



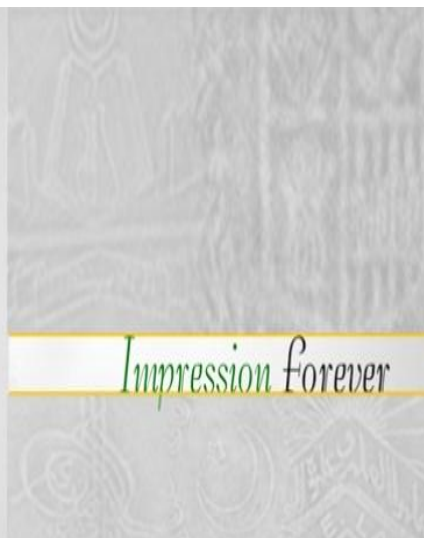
Security Papers
LIMITED

Environmental Report

ISO 9001: 2008 , ISO 14001: 2004 and OHSAS 18001: 2007



2015



Factory

Jinnah Avenue, Malir Halt, Karachi-75100, Pakistan. Tel: +92 21 99248536-37. Fax: +92 21 99248616

EXECUTIVE SUMMARY & SCOPE OF THE REPORT

This report encompasses the activities of Security Papers Limited regarding economic, social, environmental and operational performance of the Organization during the year 2015. This report provides an overview of Company Profile, business ethics and practices, continual improvement, major areas of operations, significant environmental aspects/ impacts, environmental monitoring and measurement, objectives, achievement trend, environmental management programs and corporate social responsibility. Policies and core values are integrated in the report to show the commitment of the Company regarding CSR, environment and safety activities.

Under sustainable development program, the Company sets targets and objectives such as conservation of resources by following proactive strategy, energy conservation, effluent & emissions control, solid waste management and prepare their achievements plans in order to keep improving in the areas of economics, social and environmental performance.

Emergency preparedness & response procedures and plan have been established and drills are conducted on periodic basis in order to check the effectiveness of these plans. Assembly zones are identified and marked in the mills. Responsibilities and authorities in emergency situation are clearly identified in the procedures. Incident reporting & analysis mechanism is also defined.

The Company profile

History of Major Events

Incorporation of the Company (as a private Company)	1965
Signing of contract for the supply of Paper Machine-1 (PM-1) with Mills-Paugh, U. K.	1966
Conversion into public Company	1967
Listing on the Karachi Stock Exchange	1967
Start of commercial production of PM-1	1969
Signing of contract for supply of Paper Machine-2 (PM-2) with Voith Paper, Germany (Obsolete PM-1 made redundant and scrapped)	2001
Start of Commercial Production of PM-2	2003
Formal inauguration of PM-2 by the Prime Minister	2004
Installation of Reverse Osmosis (RO) Plant	2006
Commissioning of Co-Generation Power Plant	2009
Modification and upgrading of plant	2011
Commissioning of new Mould Cover preparation building	2012
Commissioning of Dry Cleaning Plant	2014
Commissioning of Thread Unwind System	2015

Registered Office

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E-mail: comsec@security-papers.com

Website: <http://www.security-papers.com>

Share Registrar

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Timings: 8:30 AM to 1:00 PM & 2:00 PM to 3:30 PM

Auditors

Ernst & Young Ford Rhodes Sidat Hyder

Chartered Accountants

Investor Relations Contact

Muhammad Abdul Aleem

Company Secretary

Telephone: (+9221) 99248285

Fax: (+9221) 99248286

E-mail: comsec@security-papers.com

Web Reference

The Company maintains a functional website. Annual, Half-yearly and Quarterly reports are regularly posted at the Company's website <http://www.security-papers.com>.

Chairman's Review

I am pleased to report that 2015 has not only been another year of good performance for Security Papers Limited but a milestone in achieving certain goals. A healthy bottom line was achieved due to a well planned strategy and a stable management team enabling the Company to deliver consistent value for our shareholders. Your Company has attained an all-time record profit after tax of Rs 506 million in a challenging business environment.

To pass on the benefit of this achievement to the shareholders, the Board recommended payment of 60% cash dividend for the financial year 2014-15.

Business and Performance Review

Strategically the Company remained on course in realizing our vision of providing highest quality banknote and security paper to our customers. The Company had performed very well on the financial as well as operational front. The operational results recorded for the year under review demonstrate performance consolidation.

The Company achieved impressive growth in its operations during the year. Operational excellence and management skills have positioned the Company to achieve sustained and qualitative growth in the long run. The Board closely monitored the performance of the business with a focus to achieve continued improvements in productivity and efficiency while optimizing cost and processes to ensure sustained growth of the Company.

Production

The management of the Company remained committed to produce and deliver paper as per the customers' requirements. The Company produced 2,210 tons banknote and other security papers as against 2,405 tons last year. The supply chain team ensured continuous availability of goods and services by working closely with all vendors. The cost of production had been kept at optimum level through effective utilization of resources and by controlling production wastages and maximizing output to achieve efficiency. No major operational problems occurred and technical matters were handled well by trained and experienced engineers and technicians.

Sales

The Company achieved a sales volume of 2,237 tons as against 2,399 tons last year. The sales value during the year under review decreased by Rs 95 million owing to low demand for other security paper.

During the year under review the Company had successfully negotiated sales price increase with its major customer Pakistan Security Printing Corporation (Pvt.) Limited.

Plant Upgrade

The Company is continually pursuing an ambitious program of plant upgrade with a view to modernize its production facilities in phases. The objective was to improve efficiency and quality of the product. During the year the installation of the following projects was completed:

Dry Cleaning Unit (DCU)

The DCU is a state of the art automatic system of German origin to clean the raw material before putting it into the pulping process. Since the commissioning of the plant there was a marked improvement in the quality of paper which had resulted in higher level of customers' satisfaction.

Thread Unwind System (TUS)

The TUS was installed to switch over from manual feed system to automatic thread feeding system. The new system is working satisfactorily, thus helping in controlling thread related defects and improvement in the quality of paper.

Internal Audit

Internal Audit function is an independent appraisal activity within the Company engaged in continuous review of operations. Internal audit reviews were risk-based and impartial that also ensured that the audit cycle resulted in genuine value addition to the Company's operation. Internal Audit procedures were guided by the principles of independence, objectivity and value addition. The outcome of these procedures is operational efficiency, safeguard of Company's interests and establishment and observance of internal controls.

Information Systems

Information systems were developed to support the Company's long term objectives and were managed by a professionally staffed team which carried out notable enhancements during the year under review. The Company is moving fast towards the implementation of unified and secure information systems. Various steps have been taken to improve information Technology (IT) infrastructure with a view to increase operational efficiency.

Strategic Plan

The business agenda is determined by the strategy which has been revised and updated continuously, setting out targets for financial return and service standards, and identifying and prioritizing improvement opportunities to deliver those targets. The strategic planning process confirms that the targeted results would be achieved and establishes robust performance indicators which can be used to evaluate departments. The Board on an annual basis approved a detailed financial plan which also incorporated the business strategy. Progress against the plan was reviewed regularly.

