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LIST OF ABBREVIATIONS

W & D	Works and Development
OSHA	Occupational Safety and Health Administration
EPA Punjab	Environmental Protection Agency, Punjab
EIA	Environmental Impact Assessment
IEE	Initial Environmental Examination
PEQS	Punjab Environmental Quality Standards
PEPA	Punjab Environmental Protection Act
TORs	Term of references
WAPDA	Water And Power Development Authority

EXECUTIVE SUMMARY

Title & Location of the project

The subject project for which this Environmental Impact Assessment Study has been conducted is already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. Total area of the project is 193745 SFT. The Cost of operation is 300 million rupees. Products of the said project are Metallized Film, Pouches, Holographic Film, Retail Shopping Bags and rolls. The production capacity of the Packaging unit is 350 T per month.

Subject study has been conducted for the study of major environmental impacts that can be generated from establishment of the industrial unit.

The said Project; i.e., Already Established Packaging unit falls under Schedule-II, Category J, "Any other project for which falling of an EIA is required by the provincial agency under sub regulation (2) of regulation 5, i.e., the project requires an EIA study. Thus, an EIA report is being prepared and submitted accordingly for approval under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022. TORs of the study under clause 5 (f) of policy and procedure for the filing, review and approval of environmental assessment are annexed as **Annexure–A.**

Location

Project site is located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore
Land coordinates of the project site are given below:

- **31°17'59.06"N**
- **74°10'4.92"E**

North…….. Industrial Road

South……. .Open Plot

East…….Open Plot

West……Access Road

For further details layout map of the project has been attached as **Annexure-B.**


SHAFIQ PAK PACKAGING PVT LTD
31°17'59.06"N
74°10'4.92"E
Legend
BAK Packaging (Pvt) Ltd
Feature 1
Fine Packages
Gate 1 Office Sunder Industrial Estate
Green Chilli Restaurant Al Khan Plaza
Pak Packages
Shafiq Pak Packaging Pvt Ltd
PAF HS 2
Roshan Packages Limited - Corrugated
Gate 1 Office Sunder Industrial Estate
Head Office, Sun Fiber Pvt. Ltd, Sundar
Shafiq Pak Packaging Pvt Ltd
Pak Packages
Sundar Raiwind Rd
Fish farm
T.M Rubber (Pvt) Ltd
Fine Packages
Google Earth
Image © 2024 Airbus
Image © 2024 Maxar Technologies
2000 ft
N

Name of the proponent

Proponent: Shafiq Ur Rehman

Postal Address: Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore

For further details CNIC of the proponent and other relevant documents are attached as **Annexure-B** with this report.

Name of organization preparing the report:

Environmental Services of Pakistan (ESPAK)., as independent consultants, has been appointed by the proponent to conduct Environmental Impact Assessment Study.

Company office address: Office No. 731, Shah Jilani Road, Block 2 Sector D1 Lahore.

Contact No: 0312-0839999.

For detail company profile see the *Chapter # 1 "Introduction"*.

A brief outline of the proposal

Name of the proposed project	**M/s Shafiq Pak Packaging Pvt. Ltd**
Purpose of the Project	Printing & manufacturing unit of packaging materials. • Utilize innovative and sustainable packaging technology to differentiate products in the market • To meet growing demand or to handle larger volumes of products efficiently. • To establish the business for the proponent. • To contribute to the national economy of the country. • Compensate to help poverty by providing employment.
Process Details	
Manufacturing Process	It includes the manufacturing of packaging materials and their printing.
Raw Material	Polyester (PET), Biodegradable Packaging (BDP-PP), Cast Polypropylene (CPP) and Low-Density Polyethylene (LDPE).
Finished Products	Metallized Film, Pouches, Holographic Film, Plastic Shopping Bags and Rolls.

Intermediate Process	Printing will be done on the Packaging Material
By Products	Nil
Land Requirement	
Total Area allocated for proposed project	193745 SFT
Status and location	
Location of the proposed site	Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore
Description of project	Subject project is already established Packaging unit
Water Requirement	
Water consumption for the project	700-800 Gallons/ day during operational phase
Source of Water consumption	Underground.
Amount of waste water	60-70% of total used water
Source of waste water	Domestic Waste
Mode of treatment	Waste water is treated in septic tanks first then dispose off in the nearby drain of Sundar Industrial Estate As the wastewater will be produced only from domestic usage.
Solid Waste	
Source of solid waste generation	Operation & Domestic sources
Mode of disposal	Will be handed over to contractors
Solid waste during operation of unit	Cutting plastic wraps, Scrap Material, Trimmed edges from film rolls and sheets, defective holographic foil material, boxes, and cardboard.
Manpower	
Labor Force	About 40-50 person during operation
Power requirements	
Source of power	Power requirements at the project site will be fulfilled by WAPDA.

The major impacts

The following major impacts associated with the project during operational phase of the project have been identified and mitigation measures suggested:

Summary of Environmental impacts of the project during the operational phase and their mitigation measures:

Potential Impact	Criteria for determining Significance	Key Mitigation Measures
Gaseous Emissions- During the operational phase of the project, gaseous emissions from project site generator (if use) may affect the air quality of the project area.	PEQS for Ambient Air	Industry should ensure the PEQS compliance and should not be allowed to emit hazardous pollutants. Proper tuning of generator should be done to avoid the excessive gaseous emission from the generator. Vehicle emissions inspection should be done on regular basis. Sprinkling should be done on the unpaved area to avoid dust pollution/ particulate matter.
Noise- Noise due to industrial activity, machinery and generators can be a nuisance for the workers in the working area.	OSHA Standards	Activities generating high levels of noise should be minimized at the project site. Personal Protective Equipment PPEs including Ear muffs, Ear plugs and other noise abating equipment will be provided to the workers and other staff in case of noise at the project site. Generator should be covered with canopy (if use). Proper maintenance and tuning of the vehicles should be done. Sound proof rooms should be built for generators to be installed at the project site to control the noise. Speed restriction of 40 km/h should be imposed on all vehicles.
Discharge of wastewater- The discharge of untreated	PEQS for Municipal Effluents (mg/l, unless otherwise defined)	Each industry should construct its own wastewater treatment facility to treat its

municipal wastewater may be a negative impact of the subject project.		industrial and municipal wastewater before its final disposal. Domestic and industrial waste water will be drained out in nearby local drain after treatment in wastewater treatment facilities. Municipal wastewater must be treated before its discharge. Compliance of PEQS for Municipal and Liquid Industrial Effluents should be ensured. Monitoring should be conducted as per PEQS and reports should be submitted to EPA.
Health & Safety Issues- **D**ifferent operational activities at the project site may cause health and safety issues for workers if precautionary measures will not be adopted.	OSHA Standards	Proper training of workers and staff should be conducted to avoid the accidents. Use of PPEs should be implemented at workplace. First aid measures/medical facility should be provided at the project site. Safe drinking water must be provided to workers, staff, and poor people of the area. Water consumption records should be maintained. Safety signs & boards should be placed during operational activities.
Solid waste management- If solid waste will not be managed properly, it may cause negative impacts.	Exposure to potentially hazardous waste; Generation of excessive waste; Recyclable waste and reusable waste is discarded; Littering; Improper disposal.	A solid waste management division should be formulated to deal with the proper disposal of solid waste, supervised by HSE Manager, SW Manager, and other related personnel. Project related waste i.e. Cutting plastic wraps, Scrap Material, Trimmed edges from film rolls and sheets, defective holographic foil material during cutting should be properly collected and should be handed over

		to contractors. Industrial ecology practices will be adopted wherever possible. 7 R's of sustainability are recommended to achieve. Industrial solid waste should also be managed in scientific way.

Proposed Environmental Monitoring

To oversee the environmental performance of the project through its lifecycle enforcing the PEQS an Environmental Monitoring Program should be formulated which ensures effective surveillance of the environmental parameters at various stages of the project development and compliances with PEQS and legal obligations. Monitoring for following Environmental Parameters is recommended:

- **Ambient air**

Monitoring for ambient air should be conducted during operational activities of the project and report should be submitted to EPA Punjab.

- **Noise**

Regular monitoring for noise level should be maintained periodically during operation phases of the project and report should be submitted to EPA Punjab as per rule.

- **Water quality**

Regular monitoring of water quality should be conducted during operational phases of the project and report should be submitted to EPA Punjab. Record should be maintained regarding the underground water pump and consumption.

