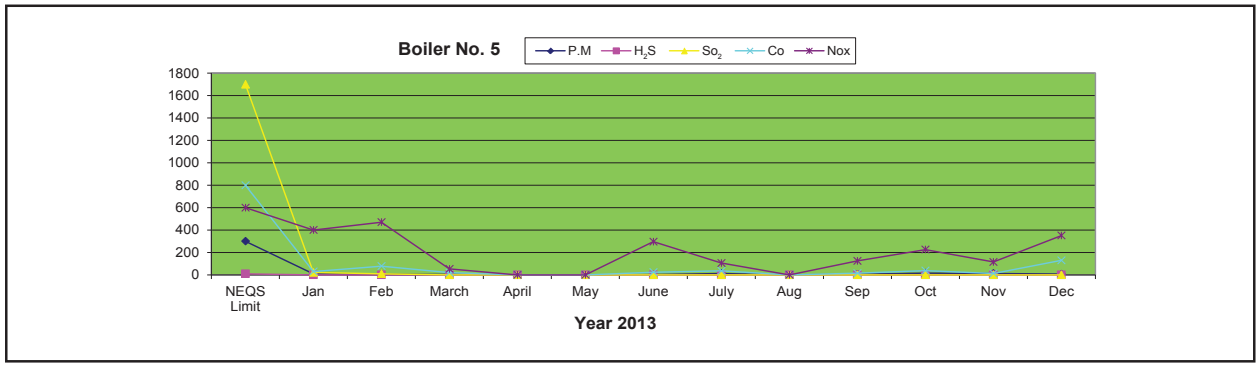
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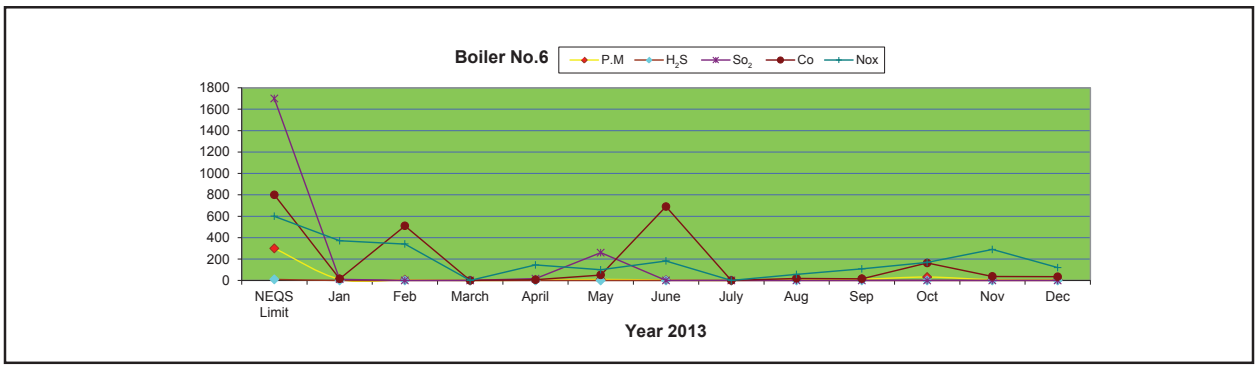
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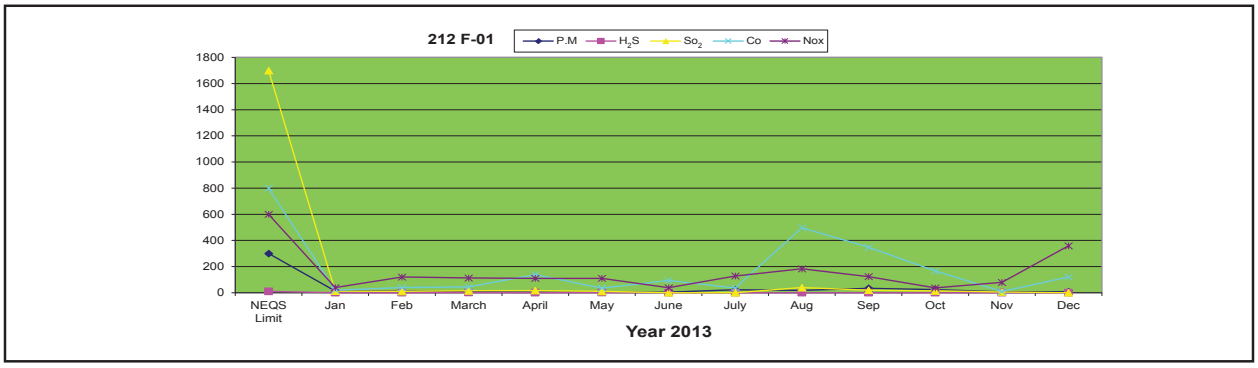
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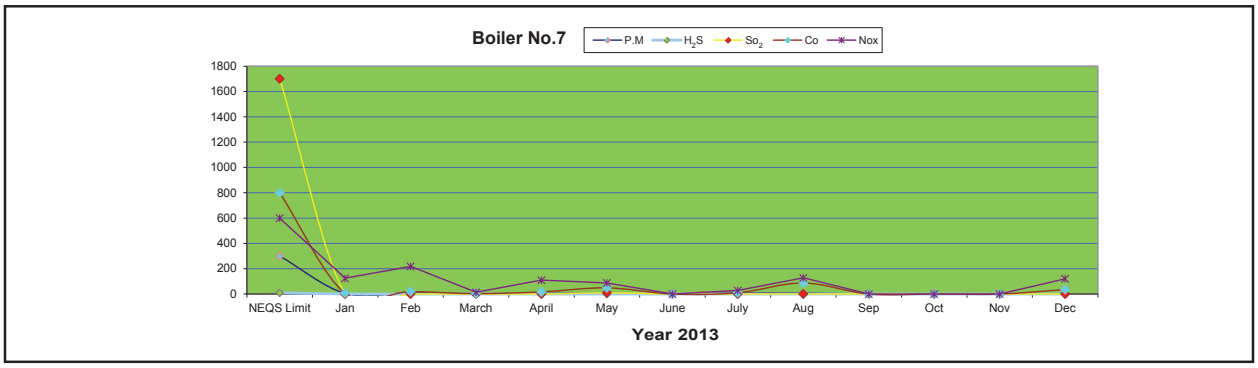