Business Continuity / Disaster Recovery Plan

The Company had the following measures in place to ensure business continuity in case of any disruptive events:

- Comprehensive and state of the art security system employing human and electronic resources, to monitor activity within and without the factory premises
- Comprehensive fire prevention system accomplished through mechanical installations as well as frequent trainings of all staff
- Backups of the Management Information System (MIS) data were taken regularly and stored in a safe location
- Adequate insurance arrangements had been made to safeguard against any loss of man or material resulting from natural or man-made threats
- Succession planning has been in place to ensure continued efficient and effective operations regardless of changing composition of management positions

Business Process Re-engineering

The Company's Business process re-engineering initiative focused on analyses and design of work flows and processes to help the organization to improve customer service and control operational costs. During the year under review business process re-engineering efforts had resulted in reduction in production losses and improvement in quality of paper.

Research & Development

To meet future challenges, we are constantly searching for areas of improvement. To achieve this end, we are continually engaged in balancing, up-grade and modernization of development and research activities. We feel that research and development activities were the backbone for attaining sustainability in growth. Efforts are already underway to reduce process and material losses by continuous improvement in testing and processing methodology not only to increase plant efficiency but also maximize customer satisfaction.

The Integrated Management System

The Company was continually demonstrating its strong commitment to sustainability. An internationally recognized Integrated Management System (IMS) for Occupational Health and Safety, Environment and Quality had been enforced which comprise of the following management systems:

The Occupational Health and Safety Management System (OHSAS 18001:2007)

A comprehensive documented system with appropriate standard operating procedures / manuals and specifications had been established to reduce and eliminate unsafe and unhealthy work practices / conditions and to ensure health, safety, fire, hygiene and security.

A detailed Occupational Health and Safety "Hazards Identification and Risk Assessment and Controls" (HIRAC) had been implemented for normal and emergency situations (covering routine and non-routine activities' and natural disasters) within the organization. An Occupational Health and Safety Committee has been established which not only ensures periodic health and Safety Inspection but also follow and investigate timely incident reporting.

Co-workers, employers, customers, suppliers, family members, nearby communities, contract worker, visitors and other members of the public who are influenced by the workplace activities are protected.

The Environment Management System (ISO 14001: 2004)

The recertification of ISO 14001:2004 confirmed that we had been maintaining and improving environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning, Environmental Risk Management with life Cycle of critical aspects and resources for developing, implementing and maintaining policy for environmental protection.

Environmental Objectives and Policy include, compliance with regulatory standards such as National Environment and Quality Standard (NEQS) and Environment Protection Agency (EPA) Standards, etc.

A detailed aspect impact analysis is done regularly to manage and control environmental risks associated with routine and non routine operational activities including emergency response during handling solid, liquid effluent, Noise and stack emission.

We are mindful of the reduction of waste and more efficient use of natural resources (electricity, water, gas and fuels), and are following global practices for environmental labeling, performance evaluation and life-cycle assessment helping and maintaining ecological balance such as ozone depletion and other social and health related issues.

The periodic internal as well as external audit is regularly conducted by independent certification body. As a responsible corporate organization, management is committed to keep SPL a 'green organization'.

Quality Management System (ISO 9001:2008)

Keeping in view long term sustainable development, a documented Quality Management System (QMS) has been established and maintained to determine processes needed for their application throughout the organization, and continually improve its effectiveness to meet customer satisfaction. Customers' feedback survey has been conducted regularly for long lasting relationship with customers and suppliers to prevent complaints. Periodic Internal and external surveillance audits have been conducted and reported to top management for review at regular intervals.

Annual Environmental Excellence Award (AEEA) 2013

The Company has won Environment Excellence Award (AEEA) 2013 conferred by National Forum for Environmental Health (NFEH). This demonstrates our commitment to environmental preservation and its effective management.

The award has been instituted to recognize and promote the organizations making outstanding contribution to sustainable development and economic growth of the country.

Corporate Social Responsibility

Being a good corporate citizen, the Company has traditionally played a proactive role. The CSR Policy includes corporate social contributions in the areas of welfare spending for under-privileged classes and community investments.

During the year following donations were made:

Description	Rupees
THAR- Drought Victims	948,027/-
Abdul Sattar Edhi Foundation	500,000/-
Chippa	500,000/-
Akhuwat	1,800,000/-
Sindh Institute of Urology & Transplantation	1,000,000/-
Employees Welfare	98,173/-
Total	4,846,200/-

Contribution to the national exchequer and the economy of the country

During the year under review the Company made contribution to the national exchequer by way of taxes, levies, sales tax etc. amounted to Rs 419.48 million as compared to Rs 433.29 million during the corresponding period. In addition the Company had also made foreign exchange savings of US\$ 21.05 million (approx) through import substitution during the year as compared to US\$ 22.36 million in the corresponding period.

Human Resource

At SPL, people come to work each day with energy, enthusiasm and a commitment to provide highest quality paper to our customers. Our mission is to attract, develop, motivate and retain the most talented and dedicated employees who are committed to ensure the Company's success. HR Department strives to create an environment in which employees can realize their full potential through professional development programs.

Some key objectives which drive the Human Resources function at SPL include:

- Attracting the best and diverse pool of talent from various backgrounds, cultures and a wide range of expertise
- Retaining talent by providing opportunities for personal and professional growth.

We have identified employees with an objective of enabling them to advance their careers by offering opportunities that can groom them for senior management positions. Many employees were given opportunities to enrich their work experience through job rotation and on the job training within different functions and sections. Where possible, such movements are encouraged to give employees exposure to develop multiple skills and broaden their horizons.

Employees' Welfare Fund - A Welfare Fund has been launched to facilitate the deserving employees.

Healthcare Facilities - Caring is central to the work that we do to help people live healthier lives. We have inducted a Professional Consultant to provide better healthcare facilities and equip our first aid centre. We have also recently covered the parents of the employees for health insurance.

Statement of Ethical Practices

The Company had a comprehensive code of ethics and business practices. All employees must avoid conflict of interest between their private financial activities and conduct of Company's business. All business transactions on behalf of Security Papers Limited were reflected accordingly in the accounts of the Company.

Every employee shall be responsible to see that there is no violation of laws within his/her area of responsibility which proper supervision could have prevented. The employee shall still be responsible if he/she delegates particular tasks.

Top Companies Award

The Company has the distinction of receiving Top Companies Award of the Karachi Stock Exchange Limited (KSE) for the year 2000 to 2007 and again consecutively for the last five years from 2009 to 2013.

The award is conferred by KSE on the basis of comprehensive criteria which include Dividend Payout, Capital Efficiency, Profitability, Free-Float of Shares, Turnover of Shares, Corporate Social Responsibilities, Transparency & Investors Relation and compliance with Listing Regulations.

Forward Looking

Going forward, there are considerable macro economic, political and social challenges. We remain cautious on the economic outlook; however, the fundamentals of the economy going forward in the backdrop of the recent policy and reform measures look stable. We continue to focus on innovations, increased customer focus and a strong performance culture within the organization. Our people continue to remain crucial for the growth of business. We believe that the Company is well positioned to capitalize on growth opportunities in the coming year and is working to enhance its productive capacity through innovative plant upgrade and optimization that will be to the benefit of our shareholders, employees and customers.

Acknowledgement

On behalf of the Board, I would like to record my gratitude to extremely valued shareholders, customers, suppliers, contractors, bankers and other stakeholders for their support, trust and confidence. Thanks are also due to all the employees for their loyalty, dedication and hard work which enabled the Company to achieve its objectives.