Recommendation: Environmental Monitoring data log book should be maintained by the project proponent

CHAPTER # 1

INTRODUCTION

This Section of the report provides an overview of the rational of the Project, objective of project, requirement of the project, purpose of the report and approach adopted to conduct the Environmental Impact Assessment Study.

Purpose of the report

Environmental Impact Assessment (EIA) report is being submitted to the Environmental Protection Agency (EPA), Government of the Punjab, Lahore for the compliance of Section 12 of Punjab Environment Protection Act-1997 (Amended 2012) for obtaining No Objection Certificate (NOC) before starting the operational activity at the project site. The other relevant regulations and guidelines considered while preparing this EIA report include:

- Policy and procedures for filing, review and approval of environmental assessments.
- Guidelines for the preparation and review of environmental reports.
- Guidelines for public participation.
- Guidelines for sensitive and critical areas.
- Detailed sectorial guidelines.

Various aspects like environmental, social, physical and other aspects of the project during operation and its regular occupancy are highlighted in this EIA report. Measures necessary to be adopted to mitigate any environmental impacts on any part of the environment around are also described. All the important information is also provided as described under the format used to help decision makers, EPA Punjab in the present case, before issuing the desired Environmental Approval.

Identification of the project and proponent

The said Project; i.e., Already Established Packaging unit falls under Schedule-II, Category J, “Any other project for which falling of an EIA is required by the provincial agency under sub regulation (2) of regulation 5, i.e., the project requires an EIA study. Thus, an EIA report is being prepared and submitted accordingly for approval under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022.

Proponent:

Proponent: Shafiq Ur Rehman

Postal Address: House No 28-A1 Street no 2, Town Ship Lahore

For further details CNIC of the proponent and other relevant documents are attached as **Annexure-B** with this report.

Details of Consultant

Environmental Services of Pakistan (ESPAK)., who conducts IEE, EIA, EMP and other environmental investigations through its panel of environmental consultants, public participation practitioners and experienced environmental managers. The company has its own recommended instruments to check the baseline environmental data/PEQS and lab analysis facility for water, waste water priority parameters.

Company office address: Office No. 731, Shah Jilani Road, Block 2 Sector D1 Lahore.

Contact No: 0312-0839999.

The current study was carried out by the following professionals:

#	Name of Team Members	Designation	Qualification
1	Maham Ahsan	Environmentalist	M.S Environmental Science
2	Ali Ramzan	Environmentalist	B.S Environmental Sciences
3	Asma Akram	Environmentalist	M.S Environmental Science
4	Taha Nadeem	Environmentalist	B.S Environmental Sciences
5	Shahzad Ahmad Khan	Project Manager	MBA Marketing

Brief description of Nature, Size and Location of Project

The subject project for which this Environmental Impact Assessment Study has been conducted is already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. Total area of the project is 193745 SFT. The Cost of operation is 300 million rupees. Products of the said project are Metallized Film, Pouches, Holographic Film, Retail Shopping Bags and rolls. The production capacity of the Packaging unit is 350 T per month.

Location

Project site is located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore

Land coordinates of the project site are given below:

- **31°17'59.06"N**
- **74°10'4.92"E**

North…….. Industrial Road

South……. .Open Plot

East…….Open Plot

West……Access Road

For further details layout map of the project is attached as **Annexure-B**.

Figure 1: Pictorial view of the project site

Scoping

Spatial and Temporal Boundaries of Environmental Assessment

The project falls in Industrial area of district Lahore. This project spans at the area of 193745 SFT. Various Industrial Units are already present around the vicinity of the project corridor. The main road along with the project site is Raiwind Road Lahore. The following map shows the spatial and temporal boundaries of the project. For further details, Google earth map of the project on A3 page is attached as **Annexure-E** and layout as **Annexure C** with the report.

Important issues and concerns raised during consultation

Important issue and concerns raised by the community during consultation include the impact of waste water released from the treatment plant that may impact the nearby community. The Proponent ensured that only domestic wastewater is generated from the said unit that is treated in septic tanks first that is within limits of the PEQS and then disposed of into the nearest drain of Sundar. Hence will not cause any issues to the community The community was also concerned about employment for local people. The proponent made sure that maximum job opportunities for plant management and unit operation are provided to the residents.

Screening

The said Project; i.e., Already Established Packaging unit falls under Schedule-II, Category J, "Any other project for which falling of an EIA is required by the provincial agency under sub regulation (2) of regulation 5, i.e., the project requires an EIA study. Thus, an EIA report is being prepared and submitted accordingly for approval under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022.

CHAPTER # 2

ANALYSIS OF ALTERNATIVES

This Chapter deals with the analytical overview of different alternatives that have been considered. The analysis has been carried out critically so as to justify the need of the Project and to select the most feasible alternative. Besides the economic viability; environmental sustainability and social soundness of the said Project has also been considered while analyzing different alternatives.

The no Project Alternative

Adopting zero-alternative would mean abandoning all the potential that the site offers to investor(s), contribution to government revenue and even local community livelihoods' improvement.

Location/site alternatives

To fulfill the commercial aspects of the project under reference of this EIA Report, it is to be sited at a place where commercial processing activity is either already going on or there are bright prospects of the same. Concurrently, it must also meet the legal requirements of the Punjab Environmental Protection Act, 1997 (Amended 2012). Availability of land at the best convenient place is equally important among other considerations for the site selection. Availability of access roads, communication facilities, electricity, basic infrastructure, sewerage etc. is yet the other necessary requirements.

Obviously, environmentally sound, neat and clean environment are the other considerations for site selection. The project will also facilitate the people of the area with increasing the opportunity of employment, and other related facilities.

Keeping these requirements and their feasibility and other basic infrastructural requirements, the selected site is ideally suited for the subject unit.

Alternative site

No Alternative site has been considered due to insignificant environmental impacts. The said project site fulfills the site selection criteria for the construction of the said project.

Reasons of rejection

The reasons of rejection of this site are:

- High cost of land
- Nearby human settlements
- Due to the ownership conflict of surrounding land

- No proper communication facility
- Fauna & Floral Species are present at this site in abundance.

Modified Construction Technology Alternatives

As the said project is already established Packaging unit, there are no construction technology alternatives rather some alteration/renovation of the building will be done.

Technology Alternatives

The company imported brand new machinery from renowned international manufacturers of the world as well as from local market. Machinery is based on latest available technology to produce high quality Packaging material. The machines are having pollution remove technologies built in. Therefore, it the best option to use that technology.

CHAPTER # 3

DESCRIPTION OF THE PROJECT

Type and Category of the Project:

The subject project for which this Environmental Impact Assessment Study has been conducted is already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. Total area of the project is 193745 SFT. The Cost of operation is 300 million rupees. Products of the said project are Metallized Film, Pouches, Holographic Film, Retail Shopping Bags and rolls. Said project is the manufacturer of ecolean Packaging. The production capacity of the Packaging unit is 350 T per month.

Subject study has been conducted for the study of major environmental impacts that can be generated from establishment of the industrial unit.

The said Project; i.e., Already Established Packaging unit falls under Schedule-II, Category J, "Any other project for which falling of an EIA is required by the provincial agency under sub regulation (2) of regulation 5, i.e., the project requires an EIA study. Thus, an EIA report is being prepared and submitted accordingly for approval under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022. TORs of the study under clause 5 (f) of policy and procedure for the filing, review and approval of environmental assessment are annexed as **Annexure–A.**

Objectives of the Project

Objectives of the operation of the subject project are:

- To enhance the economic growth of country;
- To develop a sustainable economic approach to interlink various industries;
- To provide more job opportunities to local public and to improve their living standards;
- To improve the economic activities;

Location and site layout of the project:

Project site is located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore.

Land coordinates of the project site are given below:

- **31°17'59.06"N**
- **74°10'4.92"E**

North…….. Industrial Road

South……. .Open Plot

East…….Open Plot

West……Access Road

For further details layout map of the project, Google earth map of the project site indicating its distances from nearby residential, commercial and industrial areas on A3 page is attached as ***Annexure-E*** with the report.

Land Use on site

Nature of the area is industrial, Site selected for the subject project is a constructed building and it is the property of the proponent.

Road Access

Sunder industrial road is the access road present at the front side of the project site.