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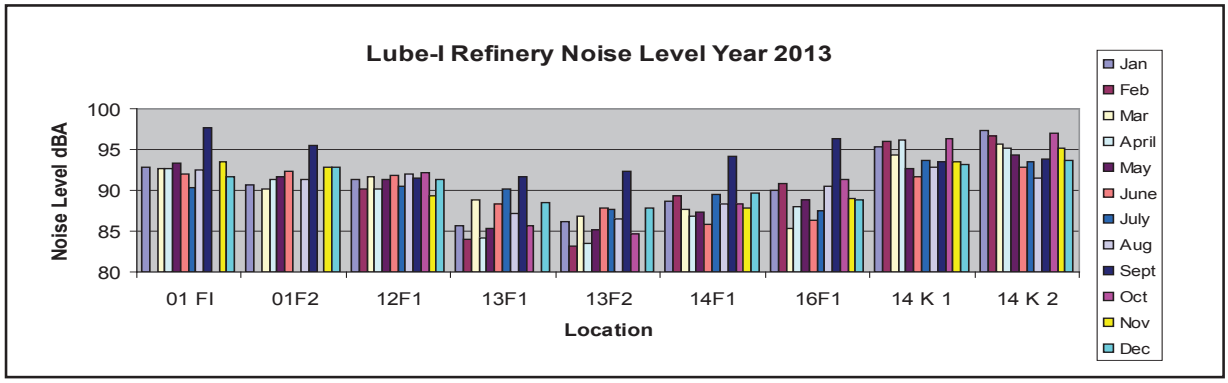
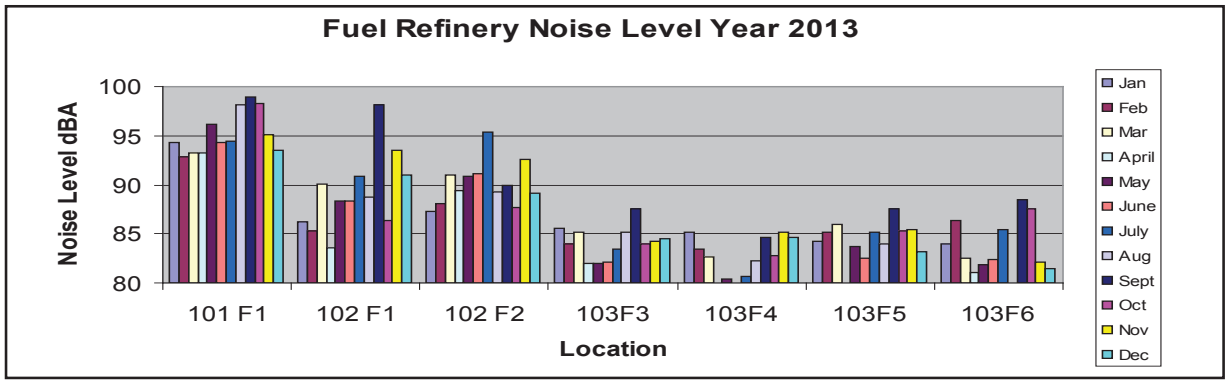
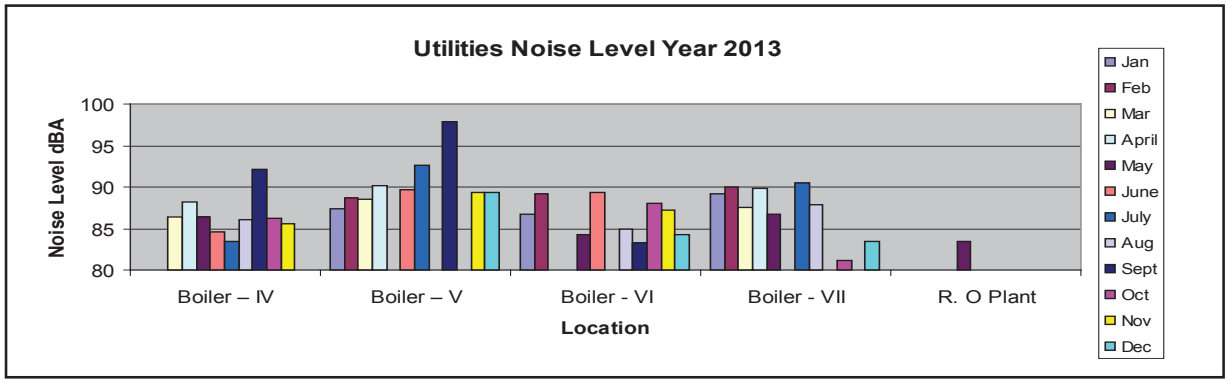
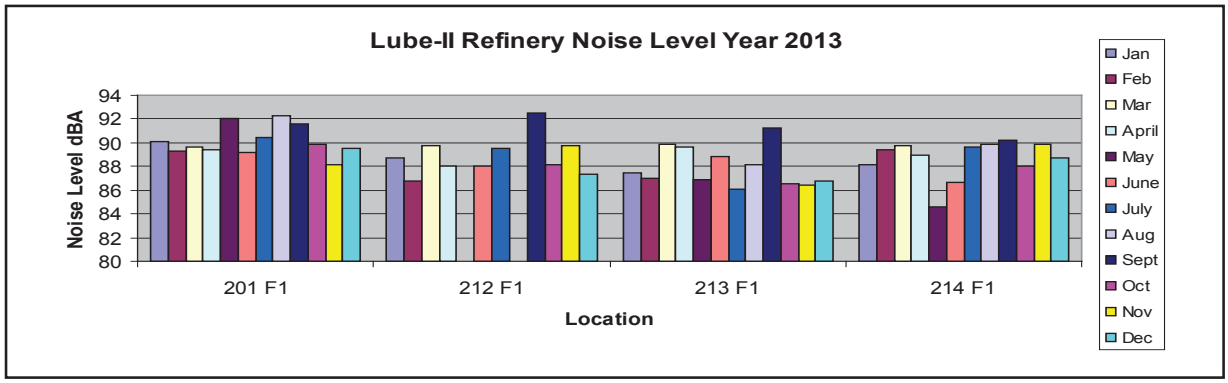
400
200
0
NEQS Limit
Jan
Feb
March
April
May
June
July
Aug
Sep
Oct
Nov
Dec
Year 2013