KAZI ABDUL MUKTADIR

Chairman

Karachi

Dated: 31 July 2015



Kazi Abdul Muktadir
Chairman



**Muhammad Misbah
Tunio**
Chief Executive Officer



**Sheikh Mohammad Aijaz
Akhtar**



Ajaz Ali Khan



Ayla Akin



Dr. Abolghassem Jamshidi



Jamal Nasim



Muhammad Ayub



Shamsuddin Soomro



Ch Mehboob Ilahi

VISION STATEMENT

“To be a nationally and internationally recognized and accepted security paper producing organization, providing highest quality paper to our customers, both in Pakistan and abroad.”

MISSION STATEMENT

“We are the only national organization producing strategically important security paper products for the nation. We have developed a unique set of strength and competencies. We wish to build on these assets and will strive continuously to achieve higher levels of excellence.

Our mission is to exceed the expectations of our customers in producing, with security and efficiency, highest quality paper products, employing international best practices and applying an integrated approach to product research and development, manufacturing technology, operations management, Counterfeit deterrence, materials procurement, human resource management, financial management and information systems.”

CORE VALUES

- Striving for continuous improvement and innovation with commitment and responsibility;
- Treating stakeholders with respect, courtesy and competence;
- Practicing highest personal and professional integrity;
- Maintaining teamwork, trust and support, with open and candid communication;
- Ensuring cost consciousness in all decisions and operations.

STRATEGIC GOALS

- Providing Customers Satisfaction by serving with quality products, security paper needs of national and international customers.
- Ensuring Quality manufacturing by production of state-of-the-art security paper products with highest quality at lowest cost.
- Deterring Counterfeiting by producing security paper products that have built-in deterrence against counterfeiting so as to contribute to public Confidence and facilitation of commercial transactions.
- Ensuring Security and Accountability by creating an environment of Security and accountability for employees, production facilities and products.
- Expanding Customer Base by exploring new national and international markets and undertaking product research and development in security paper.
- Ensuring Efficient Resource Management by managing human, financial, technical and infra-structural resources so as to support the above strategic goals and to ensure highest possible value addition to stakeholders.

CODE OF ETHICS AND BUSINESS PRACTICES

The Company has a comprehensive Code of Ethics and Business Practices. All Directors and Employees are required to certify its compliance annually. Also, the Company has a policy on detection and prevention of corruption. Authorities and responsibilities are defined and appropriately delegated for transparent operation.

- Maintaining integrity and scrupulous dealings
- Reporting violations
- Maintaining correct books and records of the Company
- Strictly observing the laws of the country
- Strictly avoiding questionable and improper payments or use of the company's assets
- Strictly avoiding conflicts of interest
- Strictly avoiding political contributions
- Expediting payment of amounts due customers, agents or distributors
- Strictly avoiding giving and receiving of gifts
- Treating mean to be as important as ends

QUALITY POLICY

To be the best in class paper manufacturer that produces paper which fully meet customer's requirements in terms of desired specifications and maintains paper parameters with respect to storage, when stored suitably. Management is committed to ensure continual improvement in the processes and quality objectives. Management also ensures optimal use and adequate maintenance of plant with its up gradation.

ENVIRONMENTAL POLICY

As a responsible corporate organization, management is committed to keep "Security Papers Limited" a "green company"

We ensure:

- to establish and review environmental objectives.
- all raw materials are stored meeting manufacturer's requirements.
- liquid effluent is treated, gas emission is hazards free, noise pollution is controlled and solid waste is properly disposed off.
- all NEQS standards and legal requirements are complied.
- environmental reports are available for employees and public.
- all emergencies preparedness is in place

OCCUPATIONAL HEALTH & SAFETY POLICY

- To work in an environment which is accident free and there is no work related ill health.
- Maintain plant, equipment and machinery, storage and use of chemicals, following international safety standards.
- Eliminate all potential hazards which may cause any diversity.
- Define and monitor key performance indicators related to health and safety for continual improvements.
- Our plant to conform to Factory Act and other legal requirements for occupational health and safety.

SUSTAINABLE DEVELOPMENT GOALS (SDG's)

On September 25th 2015, United Nations adopted a new set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years (by 2030).

The SDG's also known as Global Goals, have been built on the success of the Millennium Development Goals (MDGs) and aim to go further to end all forms of poverty. The new Goals are unique in that they call for action by all countries, poor, rich and middle-income to promote prosperity while protecting the planet. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and addresses a range of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection.

SPL is committed to support and work to achieve the SDGs. We are currently focusing on those goals that relate directly to our core business and our work to promote sustainability, and where we believe we can make a positive contribution.

SUSTAINABILITY



Environment
Protection



Social Inclusion



Economic Growth



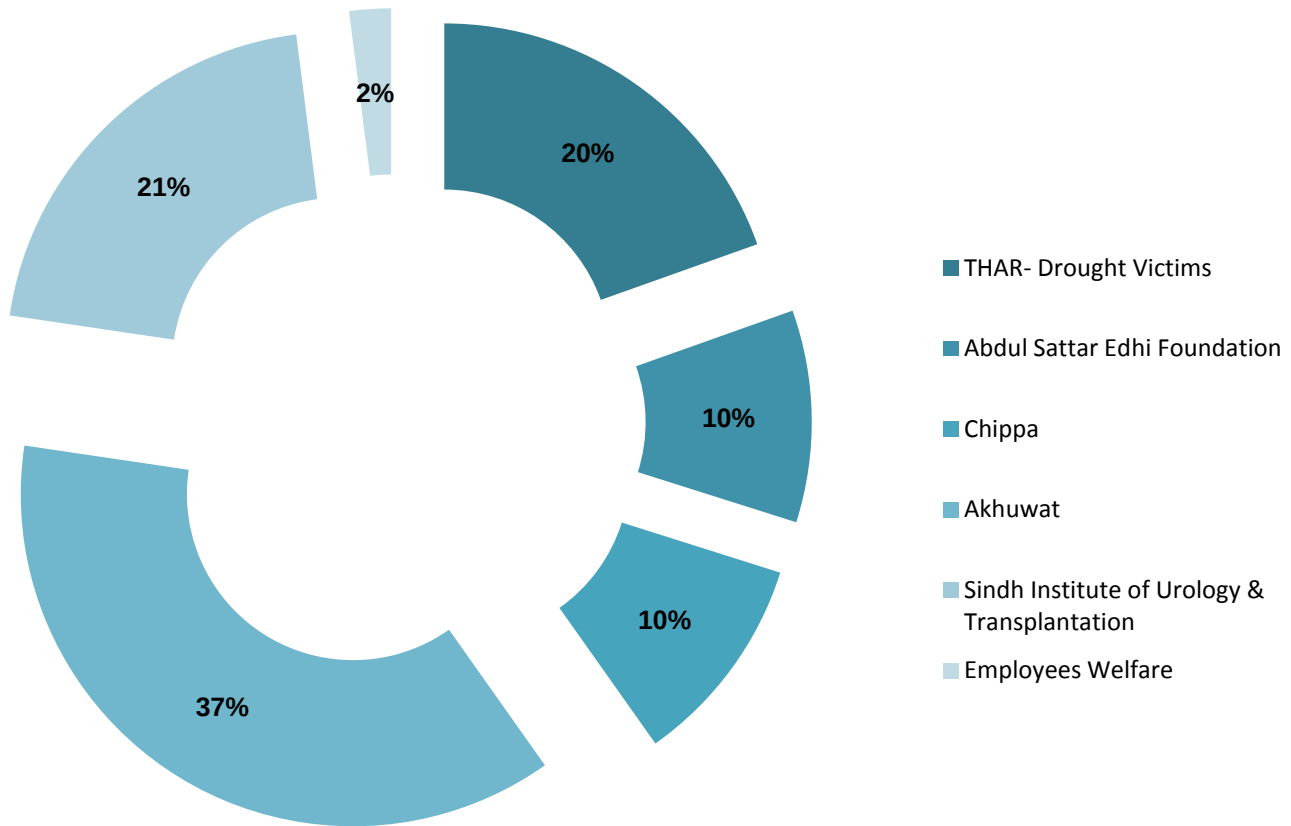
CORPORATE SOCIAL RESPONSIBILITY

Philanthropy Policy

The company under takes Social Action Programs under its policy of corporate Social Responsibility (CSR) which includes the provision of basic health facilities, promotion/education of under privileged children & students, spending for under privilege classes and welfare schemes, population groups and areas have been identified for CSR/Corporate Philanthropy activities. Priorities were given to certified non-government organization (NPOs/NGOs).