Vegetation features of the site

Land where construction occurred for the said project was clear and free of dense vegetation, only shrubs like *Parthenium* and grasses were present over there in scattered quantity. Few and scattered amount of vegetation helped to avoid land clearing at the project site. Management of M/s Shafiq Pak Packaging Pvt Limited has done extensive plantation. Pictorial evidence is attached as **Annexure-F.**

Cost and magnitude of the operation

Subject project is the already established Packaging unit in district Lahore. The Cost of operation is 300 million rupees, which will include the cost of machineries, purchasing of raw material, its processing in unit and provision of electricity. There are no other associated activities with regard to the subject project.

Schedule of Implementation

The project site is already established Packaging unit.

Description of the project:

The subject project for which this Environmental Impact Assessment Study has been conducted is already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. Total area of the project is 193745 SFT. The Cost of operation is 300 million rupees. Products of the said project are Metallized Film, Pouches, Holographic Film, Retail Shopping Bags and rolls. The production capacity of the Packaging unit is 350 T per month.

Detailed process

Raw Material:

Raw materials include:

- Polyester (PET)
- Biodegradable Packaging (BDP-PP)
- Cast Polypropylene (CPP)
- Low-Density Polyethylene (LDPE).

List of Machinery:

List of Machinery is given below:

- Rotogravure Printing Machine
- Lamination Machine
- Slitting Machine
- Bag making machine
- Extrusion Machine

Production Process:

The packaging unit process where films are made and printing is done involves several stages. Here's a detailed breakdown:

Raw Material Preparation:

- **Polymer Granules:** The process begins with raw polymer granules, typically polyethylene, polypropylene, or polyester, which are the base materials for film production.
- **Additives:** Various additives (like colorants, UV inhibitors, anti-static agents) may be mixed with the polymer granules to impart desired properties to the film.

Film Extrusion

- **Extruder:** The polymer granules are fed into an extruder, which melts them and forces the molten polymer through a die.

- **Die:** The die shapes the molten polymer into a thin film. There are several types of dies, such as flat or blown film dies.

Film Treatment

- **Corona Treatment:** The surface of the film is treated with a corona discharge to increase its surface energy, which improves ink adhesion during printing.
- **Annealing:** The film may undergo an annealing process to relieve internal stresses and stabilize its dimensions.

4. Printing

- **Printing Press:** The film is fed into a printing press, which uses various printing techniques (such as digital printing) to apply the desired graphics and text.
- **Ink Preparation:** Inks are prepared according to the design specifications and the type of film being printed.
- **Printing Process:** The film passes through several stations where different colors are applied in sequence to create the final image.
- **Drying:** The printed film is dried using heated air or UV lamps to set the ink.

5. Lamination

- **Lamination Process:** In some cases, a second layer of film (or another material) is laminated onto the printed film to provide additional strength, barrier properties, or aesthetic appeal.
- **Adhesive Application:** An adhesive is applied between the layers to bond them together.
- **Curing:** The laminate is cured under heat and pressure to ensure a strong bond.

6. Slitting and Rewinding

- **Slitting Machine:** The large rolls of film are slit into narrower rolls or specific widths as required by the customer.

- **Rewinding:** The slit film is rewound into rolls of the desired length and width.

7. Quality Control

- **Inspection:** Throughout the process, the film is inspected for defects such as pinholes, wrinkles, or color inconsistencies.
- **Testing:** Samples of the film are tested for properties such as thickness, tensile strength, and adhesion to ensure they meet specifications.

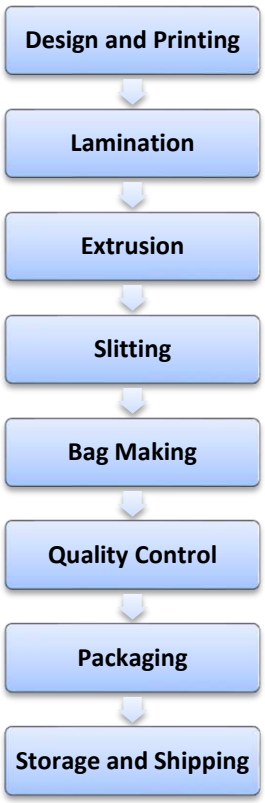
8. Packaging

- **Rolls or Sheets:** The finished film is either rolled or cut into sheets, depending on customer requirements.
- **Labeling:** Each roll or batch is labeled with information such as material type, dimensions, batch number, and any other relevant details.
- **Final Packaging:** The rolls or sheets are packaged in protective materials (such as plastic wrap or boxes) to prevent damage during transportation and storage.

9. Storage and Shipping

- **Storage:** The packaged film is stored in a controlled environment to maintain its quality.
- **Shipping:** Orders are processed, and the packaged film is shipped to customers as per their delivery requirements.

Project process flow chart:



Complete production process is attached as **Annexure-G**.

Power Requirements:

The entire process is carried out using automatic running machines, which operate on electricity. The power requirements are met by WAPDA.

Water requirements:

During the operational phase of the project, the water is used for the domestic purposes only.

Waste water:

During the operational phase of the project, only wastewater from domestic source is generated that is treated in the septic tanks before discharge.

Disposal of wastewater:

After the treatment in the septic tanks water is disposed off in the sunder drain present in the vicinity of project site.

Solid waste:

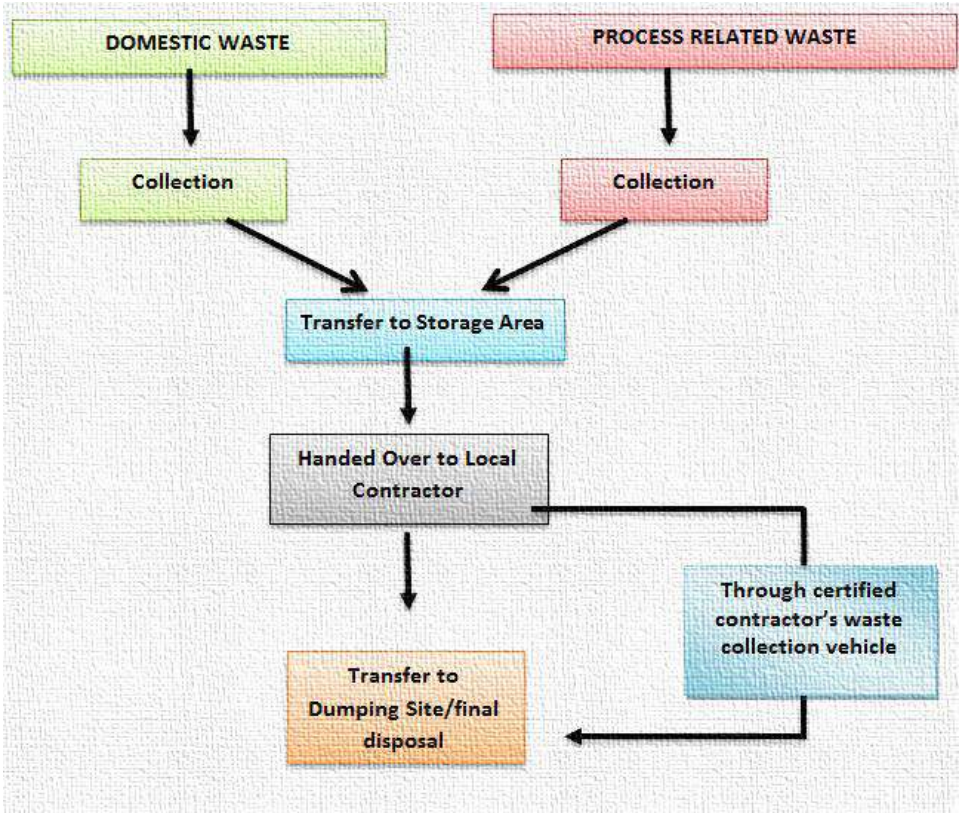
During the operational phase of the project, only domestic and project related waste i.e. Cutting plastic wraps, Scrap Material, Trimmed edges from film rolls and sheets, defective holographic foil material, boxes, and cardboard are generated as solid waste. That is handed over to the certified contractors.

Solid waste management system/practices

The Solid waste is managed in proper way by following operations:

- Placement of separate waste bins for domestic and project related waste in all working halls and designated points.
- Collection of waste from all the working halls at one designated point by the sanitary workers on daily basis.
- Collected waste is handed over to the solid waste contractors for its final disposal, from this point.

Flow chart of solid waste management plan:



Plantation

Sufficient plantation is done at the project site. Pictorial Evidence is attached as **Annexure-F** with this report.

Parking Area

Parking area is present in the said unit. Industry allocated ample area for parking purpose.