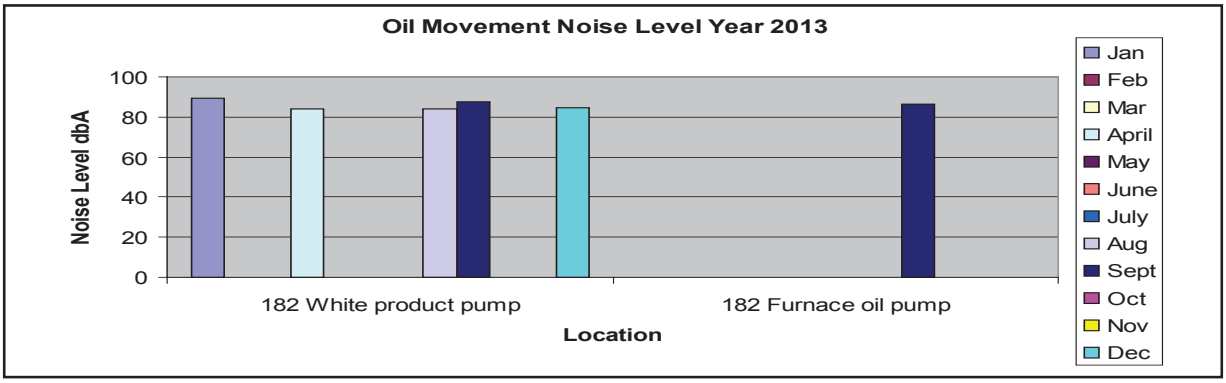
Noise Level Monitoring

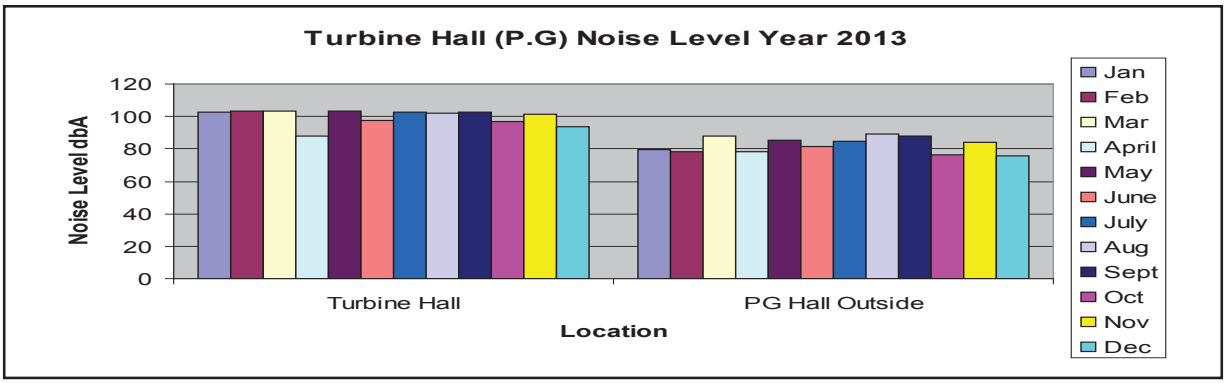


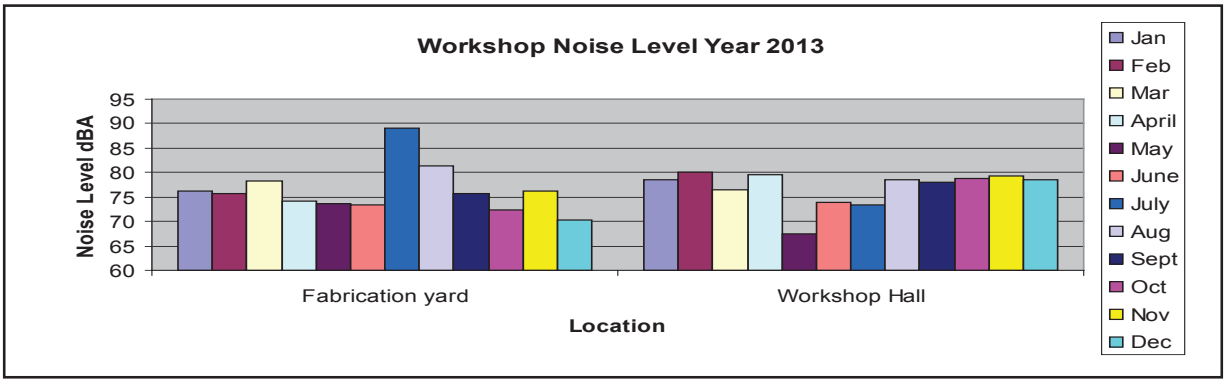


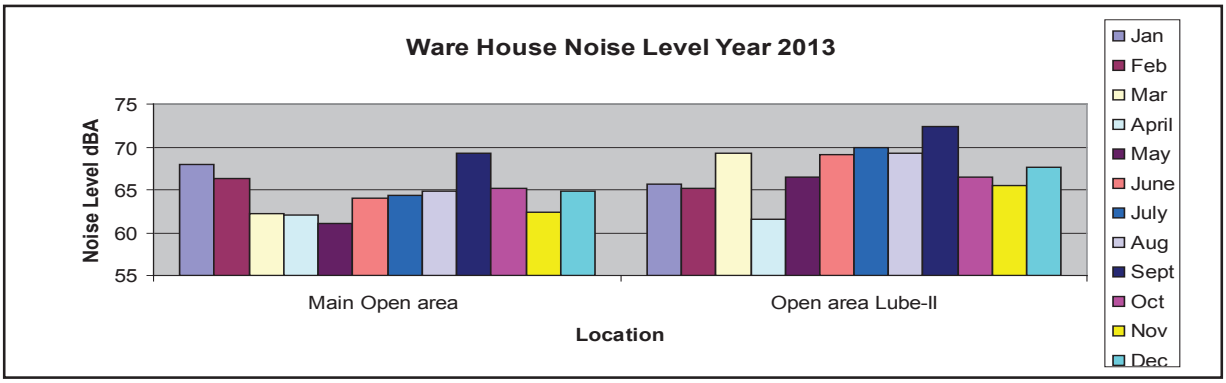





Oil Movement Noise Level Year 2013
Noise Level dbA
100
80
60
40
20
0
182 White product pump
182 Furnace oil pump
Location
Jan
Feb
Mar
April
May
June
July
Aug
Sept
Oct
Nov
Dec


Turbine Hall (P.G) Noise Level Year 2013
Noise Level dbA
120
100
80
60
40
20
0
Turbine Hall
PG Hall Outside
Location
Jan
Feb
Mar
April
May
June
July
Aug
Sept
Oct
Nov
Dec


Workshop Noise Level Year 2013
Noise Level dBA
95
90
85
80
75
70
65
60
Fabrication yard
Workshop Hall
Location
Jan
Feb
Mar
April
May
June
July
Aug
Sept
Oct
Nov
Dec


Ware House Noise Level Year 2013
Noise Level dBA
75
70
65
60
55
Main Open area
Open area Lube-II
Location
Jan
Feb
Mar
April
May
June
July
Aug
Sept
Oct
Nov
Dec

Hazard Risk Management

Facility / Operation / Activities / Process / Equipment	Ill Health Injury hazard	Hazard Potential Impact Towards Ill Health / Injury	Strategy of Controls ▪ Elimination ▪Substitution ▪Reduction ▪Engineering ▪Administration ▪ Preventive measures
⇒ To receive imported crude oil from crude oil ship tanker through 30" dia pipeline. ⇒ To load export Naphtha through 16" dia pipeline from storage tanks to ship tanker. ⇒ Crude oil pumping through 14" dia pipeline from Keamari Terminal to NRL Korangi ⇒ Operation of high-tension motors / pumps ⇒ Product, pumping operation through pipelines from NRL to KT and then Oil Marketing Companies ⇒ Pumping of effluent water to sea and recovery of oil	◆ VOC's emission ◆ Overflow of tank ◆ Fire ◆ Pipeline leakage ◆ Falling hazard ◆ Spillage / Falling ◆ Overflow of collecting tray ◆ High temp. product ◆ Slippery hazard	• Ill Health due to vapors inhalation • Air / Soil contamination. • Injuries / asset loss • Contamination	**CC:** • Define & documented SOP's for each activity along with record management • Emergency Response Plan • House keeping properly maintained. • Auto tank gauging system and bob-gauge system monitoring. • API sewer system properly cleared. • Dyke wall properly sealed. • Routine Maintenance regularly done. • Training is being given to all concerned • Preventive maintenance / inspection schedule is being properly followed. • Earthling of tanks properly maintained. • Provided security to safeguard pipeline in KPT trench. • KPT maintains chikson arms, pipelines and valves in side BOP-I, II, III • Sufficient lighting has been provided • MSDS being followed • Communication system walki / talkies & telephones are maintained in working order. • Low and high level alarms are being provided on API to avoid backflow Preventive maintenance / inspection schedule implementation • Electrical wiring is regularly inspected & maintained • PPE's being used
⇒ Loading and Unloading of chemical drums / material through Fork lifter	◆ Improper stacking ◆ Falling of drums ◆ Uneven surface ◆ Slippery surface	• Human Injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Fork lifter load capacity being followed • Designated area marking • Display of sign boards • Proper Illumination of area • MSDS being followed • Proper preventive maintenance of Fork lifter • Emergency Response Plan • PPEs being used