Description	Rupees
THAR- Drought Victims	948,027/-
Abdul Sattar Edhi Foundation	500,000/-
Chippa	500,000/-
Akhuwat	1,800,000/-
Sindh Institute of Urology & Transplantation	1,000,000/-
Employees Welfare	98,173/-
Total	4,846,200/-

Contributions Made in 2015



Business Ethics and Anti-corruption measures

The Company has a comprehensive Code of Ethics and Business Practices. All Directors and Employees are required to certify its compliance annually. Also, the Company has a policy on detection and prevention of corruption. Authorities and responsibilities are defined and appropriately delegated for transparent operation.

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RISK AND OPPORTUNITY REPORT

Security Papers Limited (SPL) operates in a highly specialized market that has a unique set of challenges and opportunities that are influenced by a wide variety of internal, indigenous and external factors.

STRENGTHS

- *Being the sole supplier of reasonably priced and high quality banknote paper in Pakistan*
- *Year to year increase in order volumes results in an optimum utilization of capacity*
- *Finely tuned internal processes relying on cumulative technical expertise of staff as well as the latest equipment resulting in a continuous improvement in manufacturing processes*

WEAKNESSES

- *Dependence on quality of input raw materials which are sourced from external suppliers*

OPPORTUNITIES

- *Expertise in all kinds of security papers means there is a lot of room for expansion into other markets*
- *The paper manufactured meets all international quality standards and SPL can look into supplying abroad*

THREATS

- *Sales volume is largely dependent on*
- *the country's demand for banknotes*
- *Energy requirements are immense and any disruption from external or internal sources will be detrimental to operations*
- *Water is one of the main raw materials and its continued supply is vital for operations*

STRATEGIC RISKS

Risks:

The Company is the sole supplier of high quality banknote paper in the country. A large portion of its manufacturing capacity is utilized by a single product. The sales volume and capacity utilization, therefore, become largely dependent on the demand for currency notes in the country. This also results in a high dependence on a single customer.

Mitigation:

The Company is constantly looking for new markets to expand into. Our unique strategic advantage is a deep, far reaching understanding of manufacture of high quality paper with unique and foolproof security features, and we are leveraging that expertise to offer a wide variety of products to various sectors and organizations. Currently we are either supplying or exploring the market for cheque paper, passport paper, parchment, degree, certificate and identification papers.

COMMERCIAL & OPERATIONAL RISKS

Risks:

We are dependent on various inputs that are inherently not influenced by the Company. These include comber, denim, chemicals, security thread, energy and water. We are also importing a large quantity of chemicals and equipment. Therefore cost competitiveness of our product is dependent upon pricing and consistent supply of material and equipment from a large number of internal and external suppliers.

Mitigation:

- We have a comprehensive supply chain management system that ensures supply of local raw materials. By constantly looking to expand our supply base we are in a position to regulate our inventory and costs effectively.
- We enter into contracts that largely guard the Company against stock out situations. This assures timely supply of the needed goods.
- We have recently undergone a restructuring of our power infrastructure that will provide a more consistent energy supply for uninterrupted operations.
- We already operate a Reverse Osmosis plant (RO) that caters to a large fraction of our needs. We are further exploring this option to augment this supply in a cost effective, sustainable and environmentally friendly manner.

FINANCIAL RISKS

Risks:

We are exposed to pricing fluctuations for our raw materials, based on local macroeconomic conditions, foreign currency fluctuations and market forces.

Mitigations:

- We enter into long term contracts with suppliers both local and foreign in order to guard against abrupt fluctuations in pricing and currency.
- We make prudent investments to hedge against interest rate movements and create a steady source of alternative income.

Aspect / Impact Analysis Report 2014-2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
01	Stores	Transportation of Liquid Caustic Soda	Large spill due to valve/pipe leakage/damage	Hazard for marine life due to corrosive and alkaline nature	• strong and sealed coupling to install at the transferring pipes joints has been provided • Spill kit has been provided • MSDS of caustic has been provided. • Safety Symbols and signs are placed	7	2	14	B
		Solid material transportation	Fall incident / small spill	Soil/drainage contamination hazards for marine life	• Lifters and trolleys have been provided • Secondary containers have been provided where ever required • Spill kit has been provided • Waste chemicals and contaminated cloths are shifted to yard. • Waste Chemicals are disposed off as per MSDS.	3	3	9	B
		Liquid Materials Transportation	Fall incident/medium spill may occur due to poor handling	Soil/drainage contamination hazards for marine life	• Lifters and trolleys have been provided • Secondary containers have been provided where ever required • Spill kit has been provided • Waste chemicals contaminated cloths are shifted to yard	5	5	25	B
		Fork lifter operation	Poor maintenance	Air contamination of green house gases (Air pollution) due to stack emission	• Preventive maintenance has been performed. • Stack emission have been tested periodically to comply with NEQS standards	2	5	10	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
	Stores	Liquid materials storage and stacking	Poor stacking	Small/large spill due to Fall incident, Air /drainage contamination	- Chemical handling staff has been trained. - Separate stores have been constructed.	4	7	28	B
			Weak pallets / Cage	Small spill due to pallet breakage	- Strong pallets and racks are provided - Spill kit has been provided. - Secondary containers have been provided for liquid chemicals - MSDS Has been provided	6	5	30	B
		Solid materials storage and stacking	Poorly closed /opened container	Bad smell/Air pollution (contamination)	- Chemical handling staff strictly instructed to keep closed each chemical contained /empty containers - Environmental hazard signs have been placed	3	4	12	B
		Solid waste handling	Poor handling and disposal of environmental hazard materials	Eco system Contamination	- All chemicals have been classified as hazards and none hazards. - Chemical handling staff have been trained for emergency response - Spill kits have been provided - Hazardous chemicals have been disposed off as per recommended procedures	3	4	12	B
		Liquid waste handling	Fall incident due to poor handling or disposal	Drainage & soil contamination	- Chemical handling staff have been trained for emergency response - Spill kits have been provided - Hazardous chemicals have been disposed off as per recommended procedures	5	2	10	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
	Stores	Sampling	Poor handling	Soil / drainage contamination due to Fall/spill incident	- Sampling staff has been trained for sample preservation and Spill emergency response. - Spill kit has been provided at work place. - Environmental hazard symbols and signs have been placed	5	5	25	B
			Fall incident and small spill due to Poor handling of material	Air, soil contamination	- Sampling staff has been trained for sample preservation and Spill emergency response. - Spill kit has been provided at work place. - MSDS has been provided at work place - Environmental hazard symbols and signs have been placed	6	5	30	B
		Liquid Caustic Transportation/ Dosing	Small/Large spill due to dosing pipe/valve leakage	Hazard for ecosystem due to Soil, effluent contamination	- Sampling staff has been trained for sample preservation and Spill emergency response. - Spill kit has been provided at work place. - Environmental hazard symbols and signs have been placed.	7	5	35	B
		Comber Noil and denim Sorting	Poor ventilation and collection system	Air pollution and contamination due to flying Cotton (Cellulose) fibers.	- New comber and denim cleaning plant with close system and exhaust has been installed. - Air ventilations have been ensured through closed vacuum system. - Waste cotton has been disposed off in yard - Environmental hazard signs and symbols have been placed at work place	7	8	56	C
		Solid waste handling	Poor handling and disposal of material	Eco system Contamination	- Material has been classified into environmental hazard and none hazard - solid waste handling staff has been trained for solid waste disposal - hazard waste transferred to yard and disposed off as per NEQS requirements	6	4	24	B
S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank

Environmental Report | 2015

02	Pulp Mill/New dry cleaning plant	Comber Noil Cooking	Gas emission	Adverse effect on Eco system through Air pollution	- Gas emission points have been identified - Stack emission has been tested periodically to comply with NEQS Standards. - Safe gas emission has been ensured through closed system - Training has been provided to relevant staff for gas leakage emergency response - Environmental hazard signs and symbols have been placed	7	5	35	B
			Effluent Discharge /spill	Adverse effect on Eco system through effluent discharge	- Close strong sealed coupling has been installed for shifting of liquid effluent. - Effluent discharge drainage lines have been painted to identify contains secures for any leakage. - Effluent is disposed off after treatment through ETP - Environmental parameters have been tested periodically to comply with NEQS Standards	8	4	32	B
		Denim Cutting Cooking	Gas emission	Adverse effect on Eco system through Air pollution	- Gas emission points have been identified - Stack emission has been tested periodically to comply with NEQS Standards. - Safe gas emission has been ensured through closed system - Training has been provided to relevant staff for gas leakage and emergency response.	8	5	40	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
	Pulp Mill/New dry cleaning plant		Effluent Discharge/spill	Adverse effect on Eco system through effluent discharge	• Effluent discharge drainage lines have been painted to identify contains secures for any leakage. • Effluent is disposed off after treatment through ETP • Environmental parameters have been tested periodically to comply with NEQS Standards	7	5	35	B
		Solid Chemical handling	Poor handling of chemicals	Air and soil contamination due to Chemical spill	• All chemicals have been classified as hazards and none hazards. • Chemical handling staff have been trained for emergency response • Spill kits have been provided • Hazardous chemicals have been disposed off as per recommended procedures	7	4	28	B
		Solid chemical storage	Poor stacking /weak pallets	Air and soil contamination due to Chemical spill/fall	• Chemical handling staff strictly instructed to keep closed each chemical contained /empty containers • Environmental hazard signs have been placed	7	8	56	C
		Solid waste handling	Poor handling of hazardous material	Adverse effect on eco system due to hazard properties of material	• Solid waste has been classified as environmental hazard and non hazard. • Hazard chemicals have been transferred through specifically provided trolleys at work place. • Environmental hazard signs and symbols have been placed at work place. • Solid waste handling staff have been trained for handling environmental hazards materials	5	5	25	B

Environmental Report | 2015

S. No	Department/Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
03	Hemp Breaker	Hemp breaking operation	Poor handling of Chemical	Minor adverse effect on eco system due to Fall/spill incident	- Secondary containers have been provided for Chemical cans, - Environmental hazard symbols and signs have been place at point of use. - Waste chemical have been disposed of as per MSDS recommendation.	3	6	18	B
		Solid waste handling	Disposal unclassified material hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste generated from area has been classified into environmental hazard and non hazard material. - Environmental hazardous material has been disposed off as per recommendations	5	4	20	B
04	Breaker /Beater House	Solid Chemical handling	Poor handling of Chemical	Air and soil contamination due to Chemical spill/fall	- Secondary containers have been provided for all solid chemicals. - Spill kit has been provided at the work place. - Training for emergency response has been provided to the chemical handling persons. - Waste chemicals have been disposed off as per MSDS recommendations. - Environmental hazard signs and symbols have been place at work place.	5	5	25	B
		Liquid Chemical Handling	Poor handling of Chemical	Air and drainage system contamination due to Chemical spill/fall	- Drain lines have been connected to effluent treatment plant to prevent direct spill of chemicals into main liquid waste. - Environmental Emergency response training has been provided to relevant workers. - Environmental hazard safety symbols and signs have been placed at work place.	6	5	30	B

Environmental Report | 2015

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		Solid Waste handling	Poor handling and disposal of environmental hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste has been classified into environmental Hazard and non hazard materials. - Waste chemicals have been disposed off as per recommendations. - Environmental hazard signs and symbols have been place at work place.	5	5	25	B
05	Machine House	General Operation	Drainage of residual chemicals directly into main stream untreated	Adverse effect on eco system due to hazard properties of material	- Drain lines have been connected to effluent treatment plant to prevent direct spill of chemicals into main liquid waste. - Environmental Emergency response training has been provided to relevant workers.	7	5	35	B
		Window A/C operation	Leakage of CFC contained green house gases	Adverse effect on eco system due to hazard properties of green gases (Air pollution)	- A/C window has been replaced by split units. - CFC (No 12) gas compressed gas has been replaced with (No.134) 1,1,1,2 Tetrafluoroethane.	6	2	12	B
		Chemical dosing	Chemical spill due to feed pipe line leakage	Adverse effect on eco system due to hazard properties of material	- Chemical Spill kit has been provided - MSDS has been provided at work place - Emergency response training has been provided to relevant persons - Work instructions have been communicated	8	5	40	B
		PM-2 Cleaning/change over	Residual chemical contained pulp and chemicals discharge into main stream line untreated.	Adverse effect on eco system due to hazard properties of material	- Separate tank has been constructed for excessive pulp storage - Main drain line have been connected with effluent treatment plant	7	5	35	B

Environmental Report | 2015

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		System Boil out process	Residual washing chemical contained chemicals discharge into main stream line untreated.	Adverse effect on eco system due to hazard properties of material	- Washing waste has been neutralized before discharge. - Drain lines connected to main effluent treatment plant through closed system for further treatment - Environmental Emergency response training has been provided to relevant workers.	6	4	24	B
		Solid waste handling	Poor handling and disposal of environmental hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste has been classified into environmental Hazard and non hazard materials. - Waste chemicals have been disposed off as per recommendations. - Environmental hazard signs and symbols have been place at work place.	7	5	35	B
		Solution Preparation (CMC,KIO3, etc)	Chemical spill/fall incident due to Poor handling of chemical	Adverse effect on eco system due to hazard properties of material	- Secondary containers have been provided for each liquid chemical. - Specific Hand pumps have been provided for chemical transfer to prevent chemical spill. - Environmental Emergency response training has been provided to relevant workers. - Environmental safety signs and symbols have been placed at work place.	8	4	32	B
06	Repulping plant operation	Sulphuric acid dosing	Chemical spill into main stream ,due to poor handling of acid	Adverse effect on eco system due to hazard properties of material	- Secondary containers have been provided for each liquid chemical. - Specific Hand pumps have been provided for chemical transfer to prevent chemical spill. - Environmental Emergency response training has been provided to relevant workers	8	5	40	B