Occupational Health and Safety:

All the methods and procedures of health and safety is adopted at the project site to ensure the health and safety of the workers. Pictorial evidence is attached as **Annexure-H**.

First Aid facility:

Proper medical facilities and proper training about first aid will be provided to workers of the subject project to cope with any accidents.

Equipment Maintenance Detail

Subject project is already established Packaging unit, the project site is located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. Proper maintenance and condition monitoring will increase uptime significantly and keep equipment working at peak levels.

Following measures are ensured for the operational equipment maintenance:

- Operator training
- Technician training
- Scheduled maintenance
- Regular oil analysis

Personal Protective Equipment:

PPEs are provided to the workers during the working hours to ensure personnel health and safety and their implementation is also ensured. Details of PPEs required for different occupational hazards are given below:

Safety signs/Safety boards:

At any workplace safety signs and symbols are very important to avoid many accidents. They must be in easy and understandable language to all the workers. Workers should have the knowledge of sign

Protection	Occupational Hazards	PPEs
Head Protection	Falling objects, inadequate height clearance, and overhead power cords	Helmets with or without electrical protection
Hand protection	Hazardous material, cuts or lacerations, vibrations, extreme temperatures	Synthetic or Rubber gloves, leather, insulating material etc.
Hearing protection	Noise, ultra sound	Hearing protectors like ear plugs, ear muffs
Respiratory protection	Dust, fogs, fumes, gases, smokes, vapors, oxygen deficiency	Facemasks or air supply
Body protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration	Aprons, insulating clothing etc. of appropriate materials

wordings and they must be trained and aware about them. Safety signs, symbols and boards will be provided at the project site to protect the workers and employees from the risks of hazards that has not been controlled by other means. Safety signs and boards give safety message and they must be of different colors that workers could understand their meanings easily. At the subject project, safety signs and boards are placed to avoid the workers and staff from any risk.

Security:

The proposed project site is the constructed building so it has proper boundary wall. Security guards are present round the clock to maintain its security. Beside this security cameras at various places are also installed.

Emergency evacuation plan:

Emergency preparedness and evacuation plan is formulated and adopted for the individual industries.

Power sources and transmission:

Electricity requirements at the project site is fulfilled by WAPDA/LESCO.

Restoration / Rehabilitation Plan

All possible precautions are taken to prevent an untoward incident in terms of life and property losses. The demolition materials will possibly be reused and recycled. All excavated surfaces are termite proofed.

All measures are undertaken for ensuring occupational safety, security and clean environment in the project area. Ornamental trees and flower plants are planted on inside peripheral of the unit premises to restore the land.

Government approvals required by the project:

All the approvals had been obtained by the project proponent and their copies are attached with this EIA report. All relevant approvals are attached as **Annexure-I**.

CHAPTER # 4

DESCRIPTION OF ENVIRONMENT

This section describes the baseline conditions, which cover the existing Physical, ecological and socio-economic environment of the project as well as study area. Data was collected by reviewing secondary data and field survey.

Physical Environment:

Topography & Geography

The geography of Lahore comprises the various features relating to the land and climate of Lahore, Pakistan. Lying between 31°15′—31°45′ N and 74°01′—74°39′ E, Lahore is bounded on the north and west by the Sheikhupura District, on the east by Wagah, and on the south by Kasur District. The Ravi River flows on the northern side of Lahore. Lahore city covers a total land area of 1014 km² and is still growing.

The topography of the site is almost flat and slopes upward gently from north to south i.e. moving upwards when reaching the canal and vice versa.

Lahore is the capital of Pakistan's largest province, Punjab; with a population exceeding 10 million, it is a megacity and ranked as the country's second largest metropolis (after Karachi). Collectively, it is also the fifth largest city in South Asia and the 26th largest city in the world in terms of population. As a major urban center of Pakistan, it was graded in 2008 as a city with high sufficiency to become a Gamma world city

Land-Use

The land use of the Project Area is mainly industrial as it is industrial estate. Also, it is surrounded by industrial area.

Geology and Soils

The agro-ecological zones of the country are presented in Exhibit-3.1. The project site falls under Zone-IV (b); the zone generally comprises sandy loam, and clayey loam.

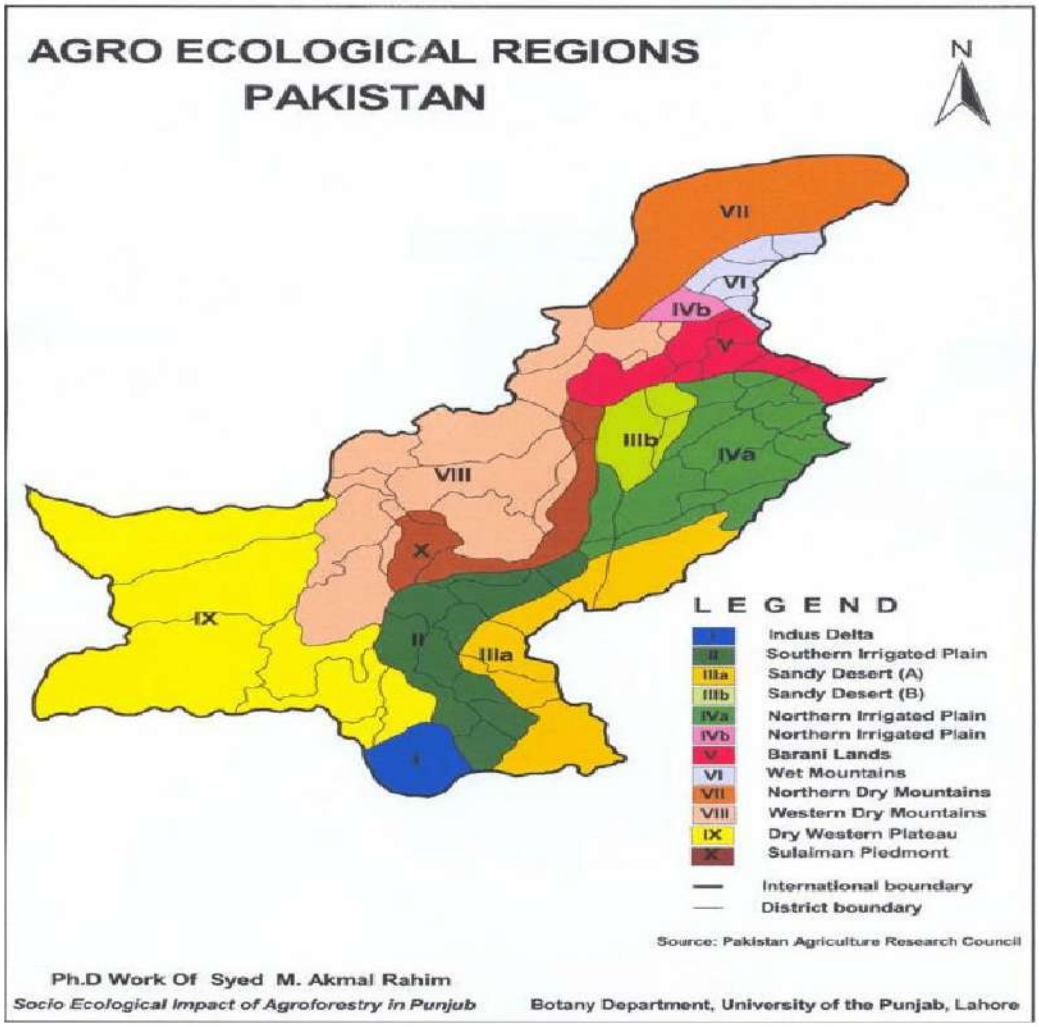


Figure 0-1: Agro-ecological zones of the country

Lahore plains are most probably underlain by the Potwar stratigraphy, but it would be deeply eroded. The geotechnical properties and mineralogical composition of the soil, das established during various studies / boring of tube wells for water supply by WASA/LDA confirm that the Lahore soil is composed of silty clay. The major mineral composition for Lahore soil is Quartz, Muscovite and Clinochlore, which shows that the alluvial deposit received sediments from metamorphic origin.