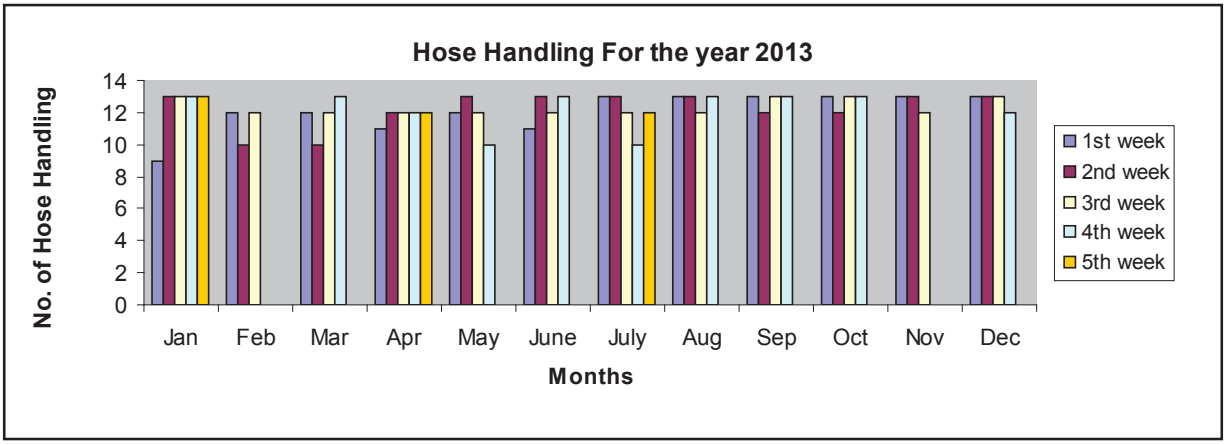
Facility / Operation / Activities / Process / Equipment	Ill Health Injury hazard	Hazard Potential Impact Towards Ill Health / Injury	Strategy of Controls ▪ Elimination ▪Substitution ▪Reduction ▪Engineering ▪Administration ▪ Preventive measures
⇒ Gauging of petroleum products stored in fixed and floating roof tanks.	♦ VOC's Emission ♦ Falling hazard ♦ Minor spillage from pump seal / pipeline fittings	• Ill Health due to inhalation • Minor / major injuries	**CC:** • Define & documented SOP's for each activity along with record management • Emergency Response Plan • Proper house keeping being maintained. • Maintenance of Auto tank gauging system is being regularly done • Training is being given to all concerned • Preventive maintenance / inspection schedule implementation. • PPEs being used.
⇒ Loading and Unloading of chemical drums / material through Fork lifter	♦ Improper stacking ♦ Falling of drums ♦ Uneven surface ♦ Slippery surface	• Human Injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Fork lifter load capacity being followed • Designated area marking • Display of sign boards • Proper Illumination of area • MSDS being followed • Proper preventive maintenance of Fork lifter • Emergency Response Plan • PPEs being used
⇒ Chemical Handling and testing e.g. Acid, caustic, Ammonia etc.	♦ Chemical hazard (Irritant and Toxic)	• Injuries • Burns	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Testing is carried out. • MSDS being followed • Emergency Response Plan • PPEs being used
⇒ Vehicle Movement inside □RL	♦ Accident ♦ Fire hazard	• Human injury • Asset loss	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Safe speed limit being followed • Designated area marking • Display of sign boards • Proper preventive maintenance of vehicle • Valid driving license • Authorized driving by security department inside refinery • Spark Arrestors are installed • Emergency Response Plan

Facility / Operation / Activities / Process / Equipment	Ill Health Injury hazard	Hazard Potential Impact Towards Ill Health / Injury	Strategy of Controls ▪ Elimination ▪Substitution ▪Reduction ▪Engineering ▪Administration ▪ Preventive measures
⇒ Fire Tender / Vehicles Movement	♦ Accident ♦ Fire hazard	• Human injury • Asset loss	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Trained and HTV / LTV licensed holder drivers • Designated area marking • Display of sign boards • PM schedule compliance • 3rd party fitness certification. • Spark Arrestors are installed • Emergency Response Plan
⇒ Vehicles Entry (In/Out)	♦ Fire hazard ♦ Bomb Threat ♦ Road Accident	• Human injuries • Asset loss	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Vehicle speed limit 25 km / hr being followed • Display of notice board/warning sign • Designated area marking • Spark Arrestors are installed • Emergency Response Plan
⇒ Visitors / Labor Force (In/Out)	♦ Terrorist Threat ♦ Bomb Threat	• Human Loss • Human injury • Property Loss	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Visitors checking at gate • Visitor passes issued • Mobile phones are retain at gate office and issue token • All types of fire material like lighter / matchbox are taken at gate • Display of notice board / warning sign • Communication with concerned department • Emergency Response Plan
⇒ Sanitation Management	♦ Microbial contamination ♦ Transmission dieses ♦ Cross contamination ♦ Smell ♦ Allergy ♦ Infection ♦ Insect Bits ♦ Suffocation ♦ □nderground gasses	• Human injuries • Illness • Infection	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Designated area marking • Emergency Response Plan

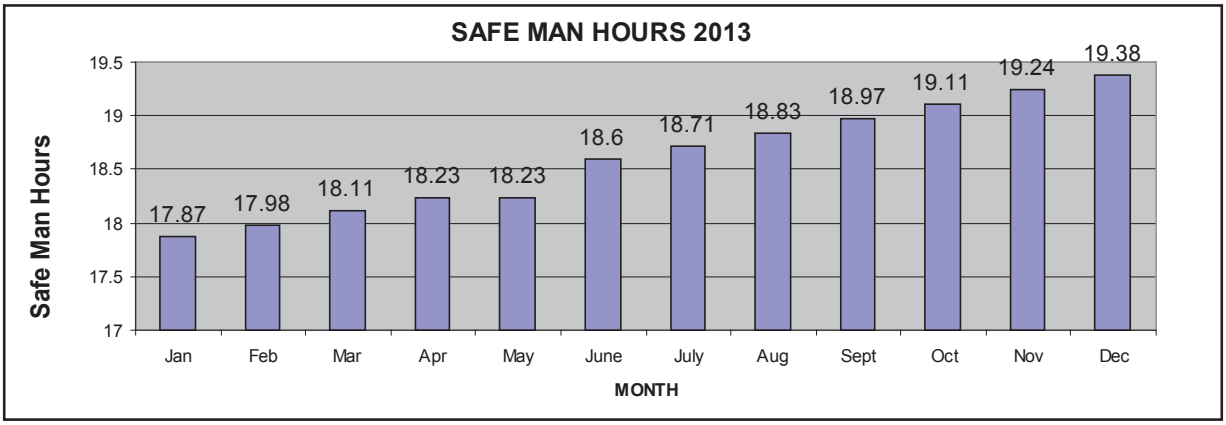
Facility / Operation / Activities / Process / Equipment	Ill Health Injury hazard	Hazard Potential Impact Towards Ill Health / Injury	Strategy of Controls ▪ Elimination ▪Substitution ▪Reduction ▪Engineering ▪Administration ▪ Preventive measures
⇒ Solid Waste management	♦ Food Waste ♦ Paper ♦ Plastic ♦ Debris ♦ Cartridge ♦ Grass ♦ Toxic ♦ Glass ♦ Chemical	• Illness • Bleeding • Headache • Sinus	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Emergency Response Plan
⇒ Canteen Burners Operation	♦ Fire hazard	• Human injury • Property loss	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Emergency Response Plan
⇒ Cooking Food	♦ Health Hazard ♦ Fire hazard ♦ Cross Contamination	• Ill health • Burn injury • Food poisoning	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Emergency Response Plan
⇒ Excavation using excavator ⇒ Concrete mixer machine operation ⇒ Operation for area dressing by hand shawl / tractor ⇒ Asphalt mixing machine operation	♦ □echanical Hazard ♦ Electrical Hazard ♦ Hazard of Collapse ♦ □oise Hazard ♦ Health hazard because of body contract with moving drum□ ♦ Heat & Temp □Hazard ♦ Excessive exposure to sun in extra climate ♦ Ergonomic Hazards	• Injury Illness • Hearing loss • Human injury by body contact with sharp edges□ • Electrocution • Skin burn • Hearing loss • Back Ache problem	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Proper barrication • Follow Permit to Work System • Flame arrestor is to be installed at exhaust • Emergency Response plan • Proper display board provided during activity • Providing PPE's including dust mask□
⇒ □aintenance checking and on / off □T motor breaker□ Power cables□electrical e□uipments	♦ Flash developed ♦ Fire Hazard ♦ Electric shock ♦ Sparking developed	• Ill health • Human minor and major injury • Damaged of particular breaker	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Inspection of breakers and monitor the current on ampere meter□ • Area barrication • Energizing / De-energizing • Completely check all the internally installed components before switching or starting the motor • Preventive maintenance schedule • Emergency Response plan • Ensure the proper insulation of cables • Ensure the proper earthing • PPE's being used