Environmental Report | 2015

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		Sulphuric acid stacking	Chemical spill into main stream ,due to poor stacking of acid	Adverse effect on eco system due to hazard properties of material	- Secondary containers have been provided for each liquid chemical. - Environmental Emergency response training has been provided to relevant workers.	8	4	48	C
		Solid waste handling	Poor handling and disposal of environmental hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste has been classified into hazard and non hazard material. - Specific trolleys have been provided for hazard materials for transfer material to yard.	5	5	25	B
07	Refiner operation	Seal burst incident	Large spill of Chemical Pulp large	Blockage of drain line	- Seal has been replaced by highest quality seal. - Water hose has been provided for cleaning large spill	6	3	18	B
08	Size Kitchen	Liquid chemical Handling	Untreated HCl large spill due to poor handling into main stream	PH of main effluent discharge may decrease	- Neutralizing chemical has been provided at work place. - Emergency response training has been provided to relevant staff. - Work instructions and safety signs/symbols and MSDS of all chemicals have been proved. - Hand pumps have been provided to transfer chemicals	8	5	40	B
		Solid Chemical Handling	Chemical spill and fall incident due to poor handling of chemicals	Blockage of drain lines	- Emergency response training has been provided to relevant staff. - Work instructions and safety signs/symbols and MSDS of all chemicals have been proved.	5	5	25	B

Environmental Report | 2015

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		Melamine Solution preparation	Melamine formaldehyde fumes generation	Air pollution due to contamination	- Work instructions and safety signs/symbols and MSDS of all chemicals have been proved. - Hand pumps have been provided to transfer chemicals	8	8	64	C
		PVA Solution preparation	Large spill due to poor handling or feed pipe leakage	Blockage of main drain line	- Work instructions and safety signs/symbols and MSDS of all chemicals have been proved. - Motorized pumps have been provided for transfer chemicals through closed system	8	4	32	B
		Solid waste Handling	Poor handling and disposal of environmental hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste have been classified as hazard and non hazard. - Separate trolleys have been provide to transfer hazard material.	6	5	30	B
		Chemical Waste Handling	Poor handling and improper disposal of environmental hazard materials	Adverse effect on eco system due to hazard properties of material	- Solid waste have been classified as hazard and non hazard. - Separate trolleys have been provide to transfer hazard material.	7	5	35	B
09	Pop Reel	Running reel scanning	Radio active decay (Radiation)	Ionization of air and health hazard	- Compact seal has been provided to relevant workers. - Radio active decay has been monitored by survey meter - Area has been cordon off by barricade tape, safety signs/symbols have been placed	8	5	40	B
		Waste paper handling	Improper disposal	Adverse effect on eco system due to hazard properties of paper chemicals	- Broke plant has been installed to recycle waste paper - Waste paper has been burned in incinerator by controlled manners. - Stack emission has been test periodically on regular basis. - Environmental community Feed back survey has been conducted in surrounding areas.	5	4	20	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
10	Finishing	Good/Waste paper handling	Melamine fumes generation due to Improper storage of paper	Air pollution and health hazards	Air ventilations and exhaust system has been installed at work place	8	8	64	C
		Solid waste handling	Poor handling and disposal of environmental hazard material	Adverse effect on eco system due to hazard properties of material	- Solid waste has been classified into hazard and non hazard - Separate trolleys have been provided to transfer hazard material	5	5	25	B
11	Effluent Treatment Plant	Liquid effluent transportation	Leakage /damage of drain lines	Air and soil contamination	Untreated effluent has been transferred through closed drainage system to Clarifiers.	8	3	24	B
		Liquid Effluent treatment	Malfunctioning of treatment chemical dosing pump	Adverse effect on eco system due to untreated effluent discharge	Periodic preventive maintenance and inspection has been conducted of effluent treatment chemical dosing system.	8	3	24	B
			Improper treatment solution preparation	Adverse effect on eco system due to untreated effluent discharge	- Periodic preventive maintenance and inspection has been conducted of effluent treatment chemical dosing system. - Treatment solution has been prepared by trained personnel	6	4	24	B
			Non availability of treatment chemical	Adverse effect on eco system due to untreated effluent discharge	Effluent treatment Chemicals minimum stock has been maintained for specific time duration.	8	3	24	B
		Solid waste drying	Bad smell generation due to Chemical pulp fumes	Air pollution and health hazards for employees & near by community	Solid pulp disposal frequency has been increased	7	5	35	B

Environmental Report | 2015

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		Solid waste disposal	Improper disposal of environmental hazard solid waste	Adverse effect on eco system due to hazard properties of materials	- Solid waste has been classified into hazardous and non hazardous. - Hazard materials has been accumulated in yard and disposed off through qualified contractors in controlled manners.	5	3	15	B
12	Boilers	General Operation	Green house gases emission More than standards	Air pollution and adverse effect on eco system	Stack emission has been tested from defined emission points periodically on regular basis, to comply with NEQS standards.	5	3	15	B
		Solid Chemical dosing	Fall/spill incident of chemicals due to poor handling	Adverse effect on eco system due to hazard properties of materials	- Main drain lines have been connected to main effluent treatment plant. - Emergency response training has been provided to relevant persons. - MSDS of chemicals has been provided at work place	6	4	24	B
		Solution Preparation	Poor handling of Chemical	Adverse effect on eco system due to hazard properties of materials	- Solution preparation training has been provided to relevant persons. - Work instructions has been communicated at work place	6	4	24	B
		Blow downing	Chemical mixed (Effluent) water drainage	Adverse effect on eco system due to hazard properties of effluent	- Main drain line has been connected to effluent treatment plant through closed system. - Emergency response training has been conducted	7	5	35	B
		Chemical handling	Fall/spill incident of chemicals due to poor handling	Adverse effect on eco system due to hazard properties of materials	- Main drain line has been connected to effluent treatment plant through closed system. - Emergency response training has been conducted - MSDS of relevant chemicals have been provided at work place .	7	3	21	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
13	Incinerator	Chemical storage	Fall/spill incident of chemicals due to poor stacking	Adverse effect on eco system due to hazard properties of materials	- Chemicals have been stacked as per MSDS. - Regular inspection of storage area has been conducted - Spill kit has been provided at work place	5	3	15	B
		Solid waste handling	Improper disposal of environmental hazard solid waste	Adverse effect on eco system due to hazard properties of materials	- Solid waste has been classified into hazard and none hazards. - Hazardous waste has been disposed of through yard gang.	5	5	25	B
		General Operation	Combustion through Conventional technology incinerators with low altitude chimney	Adverse effect on eco system due to hazard properties of combusted emission of green house gases	- Stack emission has been tested regularly to comply with NEQS Standards. - Waste burning frequency has been reduced to avoid air pollution	8	4	32	B
		Solid waste burning	Green house gases and VOC (Volatile Organic Compound) emission due to incomplete combustion	Adverse effect on eco system due to hazard properties of combusted emission of green house gases and particulate matters.	- Incinerator operation has been conducted by qualify trained persons - Periodic inspection has been conducted on regular basis	8	4	32	B
		Solid Ash disposal	Improper disposal of ash	Air pollution due to contamination of particulate matters.	Ash from incinerator has been disposed off in controlled manners, through waste cotton sludge.	5	3	15	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
14	Generator	General operation	Emission of Green house gases more than standards	Adverse effect on eco system due to hazard properties of combusted emission of green house gases	- Preventive maintenance has been conducted on regular basis - Stack emission has been tested to Comply with NEQS standards	8	3	24	B
		Cleaning	Poor handling & disposal of liquid and solid waste	Adverse effect on eco system due to hazard properties of materials, eg oily cloths, filters etc	- Generator operation has been handled by trained and qualify persons. - Hazard material has been disposed off through yard gang in controlled manners.	7	4	28	B
		Preventive and Routine maintenance	Emission of Green house gases more than standards due to poor maintenance	Adverse effect on eco system due to hazard properties of combusted emission of green house gases	Regular routine and preventive maintenance has been conducted as per annual maintenance plan	8	3	24	B
15	Chiller	Preventive /routine maintenance	Emission of Green house gases more than standards due to poor maintenance	Adverse effect on eco system due to hazard properties of combusted emission of green house gases	Regular routine and preventive maintenance has been conducted as per annual maintenance plan	7	3	21	B