In general, subsurface stratigraphy at the site consists of three basic lithological units as given below:

- Lean Clay/Silty Clay

- Sandy Silt/Silt
- Silty fine Sand/fine Sand

These soils are the alluvial deposits of the recent geologic times. The subsurface stratigraphy is as discussed below:

- The first soil unit of brown silty clay/lean clay forms the topsoil cover at the site at all the locations and generally continues to a depth of 1 .0 m-3.5m below top of ground. This stratum contains trace fine sand and trace to little concretions at places. It is present in a soft to a stiff state of consistency and has low to medium plasticity.
- The second soil unit of brownish grey sandy silt/silt underlies the upper silty clay/ lean clay stratum. This layer has a thickness of 1.0 to 3.0m and is present in a firm state.
- The third soil unit of brownish grey non-plastic fine silty sand underlies the silt/silty sand stratum. It is present in a loose to medium-dense state.

The lithological distribution of soils consists of slightly cohesive, generally firm to stiff silty clay lean clay from 1.0 to 3.5m depth, followed by firm to stiff sandy silt/silt of 1.0 to 3.0m thickness in turn followed by medium dense silty fine sand. Groundwater is present at a depth of 4.5 to 5.0m below top of ground.

The subsurface generally appears suitable for supporting light to medium loads through spread foundations placed at 1.0 to 2.0m depth. Besides, some isolated weak spots are also expected, which will require special measures to be adopted.

Seismology

Earthquake is generated by tectonic process in the upper part of the earth called lithosphere, which is divided into several rigid parts called “Plates”. Due to the movements of these plates, stress build up takes place and result in the deformation of the crustal mass.

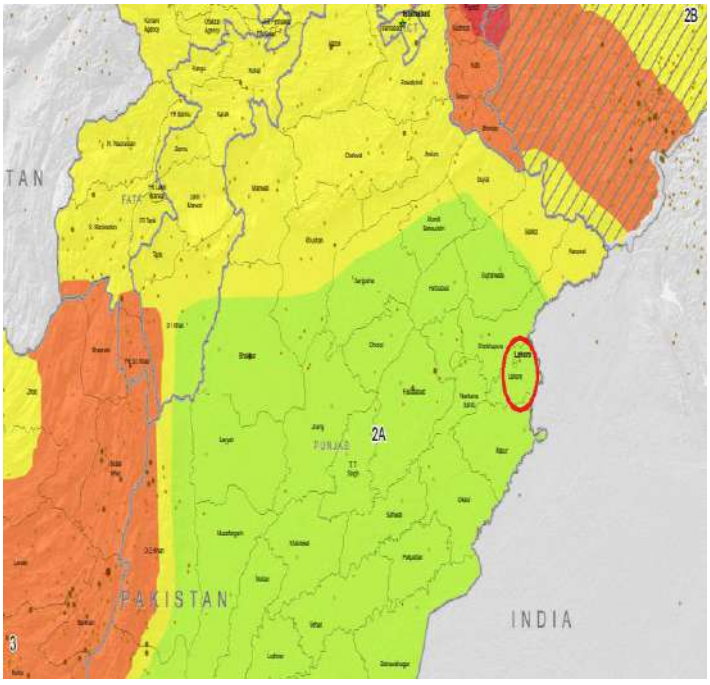
On the basis of Peak Ground Acceleration (PGA) values obtained through Pakistan Seismic Hazard Assessment (PSHA), Pakistan is divided into 5 seismic zones in line with the Uniform Building Code (UBC) 1997.

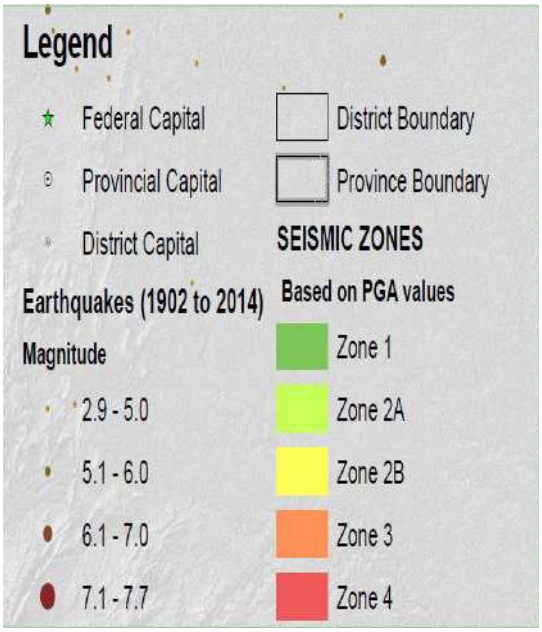
The boundaries of these zones are defined on the basis as shown in Table 4-1

Table 0-1: Probabilistic Ground Acceleration (PGA) Values of Seismic Zones of Pakistan

Horizontal Zone	PGA (g)
1	0.05-0.08
2A	0.08-0.16
2B	0.16-0.24
3	0.24-0.32
4	>0.32

As per Building Code of Pakistan (BCP) 2007 (Seismic Provisions), the proposed Project falls entirely in the zone 2A, which is the regions of moderate seismic risk (Figure). Hence all the applicable provisions related to Soil and Foundations, Structural Design Requirements and with the Structural Concrete of BCP should be considered in the design of the structures.





CLIMATE

Temporal Division of the Country

The temporal division of the country is exhibited below:

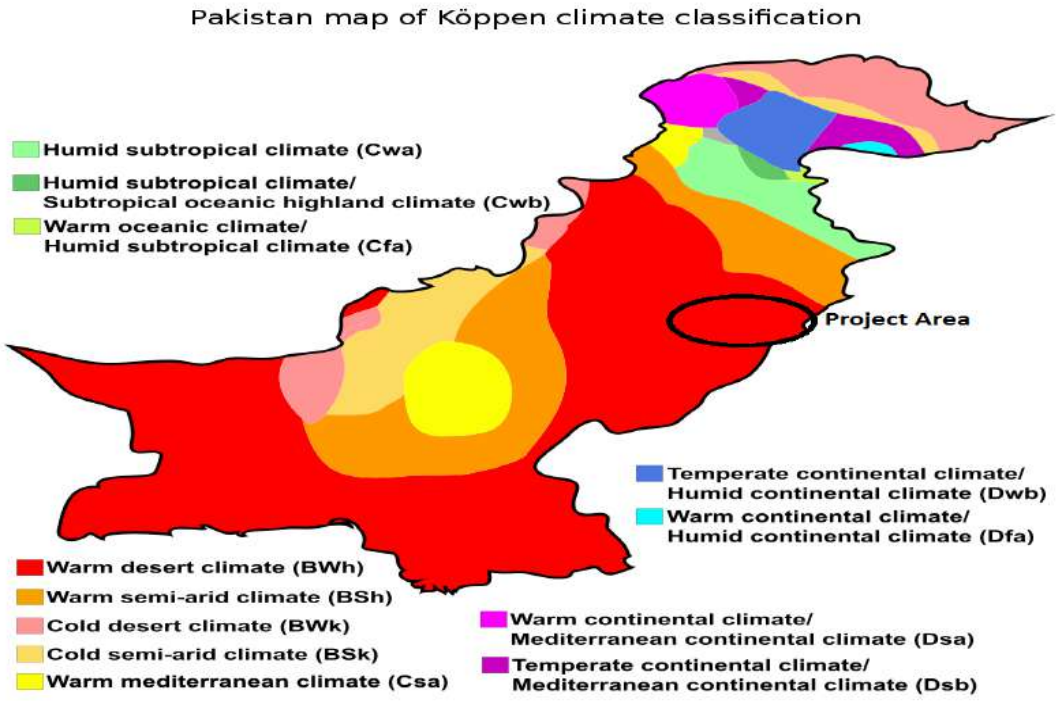


Figure 0-2: Temporal Division of Country

It is

noted from the above map that the project site falls under hot long summers and mild short winters.

Temperature

Mean Maximum Temperature

The mean maximum annual temperatures in the country are presented in Exhibit-3.2. It is noticed that the city of Lahore falls under 25-30-degree Centigrade temperature. As such, the location is in a relatively cooler area than southern part of the country.