Facility / Operation / Activities / Process / Equipment	Ill Health Injury hazard	Hazard Potential Impact Towards Ill Health / Injury	Strategy of Controls ▪ Elimination ▪Substitution ▪Reduction ▪Engineering ▪Administration ▪ Preventive measures
⇒ Loading / Unloading material through Carne / Lifter	♦ Falling Object from height ♦ Falling object on a moving machine ♦ Movement of Crane / vehicles	• Human injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management Load chart to be checked • Certified crane to be used • Certified shilling wire to be checked. • Area Marking • Follow the load chart • Emergency Response Plan • PPE's being used
⇒ Stacking of materials, general items, pipes, fitting sheets and spares	♦ Falling Object from height ♦ Falling object from a moving machine ♦ Uneven Surface	• Human injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management Load chart to be checked • Certified crane to be used • Certified shilling wire to be checked. • Identification of designated area / material • Follow the load chart • Emergency Response Plan • PPE's being used
⇒ Disposal of empty Drums	♦ Oil / chemicals spillage from empty Drums	• Human injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • Emergency Response Plan • Area identification • Training is being given to all concerned • Follow MSDS • Use of PPE's
⇒ Handling of Gas Cylinders	♦ Leakage of Gas or Leakage of oxygen diluting gases ♦ Ergonomic hazard	• Human injury	**CC:** • Define & implemented SOP's for each activity properly implement along with record management • While receiving the cylinders checking of valves for any leakage • Training is being given to all concerned • Emergency Response Plan • Use of PPE's
⇒ Catalyst Regeneration	♦ Health hazard ♦ Chemical hazards	• Human injury • Ill health	**CC:** • Define & implemented SOP's for each activity properly implement along with record management Designated area for drums • Follow MSDS • Emergency Response Plan • Use of PPE's

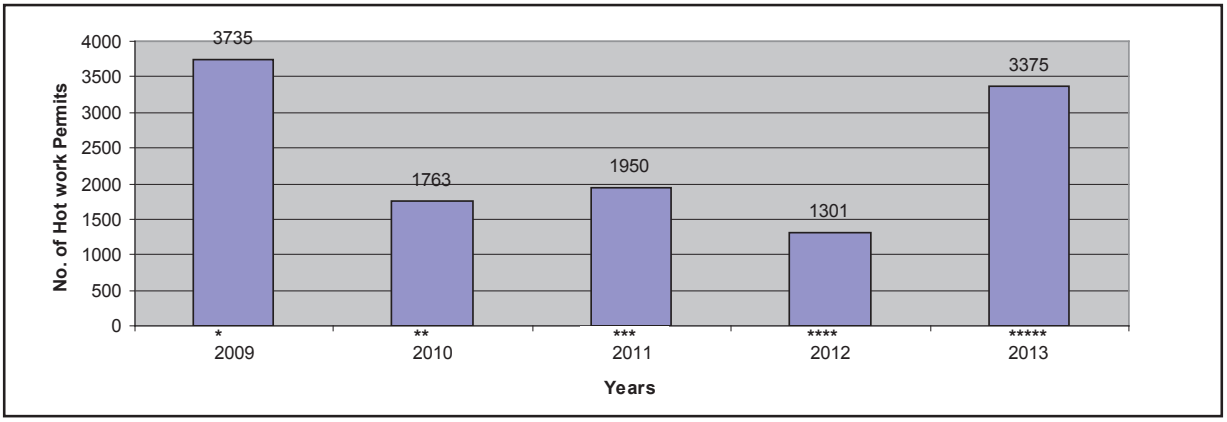
Hose Handling Drill for the year 2013



Safe Man Hours 2013



Work Permit Monitoring



* Fuel Refinery Turnaround June 2009 / Lube-II Refinery Turn Around December 2009

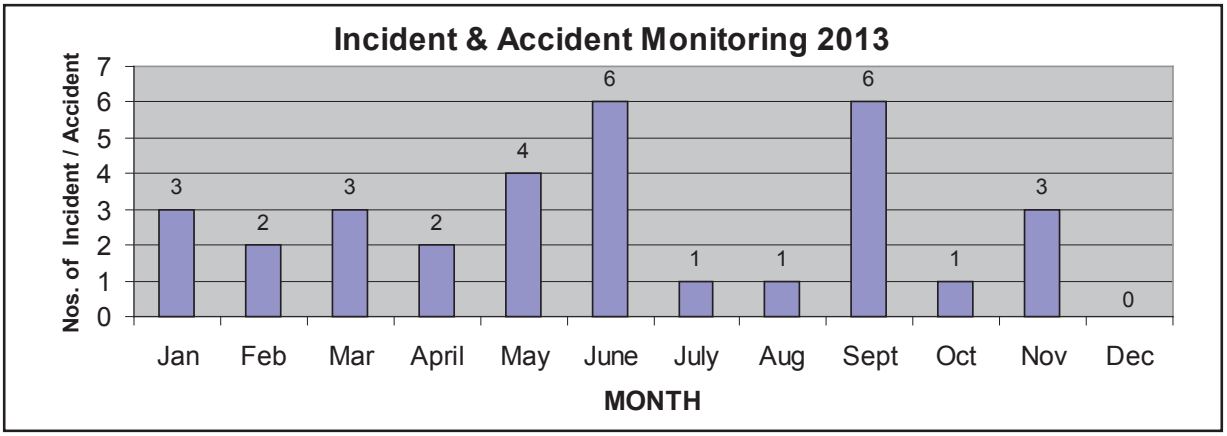
** No Turnaround in 2010

*** Lube-I Refinery Turnaround March 2011

**** Lube-II Refinery Turnaround November 2012 / Fuel Refinery Turnaround December 2012

***** No Turnaround in 2013

Incident & Accident Monitoring 2013



Awards Achievement

Mr. Aftab Ahmed Zahid General Manager (Ops) receiving the 10th Environmental Excellence Award 2013 from National Forum For Environment & Health (NFEH)

Mr. Shakil Ahmad Asif Divisional Head (Technical) receiving the 8th Environmental Excellence Award 2011 from National Forum For Environment & Health (NFEH)

Mr. Mansoor Shahid Siddiqui Manager HSE/Fire Protection receiving the Corporate Environmental Reporting award 2010 from ACCA-WWF Pakistan