Environmental Report | 2015

S. No	Department/ Section	Activity	Environmental Aspect	Environmental Impact	Design/ Method or Material control , Safety device/warning system/admin control	Severity (S)	Occurrence (O)	Total Nos. (S x O)	Rank
16	Quality Assurance / Research & Development	Chemical handling	Chemical spill	Adverse effect on eco system due to hazard properties of chemicals	- Spill kit has been provided at work place - Environmental safety signs and symbols has been place at work place - MSDS of all hazardous and none hazards chemical has been communicated and available at work place - Environmental emergency response training has been provided to relevant persons.	8	8	64	C
			Unintended exposure of hazardous chemicals	Toxicity, air pollution	- Secondary containers have been provided for all hazardous chemicals - MSDS has been available of all chemicals ht work place - Environmental emergency response training has been provided to relevant persons.	8	2	16	B
		Solid waste handling	Fall incident	Solid chemical spill Adverse effect on eco system due to hazard properties of chemicals	- Spill kit has been provided at work place - Environmental safety signs and symbols has been place at work place - MSDS of all hazardous and none hazards chemical has been communicated and available at work place - Environmental emergency response training has been provided to relevant persons.	7	5	35	B
			Uncontrolled disposal	Adverse effect on eco system due to hazard properties of chemicals contamination	- Secondary containers have been provided for all hazardous chemicals - MSDS has been available of all chemicals ht work place - Environmental emergency response training has been provided to relevant persons. - Chemical disposal has been determined and disposed off in controlled manners inventory has been maintained.	8	7	56	C
		Chemical Testing	Chemical fumes generation due to Testing error	Air pollution	- MSDS has been available of all chemicals ht work place - Testing has been conducted by qualified persons. - Fuming chamber has been provided.	8	3	24	B

Environmental Report | 2015

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		Chemical storage	Poor storage	Air contamination Violent reaction	- Secondary containers have been provided for all hazardous chemicals - MSDS has been available of all chemicals ht work place - Environmental emergency response training has been provided to relevant persons	8	3	24	B
		Chemical disposal	Poorly disposal	Adverse effect on eco system due to hazard properties of chemicals contamination	Hazardous and none hazards chemicals have been identified and disposed off as per controlled manner through yard gang.	8	5	40	B
	Engineering								
17	Maintenance	Cleaning Of machines	Oily cloth generation	Adverse effect on eco system due to hazard properties of oil contamination	Oily cloths have been classified as environmental hazardous material and disposed off as through yard gang	8	6	42	B
		Gas Cylinders handling	Gas leakage	Air Pollution, Fire incident	- Gas cylinders have been maintained by qualified staff. - Regular inspection has been conducted as per annual maintenance plan.	8	4	32	B
		Gas Cylinder storage	Poor storage	Air pollution due to valve damage	- Gas cylinders have been stored as per MSDS recommendations - Safety signs and symbols have been placed at work place - Separate hand trolleys has been provided to transformation	8	4	32	B

Environmental Report | 2015

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		Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazard properties of solid contamination	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	5	40	B
		Liquid chemical handling	Spill incident	Adverse effect on eco system due to hazard properties of chemicals contamination	- Secondary containers have been provided to all liquid contained cans. - Spill kit has been provided at work place - MSDS of relevant chemicals has been provided at work place - Environmental Emergency response training has been provided to all relevant persons.	8	5	40	B
		Preventive and routine maintenance	Gas emission due to mal function of machines	Adverse effect on eco system due to hazard properties of chemicals contamination	- Preventive and routine maintenance have been performed - Stack emission has been tested at identified points to comply with NEQS Standards.	8	5	40	B
		Welding	Fume/gas emission	Adverse effect on eco system due to hazard properties of green house gas contamination	- Good quality welding Plant has been provided - Environmental Emergency response training has been provided to relevant persons	8	7	56	C
		Natural gas usage	Gas spill	Environmental Pollution	- Leak proof Gas connections and terminals have been installed. - Inspection and monitoring has been carried out	5	5	25	B
		Water usage	Sewerage Water spill	Liquid waste pollution	- Suitable Drain lines have been installed. - Close inspections and period monitoring have been carried out	6	6	36	B

Environmental Report | 2015

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	Civil	Painting/White wash	Spill incident	Soil contamination	- Spill kit has been provide to relevant persons - Training for environmental emergency response has been provided to relevant persons. - Contaminated material has been disposed off through yard gang	7	6	42	B
		Liquid chemical handling	Evaporation of chemicals	Air pollution	- Liquid chemical have been stored with secondary containers - Environmental Emergency response training has been provided to relevant persons	8	5	40	B
		Wood cutting	Wood dust generation	Air pollution	- Vacuum cleaner have been provided to collect wood dust - Environmental Emergency response training has been provided to relevant persons	8	7	56	C
		Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	6	48	B
		Liquid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	4	32	B
		Cleaning	Lack of awareness about hazardous material properties	Adverse effect on eco system due to hazardous material disposal	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners - Environmental emergency response training has been provided to relevant persons	6	5	30	B

Environmental Report | 2015

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	Civil	Painting/White wash	Spill incident	Soil contamination	- Spill kit has been provide to relevant persons - Training for environmental emergency response has been provided to relevant persons. - Contaminated material has been disposed off through yard gang	7	6	42	B
		Liquid chemical handling	Evaporation of chemicals	Air pollution	- Liquid chemical have been stored with secondary containers - Environmental Emergency response training has been provided to relevant persons	8	5	40	B
		Wood cutting	Wood dust generation	Air pollution	- Vacuum cleaner have been provided to collect wood dust - Environmental Emergency response training has been provided to relevant persons	8	7	56	C
		Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	6	48	B
		Liquid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	4	32	B
		Cleaning	Lack of awareness about hazardous material properties	Adverse effect on eco system due to hazardous material disposal	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners - Environmental emergency response training has been provided to relevant persons	6	5	30	B

Environmental Report | 2015

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19	Electrical	Routine and preventive maintenance	Excessive Gas emission due to mal function of machines	Air pollution	- Preventive and routine maintenance have been performed as per annual maintenance plan. - Stack emission has been tested at identified points to comply with NEQS Standards.	7	4	28	B
		Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	6	48	B
		Liquid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	7	4	28	B
		Electrical usage	Gas emission	Air Pollution	- Suitable generators have been installed - Stack emission is analyzed periodically from generators - Noise emission is monitored and relevant controls have been applied.	5	6	30	B
20	HVAC	Gas cylinder handling	Green gas leakage	Air pollution	- Gas cylinders have been stored as per MSDS recommendations - Safety signs and symbols have been placed at work place - Separate hand trolleys has been provided to transformation	8	2	16	B
21	Admin	Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	7	56	C
		Motor vehicle handling	Mal function of vehicle due to poor maintenance	Air pollution	- Preventive and routine maintenance have been performed as per annual maintenance plan. - Stack emission has been tested at identified points to comply with NEQS Standards.	8	3	24	B