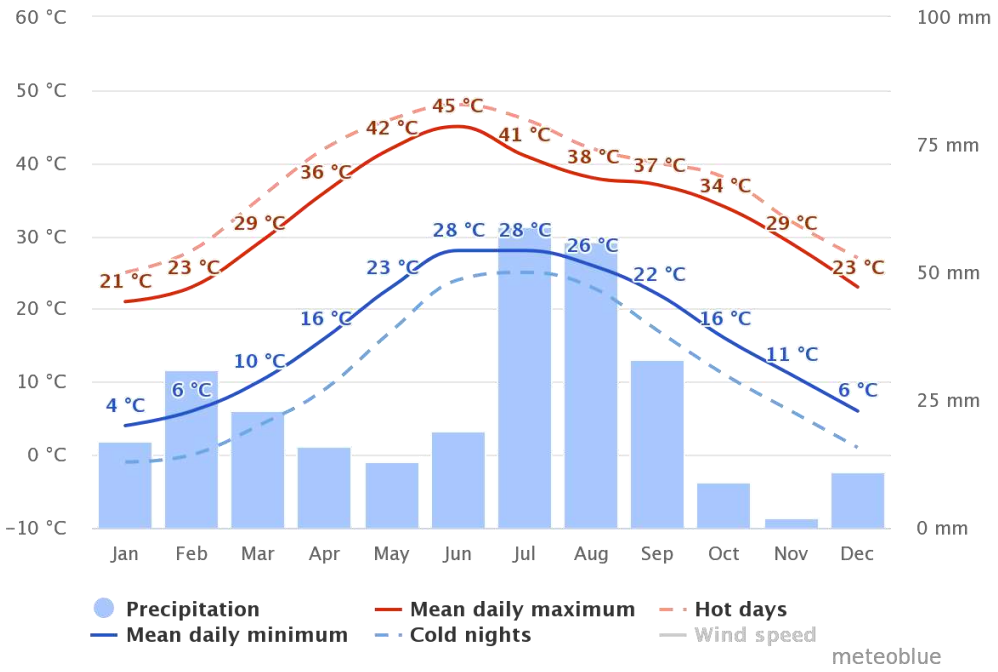


Figure 0-3: Mean and Maximum Temperatures

Rainfall

Lahore mainly receives its rainfall during the monsoon season from June till September, and in winter season from December till February. The highest-ever annual rainfall in Lahore was recorded in 2011 when 1,576.8 millimeters (62.08 in) of rainfall was recorded. Lahore received below normal rains in 2009 and normal rains in 2007 and 2010. The following is the Annual rainfall in Lahore since 2007 based on data from the Pakistan Meteorological Department.

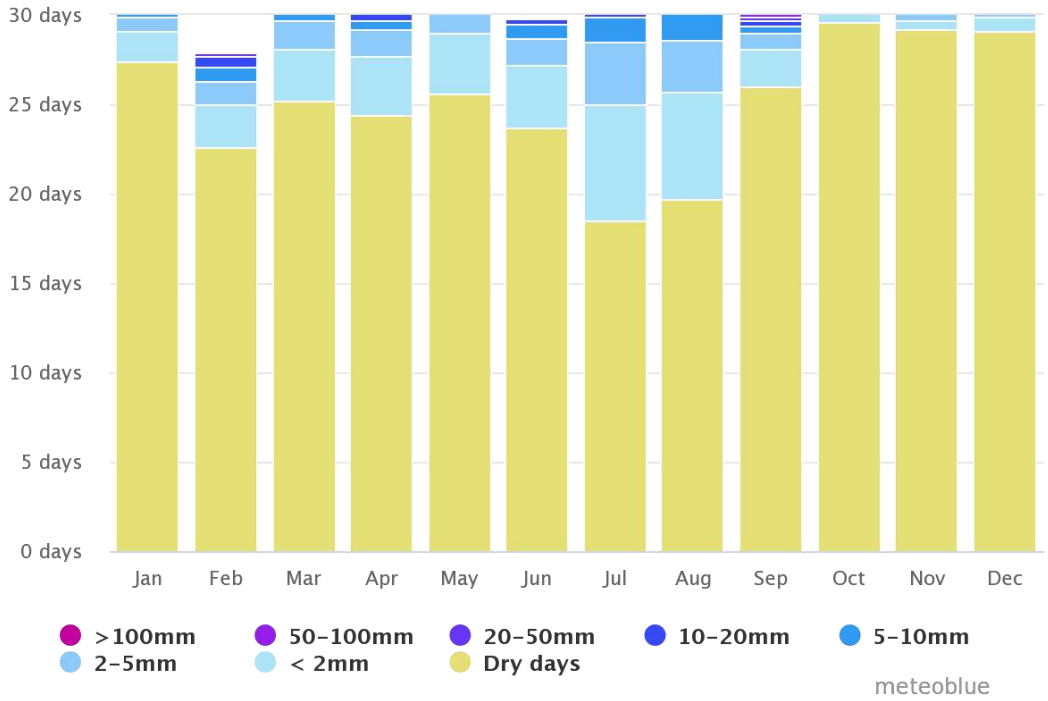


Figure 0-4: Rainfall Amount

Wind Direction

60% days of the year are calm and 33% days have mean speed of 1-3 knots. Only 6% day's exhibit speed of 4-6 knots and higher. Wind directions are from north-west and south-east during summer and winter respectively. Summer winds bring monsoon rains.

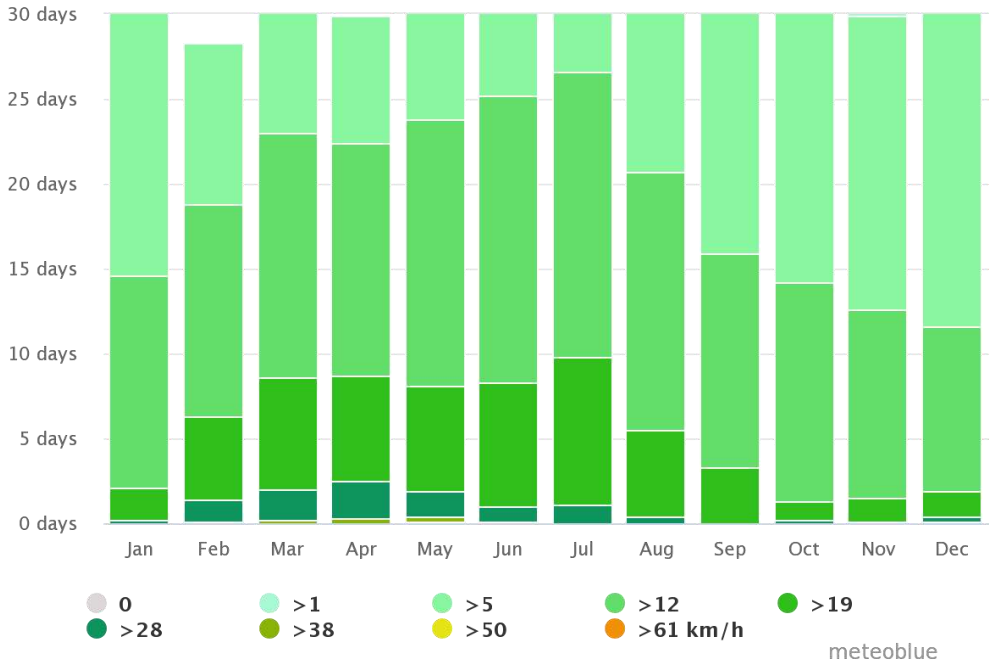


Figure 0-5: Wind Direction

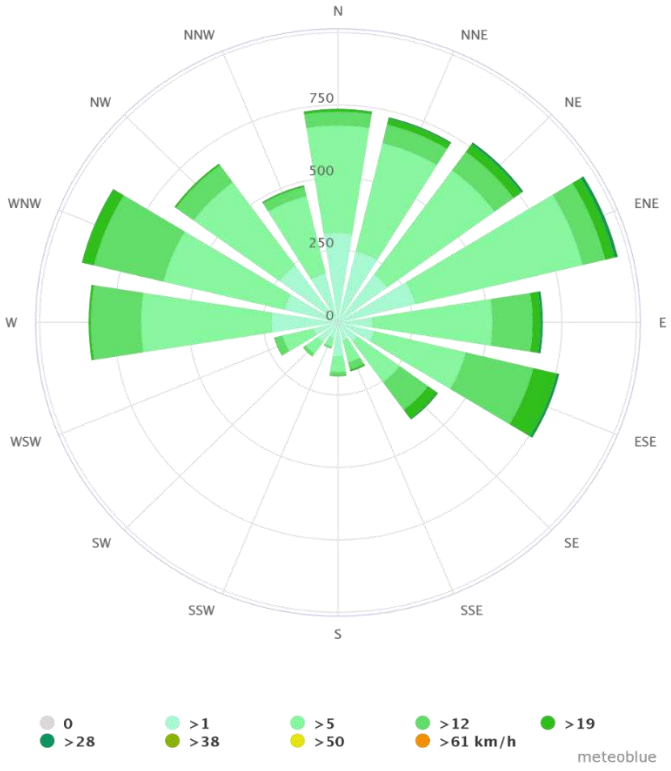


Figure 0-6: Wind Rose

WATER RESOURCES

Surface Water

No rivers exist in the vicinity; however, storm water drains cross the route for disposal into the Ravi River. Water from River Ravi, flowing on the northwestern side of the city of Lahore, is being used for other purposes other than drinking purposes. River Ravi receives almost all the municipal/ industrial wastes from the city of Lahore. The potential value as a recreational water body and breeding place for fish is threatened by the municipal and industrial pollution.