Mr. S.M Ashqeen previous GM (Operations) receiving the 6th Annual Environment Excellence Award 2009 from National Forum for Environment & Health (NFEH)

Mr. Nisar Ahmed Khan AGM (Ops.) receiving the Corporate Environmental Reporting award 2009 from ACCA-WWF Pakistan

Waste Monitoring & Management

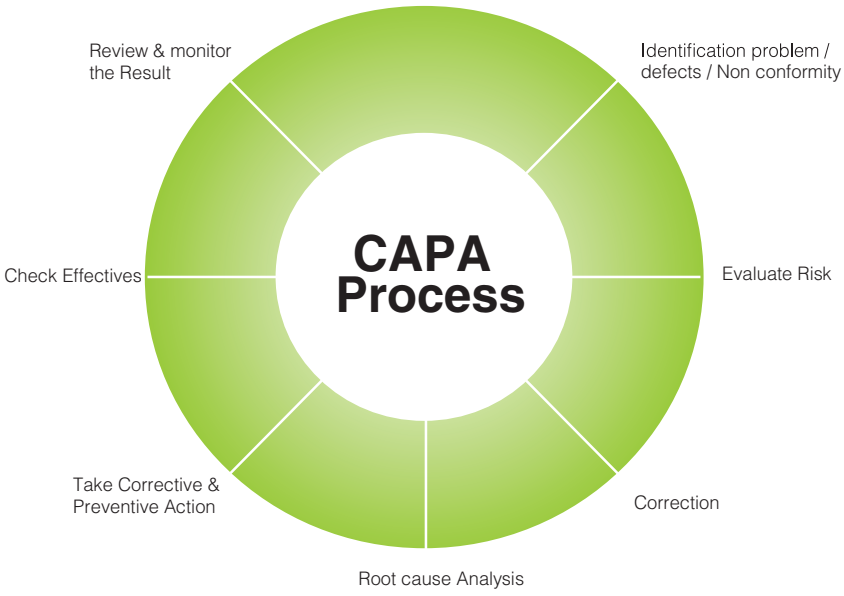
During Normal / Turnaround / Shutdown operations, Steering committee identifying waste generate causing Environmental Load with respect to the aspect like (Air emissions, Effluent discharge, solid waste). Environmental Load identification for normal / turnaround operation is carried out on format (NRL-FAF-AIA-001).

On the basis of the Environmental Load Summary for Normal operation developed on (NRL-FAF-AIA-002) and Turnaround Operation (NRL-FAF-AIA-003). Total Environmental load at NRL on the basis of above mentioned summaries is developed by concerned departments.

Environmental Load Aspects:

Flue Gases	VOC Emissions
Hot Air	Particulate Matter
API-I Effluent	API-II Effluent
Spent Caustic	Water to Sea
Cotton Waste	Hand Gloves (Leather)
Plastics	Glass Wool
Metallic Waste	Fused Refractory
Paper Cotton	Broken Bottles / Glass
Wood	Food Waste
Asbestos	Sludge
Floor Scrapping	Hospital Waste
Empty Drums	Spent Catalyst
Ionic Resin	Pyrophoric Material
Charcoal / Carbon	Rubber

Corrective and Preventive Action Process



ANNUAL CORPORATE ENVIRONMENTAL REPORT

Annual Corporate Environmental are available to all the stake holders through NRL website at the following link below:
http://www.nrlpak.com/corp_env_report.html

HSE NEWS LETTER:

Monthly HSE News letter are available to all the stake holders through NRL website at the following link below:
http://www.nrlpak.com/news_lettes.html

Contractor Control Monitoring

Steering Committee led by the HSEQ MR / DMR's reviews contractor's method statements format & methodology.

Need for contractor services is identified and method statement is requested by initiating department along with tender documents.

A written statement prepared by the contractor on prescribed format (NRL-FAF-CCP-001) which provided by NRL outlines the work to be undertaken and the methods for minimizing and managing environmental occupational health & safety impacts and risk. This statement also include and assessment of environmental occupational health and safety issues associated with activities and measures necessary to minimize the impacts.

The contractor using contractor method statement documents information related to contractor on-site activities. MR / DMR's sends method statement to contract department with observation / recommendation for action & record.

Contractors conform and maintain records (contractor method statement) as specified by the HSEQ Management System. Prior to start of work on site the nominee interviews the site Engineer / Supervisor for awareness and compliance for HSEQ requirements as declared in contractor method statements.

HSEQ MR in coordination with Manager HSE and Manager Fire Protection arranges awareness and training brief for contractors Engineer / Supervisors periodically regarding HSEQ management system and its requirements at NRL. Training records are maintained.

For turnaround or major jobs (re-vamps, expansion project), all the selected Contractors Engineers / Supervisors are given a special training session one week before the commencement of jobs. Training for Technicians / Skilled Workers is arranged at least one day before start of work.

Schedule of training is finalized with the mutual agreement with Manager Special Assignment and Manager HSE, with intimation of HSEQ MR. Records is maintained by Manager HSE.

For turnaround and major jobs (re-vamps, expansion projects), contractor appoints safety supervisor in agreement with Manager HSE.

Safety talk is dally delivered by HSE Engineer during T/A before start of the job where safety briefing is imported to the working staff of the contractors engaged in T/A activities.

Training, Awareness And Competency

At NRL, training is an important element for enhancing the productivity and value of human Resource. Employees are exposed regularly to training programs, Workshops, seminars and professional courses both within the country and abroad.

Training Need Analysis (TNA) is carried out for employees at different levels of employees to assess their requirements covering both management and technical skills. In addition to hands on executive training programs, the Company has also conducted apprenticeship program where theoretical and practical training in Refinery operations and maintenance was imparted.

Company has also planned to arrange comprehensive training program for SAP ERP Users with the implementation of SAP ECC-6.

NRL is firmly committed to the Health and Safety of its employees and to the protection / continuous improvement of the Environment.