Environmental Report | 2015

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22	Co-Generation Power Plant	Gardening/Plantation	Poor maintenance	Adverse effect on eco system due to Plantation damage	- Environmental Hazardous and non-hazardous material has been classified. - Hazardous material disposed off through yard gang in controlled manners	6	3	18	B
		Cleaning/House keeping	Poor or lack of cleaning /house-keeping/unhygienic practices	Air pollution	Environmental friendly chemicals have been used for cleaning.	5	5	25	B
		General Operation	Noise pollution and vibration	Air pollution, building damage	- Noise has been monitored by lux meter on regular basis - Office has been renovated to make it sound proof - relevant PPEs have been provided	8	6	48	C
		Preventive /routine maintenance	Excessive Green house gas emission due to poor/lack of maintenance	Adverse effect on eco system due to hazardous properties of Green house gases	- Preventive maintenance has been conducted on regular basis - Stack emission has been tested to comply with NEQS standards	8	5	40	B
		Liquid Chemical handling	Spill incident/reactivity	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and non-hazardous material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	8	64	C
		Liquid effluent disposal	Unintended spill/discharge	Adverse effect on eco system due to hazardous material	- Drain line has been connected to effluent treatment plant - Liquid effluent has been tested regularly to comply with NEQS standards	7	7	49	C
		Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and non-hazardous material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	3	24	B

Environmental Report | 2015

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		Electrical usage	Gas emission	Air Pollution	- Suitable generators have been installed - Stack emission is analyzed periodically from generators - Noise emission is monitored and relevant controls have been applied.	5	6	30	B
23	IT Department	Solid waste disposal	Unclassified disposal	Adverse effect on eco system due to hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	8	3	24	B
		Routine & preventive maintenance	Excessive generation of solid waste mal function of Poor or lack of maintenance	Adverse effect on eco system due to hazardous material	- Regular inspection has been conducted - Preventive maintenance has been audited on regular basis	7	3	21	B
24	Security	Solid waste disposal	Unclassified disposal of material	Adverse effect on eco system due to Hazardous material	- Environmental Hazardous and none hazard material has been classified. - Hazardous material disposed off through yard gang in controlled manners	5	3	15	B
25		Waste paper	Chemicals in paper	Environmental Hazard - Soil contamination - Water contamination	- Stop sailing to contractor - Recycle the paper in process - Incinerate residual paper. - Dispose of ash with normal sludge in effluent treatment plant	5	8	54	C
26		Finished Products	Chemical Ingredients	- Hazardous to Human - Hazardous to environment	- After printing paper hazardous properties are controlled - Deliver to customers with products descriptions	2 4	5 5	10 20	A
			Waste PPEs	Chemical Contamination	- Consider waste PPEs as hazardous material - Deliver to Scrap yard - Dispose of as per Standards.	7	8	56	C

S = Severity Scale:

O = Occurrence
Severity = 1 to 10 (Lowest to highest)
Occurrence = 1 to 10 (Lowest to highest)

Rank: 0 = A ----- No action required
1 to 40 = B ----- Keep monitoring
41 to 70 = C ----- Monitor changes
71to100 = D ----- Plan & implement focused measure to control

Stack Emissions

Test parameters	Unit	Steam Boiler # 1	Steam Boiler # 2	Steam Boiler #3	Spec Control Limits
Smoke	Ringlemann Scale	01	01	01	2
Particulate Matter	mg/Nm ³	7	3	9	300
Sulfur Dioxide (SO ₂)	mg/Nm ³	Nil			1700
Oxides of Nitrogen (NO _x)	mg/Nm ³	54	36	47	400
Carbon Monoxide (CO)	mg/Nm ³	5	4	5	800
Oxygen	Vol. %	8.8	2.8	2.6	-
Carbon Dioxide (CO ₂)	Vol. %	6.4	15.6	15.9	-

Test parameters	Unit	Diesel Generator	Spec Control Limits
Smoke.	Ringlemann Scale	02	2
Particulate Matter.	mg/Nm ³	19	300
Sulfur Dioxide (SO ₂).	mg/Nm ³	18	1700
Oxides of Nitrogen (NO)	mg/Nm ³	175	600
Carbon Monoxide (CO)	mg/Nm ³	570	800
Hydrogen Sulphide	mg/Nm ³	Nil	10

Test parameters	Unit	Generator # 1 (Gas Fired)	Generator # 2 (Gas Fired)	Spec Control Limits
Smoke.	Ringlemann Scale	02	02	02
Particulate Matter.	mg/Nm ³	6	05	300
Hydrogen Sulphide	mg/Nm ³	Nil	Nil	10
Sulfur Dioxide (SO ₂).	mg/Nm ³	Nil	Nil	1700
Oxides of Nitrogen (NO _x)	mg/Nm ³	390	145	400
CarbonMonoxide (CO)	mg/Nm ³	750	735	800

Test parameters	Unit	Absorption Chiller (Gas Fired)	Spec Control
Smoke.	Ringlemann Scale	01	2
Particulate Matter.	mg/Nm ³	9	300
Hydrogen Sulphide	mg/Nm ³	Nil	10
Sulfur Dioxide (SO ₂).	mg/Nm ³	Nil	1700
Oxides of Nitrogen (NO _x)	mg/Nm ³	36	400
CarbonMonoxide (CO)	mg/Nm ³	485	800
Oxygen	Vol. %	12.2	-
Carbon Dioxide (CO ₂)	Vol. %	4.6	

Test parameters	Unit	Suzuki Bolan Ambulance (Petrol)	TCM Fork lifter (Diesel)	Toyota Fork lifter (Diesel) -15 Ton	Toyota Fork lifter (Diesel) -30 Ton	Spec Control Limits
Smoke	Ringlemann Scale	01	01	01	01	2
CarbonMonoxide (CO)	mg/Nm ³	< 0.1	<0.1	<0.1	<0.1	4.5

Test parameters	Unit	Suzuki Bolan Ambulance (Petrol)	TCM Fork lifter (Diesel)	Toyota Fork lifter (Diesel) -15 Ton	Toyota Fork lifter (Diesel) -30 Ton	Spec Control Limits
Smoke	Ringlemann Scale	01	01	01	01	2
CarbonMonoxide (CO)	mg/Nm ³	< 0.1	<0.1	<0.1	<0.1	4.5

Solid Waste

S. No	Sources	Type of solid waste	Disposal
1.	Raw Material Storage	Binding strips & wires used for bales	Sold to secondary users
2.	Chemical Preparation	Empty drums, bags & other packing materials	
3.	Mechanical Workshop	Miscellaneous material	
4.	Wastewater Treatment Plant	Dry sludge	
5.	Office Block	Garbage and other debris	
6.	Other parts of the Mill	Miscellaneous material	

Fresh Water Storage Capacity

S. No	Tank	Capacity (in imperial gallons)
1.	Over Head Tank	50, 000
2.	Under Ground Tank # 1	500, 000
3.	Under Ground Tank # 2	250, 000
4.	Over Head Tank (in Residential Estate)	25, 000

Acknowledgements

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