Ground Water

Ground water quality is fresh (defined as acceptable in terms of its salinity). Raw water abstracted from the deep tube wells is believed to be essentially bacteria free. The water quality in the upper 50 meters zone of subsoil is generally brackish.

For city's drinking purposes water is abstracted from groundwater aquifer by means of tube wells located throughout the city. The quality of water is generally adequate for direct consumption. About 83% of city population is consuming groundwater for drinking purposes.

Groundwater is available at a depth ranging between 15 to 23m below the natural surface level. Deep groundwater from a depth of about 210m in the vicinity of the Project Area is being extracted for meeting the domestic and commercial water demands in nearby areas.

Adequate quantity of good quality groundwater is available below a depth of 50m. Water consumption varies significantly and its variation as of industrial units. Usual water consumption pattern for industrial units and data collected from the prospective industrialist will form basis for total water demand.

According to Master Plan-2030 for the city of Lahore, the mean average decline in ground water is about 2.03 feet per year. It is noted that ground water is at a greater depth in the central part of the city where abstraction is more than the re-charge and close to surface waters i.e. Ravi River and Canal, the situation is in the reverse order.

ECOLOGICAL ENVIRONMENT

This section describes the biodiversity existing ecosystem and existing ecological conditions in the Project AOI. This section also enlists the fruit and non-fruit trees (forest trees), wildlife species and identifies those that need protection.

Flora

Lahore, the city of gardens is heart of Pakistan. The city has seen the heydays of the Mughals, Sikhs and the British; all left their footprints on the history and cultural mosaic of the city. Resultantly Lahore is a treasure-trove of monuments, historical relics and remains which these nations have left in this historical metropolis of Punjab.

Though an ancient city; over the years Lahore has considerably expanded. However, along these modern additions, the ancient monuments, old gardens, trees, graveyards and traditional bungalows having attached gardens, large expanses of lawn and old roadside trees some of them can still be seen, are gradually disappearing. These green areas and old endemic trees of Lahore are home to many resident bird species as well as many summer, winter and transit migrants. So, Lahore is also very important due to its ecological conditions.

Fauna

Common birds found in the area are crows and sparrows. Domestic animals are seen grazing in the agricultural land as well as on the project site. Chirping birds are having their nests at the well grown trees that are providing a natural habitat for the birds. Some squirrels, parrot, rats, weaver, sparrows are also found in the area.

Different species of reptile and amphibians such as lizards and frogs are also found. Various bird species known to occur in the area include myna, bulbul, crow and sparrow.

CURRENT SOCIO-ECONOMIC CONSIDERATIONS

General

This section deals with the social conditions of the Project Area. During the desk/ office study, available reports/ documents were comprehensively studied. During the field survey interviews

with the residents, shopkeepers, students, pedestrians, drivers, and hospital employees were held and observations were taken after giving due consideration to the desk/ office study results.

Administrative Settings

The project area falls in Lahore City of the Lahore District. District Co-ordination Officer is the highest ranked administrator of the district. For the collection of revenue and administration, the districts are subdivided into Tehsils. Local governments also administer the area through Union Councils and Tehsils. The total area of the district Lahore is 2,300 square kilometers.

Demographics

The total population of Lahore District was 6,318,745 as enumerated in March 1998 with an intercensal percentage increase of 78.3 since March 1981 when it was 3,544,942 souls. The average annual growth rate of population in the district during intercensal period 1981-1998 was 3.5 percent. The total area of the district is 1772 square kilometers, which gives population density of 3,566 persons per square kilometer as against 2000 persons observed in 1981 indicating a fast growth rate of the district.

Religion

The population of the district is predominantly Muslims i.e. 93.9 percent. The next higher percentage is of Christians with 5.8 points followed by Ahmadis 0.2 percent. While other minorities like Hindu etc.

Public Transport

Lahore is one of the most accessible cities of Pakistan. In addition to the historic Grand Trunk Road (G.T. Road), a Motorway (M-2) was completed in 1997 from Lahore to Islamabad. The government has built underpasses to ease congestion and prevent traffic jams, and according to official figures, Lahore has the highest number of underpasses in Pakistan.

Railways

The Pakistan Railways headquarters is located in Lahore. Pakistan Railways provides an important mode of transportation for commuters and connects distant parts of the country with

Lahore for business, sight-seeing, pilgrimage, and education. The Lahore Central Railway Station, built during the British colonial era, is located in the heart of the city.

Rural – Urban Migration

The total number of life time in-migrants in Lahore district was 1,034,848 or 16.4 percent of the population of the district. Of total life time in-migrants 890,427 persons settled in the towns. Of total district migrants 71.7 percent came from other districts of the Punjab, 10.1 percent were from Sindh, NWFP and Baluchistan, 1.3 percent from Azad Kashmir and Northern Areas while remaining 16.9 percent were Pakistanis who repatriated from other countries. There were only 11 migrants whose birth place was not reported.

Industrial Importance

After Karachi, Lahore is the biggest industrial area in Pakistan. There has been a steady expansion of industries in and around Lahore since independence. There are many large industrial units in the district. These units manufacture cotton, woolen and silk cloths, carpets and rugs, textile products, lather and rubber foot wears, wearing apparel, pharmaceutical goods, soap, iron and steel products, heating, plumbing and lighting equipment, hardware, miscellaneous fabricated products, agriculture machinery, engines and turbines, textile machinery, printing machinery, metal working machinery, pumps and compressors, household machinery, water generators, motor generators, transformers, electric fans, communication equipment, cycles and rickshaws. There are also a good number of printing and publishing units and body building workshops. Besides, there are units of canning and preservation of food, edible oils, beverages, metal and wood furniture, rubber products, chemicals, glass products, repair of railway equipment, toys, stationary etc.

The proposed site is situated at Sunder Industrial Estate – Lahore. The project area is surrounded by industrial units.

CHAPTER # 5

SCREENING OF POTENTIAL ENVIRONMENTAL IMPACTS & THEIR MITIGATION MEASURES

The following chapter describes the overall possible impacts of project on the physical, biological and socioeconomic environment because of operation phases and mitigation measures to minimize the significance of the possible impacts up to an acceptable level. The anticipated impacts related to project location, design, operational phases have been assessed and mitigation measures are provided accordingly.

Identification of all impacts:

All the impacts related to the subject project due to the project location, during the operational phase have been identified and their mitigation measures have been suggested in Chapter # 4, Screening of potential environmental impacts and mitigation measures.

Methodologies for impact identification:

The methodology adopted for impact evaluation includes the Project Impact Evaluation Matrix.

Project impact evaluation matrix

The impact Evaluation matrix was developed by placing project activities on x-axis and different environmental parameters likely to be affected by the project actions grouped into categories i.e. Physical, Biological and Socio-Economic Environment. For the impact assessment, project impact assessment matrix is used by dividing the project action into different phases operation phase. A project impact evaluation matrix is attached in next section of this chapter.