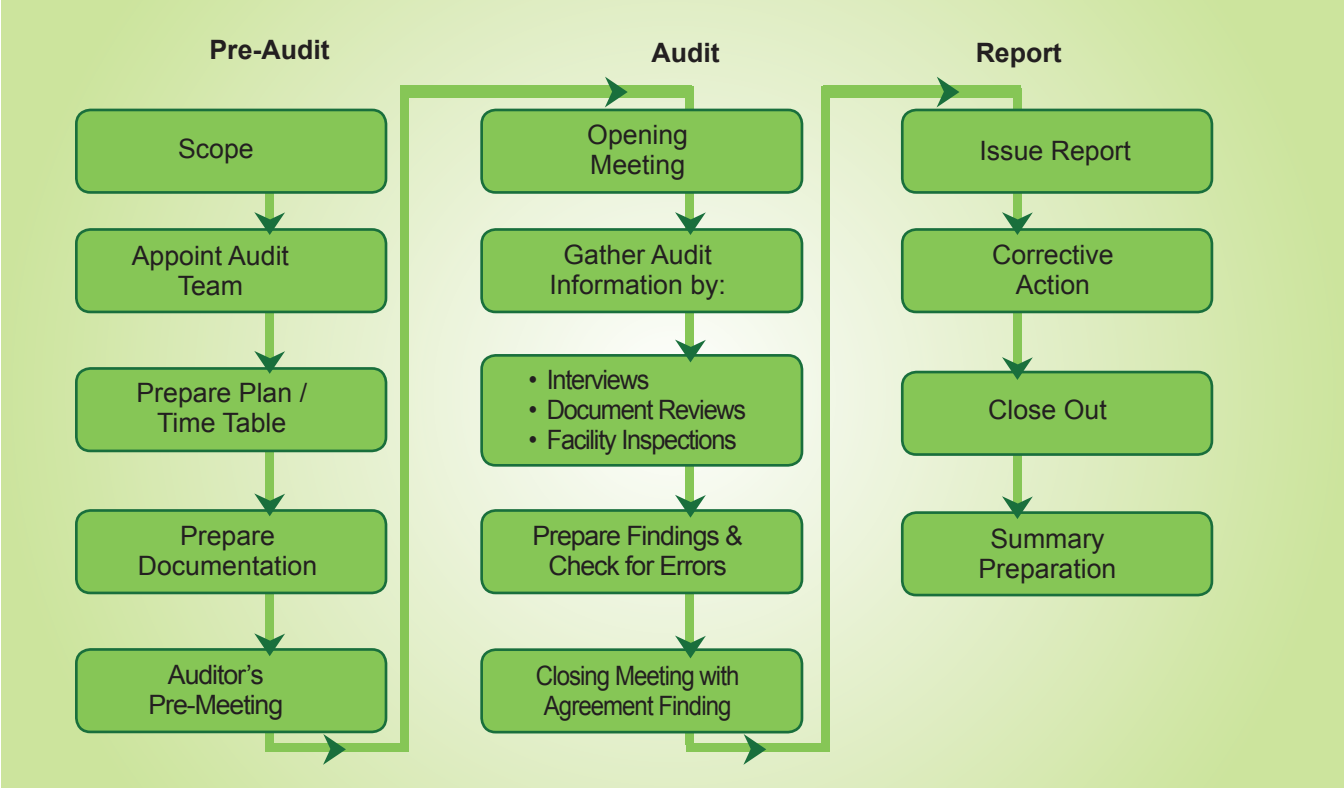
Training is therefore imparted for Health, Safety, Environment & Quality to all including employees and contractor.

Emergency Preparedness & Response Trainings / Drills:

Emergency Preparedness & Response Trainings / Drills:

Live Fire & Fire Extinguisher Training / Drills / Exercises:

HSEQ Audit Reporting



3rd Party HSEQ Auditing Reporting

Communication / Meetings

Statement of Compliance

The National Refinery Limited was assessed on Manufacturing, Supply, Marketing, Sales and Export of wide range of Petroleum & Petrochemical products based on their developed Integrated Management System (IMS) covering ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 standards.

- The ultimate responsibility for ensuring the adequacy of implementation IMS (HSEQ) Management System lies with the IMS (HSEQ) Management Council.
- The organization establish, document, implement, maintain and continually improve its IMS (HSEQ) Management System in accordance with the International Standards and determine, demonstrate how it will full fill these requirements.
- It define and document the scope of IMS (HSEQ) Management System that covers manufacturing, supply, marketing, sales and export of wide range of petroleum & petrochemical products at Korangi Refinery, Korangi-Keamari Pipeline and Keamari Terminal.
- There mechanism of assessing their Environmental Aspects & Impacts and Occupational Risk are found very good and safety measures taken are very well controlled.
- The organization IMS (HSEQ) Policy Statement within the defined scope it is well appropriate, documented, updated, maintained, communicated, publicly available, provide a frame work for setting and reviewing objectives and targets included a commitment to continual improvement.
- Roles, responsibilities and authorities of personnel are well defined, documented and communicated as in job description and procedure in order to facilitate IMS (HSEQ) Management System.
- A well defined procedure of training has been implemented to improved, skills and competency at all level.
- Internal and external communication with stakeholders in relation to, environmental aspect, pertinent OH&S information, product information, inquiries, contract, customer feedback, including customer complaints, properly implemented through effective procedural mechanism.
- The organization establish, document implement and maintained procedures to identify & control of environmental aspects, impact assessment, hazard risk assessment for all it activities.
- The IMS (HSEQ) Management System, Documents data control and record management, traceability, identification, availability and disposal of obsolete version are well managed. The level of detail of the documentation sufficient to describe the IMS (HSEQ) management System and its parts to provide direction.
- The organization establish document maintain and implement the procedure for identifying and accessing the applicable legal and other requirement.
- The organization establishes and maintains documented IMS (HSEQ) objectives at relevant function and levels consistent with the commitment to continual improvement.
- Evaluation those of its operations processes and activities that are associated with its identified significant environmental aspects, risks where control measures need to applied in order to fulfill the requirement.
- Emergency preparedness and response procedures suits its own particular need, include consideration of nature of on site hazards, scale of an emergency situation. Activities are done based on that is tremendous which identified through their drills as well as assisting surrounding factories.
- The monitoring and measurement Procedures are well maintain for IMS (HSEQ) Management System performance, data analyzed to identify the patterns and obtain information qualitative and quantitative used to implement corrective and preventive action.

- Evaluations of applicable Legal requirement regularly carried out with defined interval.

- A well defined Procedure for the investigation of incidents has been implemented to identified rout causes and corrective action. Taking action to mitigate any consequences arising from non conformance / incident.

- Procedure for Internal audits has been proper documented, implemented and maintained which covers the scope, frequency, methodologies and competences, as well as the responsibilities and requirements for conducting audits and reporting results.

- To ensure IMS (HSEQ) Management System continuing suitability, adequacy and effectiveness, including assessing opportunities for improvement management review has been carried out. The output include any decisions and action related to possible changes to IMS (HSEQ) Policy, objectives and other element consistent with the commitment to continual improvement.

M/s TUV Austria (Pvt.) Limited Previously Known as Moody International (Pvt.) Limited being an independent assessor carried out third party assessment of National Refinery Limited for the requirement of international standards ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 Integrated Management System IMS (HSEQ). During audit it was found that NRL commitment excellent towards the established, documented, implemented and maintained requirements contained in the international standards. After a thorough audit and follow audit procedures against 19011, the Auditors of M/s TUV Austria (Pvt.) Limited previously known as Moody International recommended for the continuation of the certification of the above mentioned standards for NRL for the year 2013.

It has been verified that NRL has efficient & effective IMS (HSEQ) Management performance reporting system to ensure its adequacy, reliability and accuracy. This system is well incorporated in the business processes with a very high level of commitment observed during audit process. In addition we have gone through Corporate Environmental Report 2013 and found appropriate to the above system.

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Tariq H. Khan
Lead Auditor
TUV Austria (Pvt.) Ltd.
previously known as
Moody International (Pvt.) Ltd.

Achievement

Corporate Environmental Reports:

Glossary

LR1	Lube-I Refinery
FRE	Fuel Refinery
LR2	Lube-II Refinery
OKR	Oil Movement
OKT	Keamari Terminal
UT1	Utilities
FPR	Fire Protection
MT1	Maintenance-I
TLW	Turnaround Planning / Local Manufacturing / Workshop / Auto shop
PGR	Power Generation
MEL	Maintenance (Electrical)
MT3	Maintenance-III
INS	Instrumentation
HSE	Health Safety & Environment
TSR	Technical Services
QCL	Quality Control
PPE	Production Planning & Economics
PRJ	Project
CON	Contract
ENG	Engineering
MBL	Management Block
DIS	Dispensary
ISP	Inspection
SMS	Shipping, marketing & Sales
STR	Supply & Trade Relation
WHS	Ware House
IMP	Import
LRU	Local Purchase
ITS	Information Technology & System
LCA	Legal & Corporate Affairs
HUR	Human Resource
PER	Personnel
SCY	Security
SPR	System procedures
DDC	Document Data Control
MRM	Management Review Meetings
SRR	Structure, Roles, Responsibilities and Accountabilities
CPA	Corrective and Preventive Action
AWT	Awareness, Training and Competence
CAC	Communications, Consultation and Participation
MAM	Calibration, Monitoring and Measurement
EVC	Evaluation of Compliance
AUD	Internal Audit
EPR	Emergency Preparedness and Response
TRR	Tracking of Regulations and other Requirements
AAP	Agency Approvals for EMS & OHSAS
OCP	Operational Control
CCP	Contractor Control
AIA	Environmental Aspects & Impacts Analysis
EOT	Environmental Objective & Target
HRA	Hazard & Risks Assessment
RIP	Review of (HSEQ) Identified Projects
NCR	Control of Non - Conforming Product
QOB	Quality Objectives, Targets and Analysis of Data
CO_2	Carbon Dioxide
Db	Decibel-unit for measuring noise level
EPA	Environmental Protection Agency - Govt. of Pakistan
IGPD	Imperial Gallons Per Day
LTI	Lost Time Injury
MR	Management Representative
MSDS	Material Safety Data Sheet
NEQS	National Environment Quality Standards
NOx	Oxides of Nitrogen
SOx	Oxides of Sulphur
OH&SMS	Occupational Health Safety Management System
OHSAS	Occupational Health and Safety Assessment Series
PM	Particulate Matter.
SMART	Self Monitoring and Reporting Tool
VOC's	Volatile Organic Compounds
K-K	Korangi-Keamari
CO	Carbon Monoxide
Activity	A process, function or task that occurs over time and has recognizable results. Activities combine to form business processes.
Activity, Value added	Any activity that contributes directly to the performance of a mission, and could not be eliminated without impairing the mission.
Assertion	A logical expression specifying a program state that must exist or a set of conditions that program variables must satisfy at a particular point during program execution.
Assessment	An evaluation process including a document review, an on-site audit and an analysis and report. Customers may also include a self-assessment, internal audit results and other materials in the assessment.

Audit	A periodic inspection to ensure that a process is confirming to its specifications.
Audit trail	(1) (ISO) Data in the form of a logical path linking a sequence of events, used to trace the transactions that have affected the contents of a record (2) A chronological record of system activities that is sufficient to enable the reconstruction, reviews, and examination of the sequence of environments and activities surrounding or leading to each event in the path of a transaction from its inception to output of final results.
Bar Chart	A chart that compares different groups of data to each other through the use of bars that represent each group. Bar charts can be simple, in which each group of data consists of a single type of data, or grouped or stacked, in which the groups of data are broken down into internal categories representation.
Baseline	A specification or product that has been formally reviewed and agreed upon, that serves as the basis for further development, and that can be changed only through formal change control procedures.
Batch	A definite quantity of some product or material produced under conditions that are considered uniform.
Benchmark	A standard against which measurements or comparisons can be made.
Benchmark Data	The results of an investigation to determine how competitors and / or best in class companies achieve their level of performance
Benchmarking	a structured approach for identifying the best practices from industry and government, and comparing and adapting them to the organization's operations. Such an approach is aimed at identifying more efficient and effective processes for achieving intended results, and suggesting ambitious goals for program output, product / service quality, and process improvement.
Best Practice	A way or method of accomplishing a business function or process that is considered to be superior to all other known methods.
Brainstorming	A tool used to encourage creative thinking and new ideas. A group formulates and records as many ideas as possible concerning a certain subject, regardless of the content of the ideas. No discussion, evaluation, or criticism of ideas is allowed until the brainstorming session is complete.
Business process	a collection of related, structured activities a chain of events – that produces a specific service or product for a particular customer or customers.
Cause	That which produces an effect or brings about a
Check sheet	A customized form used to record data. Usually, it is used to record how often some activity occurs. A list of things to do.
Conformance	Meeting requirements or specifications
Customer	The receiver of an output of a process, either internal or external to the organization. Can be a person, department, company etc.
Data	Factual information used as a basis for reasoning, discussion, or calculation, often refers to quantitative information.
Effectiveness	The state of having produced a decided or desired effect; the state of achieving customer satisfaction.
Environment	All of the process conditions surrounding or affecting the manufacture and quality of a part of product.
Flow Chart	is a pictorial representation showing all of the steps of a process.
Flow Chart	A graphical representation of a given process delineating each step. It is used to diagram how the process actually functions and where waste, error, and frustration enter the process.
Hazard analysis	A technique used to identify conceivable failure affecting system performance, human safety or other required characteristics.
Hazard	A condition that is prerequisite to a mishap.
Key Performance Indicator	Refers to the short list of measurable parameters that will indicate how ell the business is doing at attaining its goals. In a manufacturing quality scenario, this may be the amount of scrap or rework that gets metered. In a service quality scenario, such as an insurance company, this may be the open inventory of unprocessed claims. In brand management, market share in itself and in comparison with competing brands is sure to be relevant. In logistics, on time deliveries, empty return loads, or missing items are candidate indicators.
Maintenance	Activities such as adjusting, cleaning, modifying, overhauling equipment to assure performance in accordance with requirements. Maintenance to a software system includes correcting software errors, adapting software to a new environment, or making enhancements to software.
Mode	The most frequently occurring vale in a group of measurements.
Problem	A deviation from a specified standard.
Safety	Freedom from those conditions that can cause death, injury, occupational illness, or damage to or loss of equipment or property, or damage to the environment.
System	A combination of several components or pieces of equipment integrated to perform a specific function
Traceability	The ability to trace a product back through the process, and identify all sub-processes, components, and equipment that were involved in its manufacture.
Validate	To prove to be valid
Validation	Establishing proof that a design, product, or process will perform to specifications.
Value added activity	An activity in a process that added value to an output product or service, that is, the activity merits the cost of the resources it consumes in production.
Value added	Any action, activity, or process that adds direct value to the output of the action, activity r process.
Vendor	A person or an organization that provides software and (or hardware and / or firmware and / or documentation to the user for a fee or in exchange for services. Such a firm could be a medical device manufacturer.
Vision	Often incorporated into an organizational mission (or vision) statement to clarify what the organization hopes to be doing at some point in the future. The vision should act as a guide in choosing courses of action for the organization.
Vision Statement	`Vision and Mission have a cause and effect relationship. Vision should reflect what the organization sees for itself 5-10 years down the road. The short time frame helps assure that the organization revitalizes itself every decade or so. The vision statement should contain direction (improve, decrease, etc.) + indicator (quality, customer satisfaction, etc.) + Target value (how much, #, % etc.) + time limit (by when).

Feedback Form

The performance evaluation data sheet assist us for further improvement regarding any aspect for this report. You are requested to fill the questionnaire for each statement, please indicate your response with the respective rating given below and add your valuable comments / suggestions where appropriate.

SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree

S#		SA	A	N	D	SD
01	Reporting mechanism and presentation					
02	Understandability, readability, accessibility					
03	Completeness					
04	Credibility & communication					
05	Comprehensive navigation					
06	Integration with financial statements					
07	Environmental perfo rmance					
08	Compliance & no-compliance record					
09	Management co mmitment including environmental occupational health & safety vision, strategy and related policies.					
10	Application of guidance or standard					

Comments / Suggestions

_____
_____
_____
_____

Many many thanks for your time in answering these questions. Your answers / input will play a significant link for the improvement of this report.

Please Forward to

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