The evaluation of impacts has been carried out on the basis of developing matrix, in which impacts have been rated on the basis of their significance. For rating impacts significance following criterion has been developed;

NA – Not Available

O – Insignificant (No or minimal impact)

LA – Low Adverse (Short term, reversible or less damage to environment)

MA- Medium Adverse (Long term reversible damage to environment)

HA – High Adverse (severe irreversible adverse damage to the environment)

LB – Low Beneficial (Short term benefits or less beneficial to the environment)

MB – Medium Beneficial (Long term benefits to environment)

HB – High Beneficial (Continuous benefits to environment)

	Physical Environment							Biological Environment		Socio-Economic Environment							
Environmental Component / **Project Activities**	Topography & Drainage	Soil Quality	Landscape	Surface water quality	Ground water quality	Air quality	Noise	Flora	Fauna	Agricultural Land	Health & Safety	Disruption of Public Utilities	Employment	Population Disturbance	Social Disorder	Cultural Values	Traffic Management
Transportation of raw material/ products	MA	MA	MA	MA	O	MA	HA	LA	MA	O	HA	LA	B	MA	LA	O	HA
Production process	O	O	O	HA	MA	MA	MA	O	O	O	HA	HA	HB	O	O	LA	O
Washing process	O	O	O	LA	HA	O	O	LA	LA	LA	LA	HA	B	O	O	O	O
Operation of boilers	O	O	O	LA	HA	MA	MA	O	O	O	HA	HA	HB	O	O	O	O
Operation of generators	O	O	O	O	LA	HA	MA	O	O	O	HA	LA	HB	O	O	O	O
Water consumption	LA	O	LA	HA	HA	O	O	LA	LA	LA	LA	HA	B	LA	O	O	O
Wastewater generation	HA	MA	MA	MA	MA	LA	O	MA	MA	MA	HA	LA	B	LA	LA	O	O

Storage of raw materials/ dyes	O	O	O	O	O	O	O	O	O	O	LA	O	B	O	O	O	O
Social activities	O	O	LB	B	B	B	B	B	B	HB	HB	B	HB	HB	HB	HB	O
Public welfare	O	O	B	B	B	B	B	B	B	HB	HB	HB	HB	HB	HB	HB	LB
Economic activities	LB	O	B	B	B	B	B	B	B	B	HB	B	B	B	B	B	LB
Employment	O	O	O	O	O	O	O	O	O	O	B	B	HB	B	B	B	LB
Infrastructure improvement	LB	MB	HB	B	B	B	B	HB	LB	HB	HB	B	HB	B	B	B	B

Impact Analysis and Prediction*:*

In order to evaluate the socioeconomic and environmental impacts, filed surveys are extremely essential. In addition to the surveys at the preliminary stage, consultation with the community and their active participation plays a vital role in successful implementation of the project. For the impact analysis and predictions following methods were adopted:

Consultations/ Case Studies:

To study the impacts of the project on physical and biological environment, site visits were conducted by the environmental practitioners and experts and possible physical and biological impacts which may arise due to the subject project were identified through consultations and case studies and their mitigation measures were suggested accordingly.

Meetings:

For the identification of the social impacts of the project, meetings and group discussions were held with the local people, stakeholders, nearby residents and passerby because social acceptability of the project and the area is a key to success. Consultation with the stakeholders is a tool for managing two-way communication between the project proponent and the affected public. Its goal is to improve decision making and built understanding by actively involving individuals, groups and organizations, which have stake in the project. This involvement increases project's long-term viability and enhances its benefits to locally affected people and other stakeholders.

To identity the different types of stakeholders and ascertain their perceptions about the project, an initial environmental examination was conducted. Informal group discussions were also held as an additional tool for obtaining feedback from the stakeholders that are being discussed in the following.

The EIA team carried out public consultations at various locations around the Project Site. The stakeholder's consultation during this phase of the work targeted the project area, administrative and private offices, Govt. offices, shops, etc. near the Project area:

- Selection of the stakeholders for consultation, reconnaissance of the project site and initial discussions with the neighboring factory workers, villagers, shopkeepers, drivers etc.

- Environmental consultants and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc.

Characteristics of impacts

Environmental Impacts due to project location and mitigation measures:

Following impacts related to the location of the industrial unit should be identified to avoid the sitting of the industrial estate in sensitive, difficult or unsafe area:

Impact:

- **Displacement of existing land use and other resources:**

  Important land uses and economic activity may lose due to establishment of industrial unit.

Mitigation measures:

- ✓ The site of the project is already established. It will not cause displacement of any land use or economic activity. In fact, the industrial unit will increase the economic and land use value of the project site.
- ✓ And the project will it self-contribute in strengthen the economic activity.
- ✓ No movable or immovable property and infrastructure of public and private sectors will be lost or damaged during operation stage. Impact will be nil.
- ✓ Location can be considered as the positive impact due to enhanced infrastructure.

Impact:

- **Destruction of environmentally sensitive and critical areas:**

  Wetlands, forests, major water bodies and other areas containing rare and endangered species can all be threatened by new industrial estates.

Mitigation measures:

- ✓ There is not any sensitive area e. g. wetland, forests, major water bodies and other areas containing rare and endangered species at or near the project site, so the project location will not have any negative impact on environmentally sensitive and critical areas due to its location.

Impact:

- **Existence of adverse natural conditions:**

  Existence of adverse natural conditions such as slope of the land, unstable soil and subsurface conditions, land prone to landslide activity and land prone to seismic or volcanic activity at the project site can make the site unsuitable for establishment of industrial estate.

Mitigation measures:

- ✓ Topography of the project area is flat, soil and subsurface conditions are stable and site is not located in area prone to any landslide, seismic or volcanic activity, so the site is suitable for the establishment of industrial estate. It shows that project site doesn't fall in area prone to flood, seismic or volcanic activity.

Impact:

- **Impacts on adjoining land users:**

  Population concentrations or agricultural production or other resources near the proposed project site may be affected by heightened levels of pollution.

Mitigation measures:

- ✓ Project site is in industrial zone, surrounded by industrial units and there are no population concentrations at a safe distance from the project site. Project location will have no impacts on adjoining land users.
- ✓ The site is present where some major industrial unit i.e. Roshan Packages Limited, Livewell capsules, Textile industries and food industries are present.
- ✓ NEQS/ PEQS compliance of environmental parameters will be ensured.

Impact:

- **Displacement of existing population:**

  Relocation issues may arise if any population is occupying the project site.

Mitigation measures:

- ✓ Project site is the property of the owner. There is no involvement of displacement or relocation of population in the subject project.
- ✓ The project does not involve dislocation of the people. There is no requirement of resettling a single person. Impact is nil.

Impact:

- **Destruction of resources of historic and cultural significance:**

  Project may have negative impacts due to its location if sites or areas of importance from an historic or cultural viewpoint are present near the project site.

Mitigation measures:

- ✓ Project site should not be located near the historical places.
- ✓ There is not any area of historic or cultural importance near the project site, so the impact on destruction of resources of historic and cultural importance is insignificant.

Impact:

- **Availability of existing infrastructure and services:**

  Availability of existing services e. g water provision, road infrastructure etc. to the site may be inadequate for the proposed project. The absence of institutions for communication and accident response may make hazard management impossible at the particular site.

Mitigation measures:

- ✓ Adequate road infrastructure and other resources are present at the project site. There would be no issue of congestion of traffic due to presence of good road network in the area.

- ✓ The project provided the jobs to the local residents as well as to those from the suburban areas.

Impact significance: Moderate

Nature of impact: Direct

Duration: Long-term

Timing: Operation phase

Reversibility: NA

Likelihood: Moderate to high

Consequences: Negative

Environmental Impacts due to the project design and mitigation measures:

The following could be the impacts related to the design of the project:

Impact:

- **Hazardous Materials:**

✓ If there will be any hazardous materials in the industry, inadequate treatment, storage and disposal facilities could be a negative impact related to the design of the project.

Mitigation measures:

✓ No hazardous materials will be allowed in the subject unit, if that will be allowed then adequate treatment, storage and disposal facilities will be ensured.

✓ There will be no storage of any kind of hazardous material.

Impact:

- **Liquid waste emissions:**

Inadequacy of liquid waste treatment facilities could be a negative impact of the project due to its design.

Mitigation measures:

✓ Integrated waste treatment and disposal techniques will be designed and implemented in the industrial unit.

✓ Septic tank had been constructed in the unit to treat the domestic wastewater as there will be no discharge of wastewater from the project related activity or process.

✓ Wastewater will only be discharged from the domestic use.

- ✓ No liquid waste will be discharged into the environment directly without being treated.

Impact:

- **Gaseous Waste emissions:**

  If gaseous emissions of the industry will not be treated at NEQS/ PEQS, it will be a negative impact related to the design of the project.

Mitigation measures:

- ✓ Industry should install gaseous emissions control devices and will ensure the NEQS/ PEQS compliance for gaseous emissions.

Impact:

- **Noise:**

  Noise emissions could be a negative impact of the project if proper mitigation measures will not be taken.

Mitigation measures:

- ✓ Noise abatement devices should be installed in the industry to control the noise emissions and NEQS/ PEQS compliance will be ensured from the process.
- ✓ There will be no as such impact of noise from the project activity.

Impact:

- **Transport and traffic:**

  Inadequacy of road infrastructure at the project site may cause transport and traffic issues at the project site.

Mitigation measures:

- ✓ Efficient road network and ample parking facilities provided at the project site and there will be no issue of transport and traffic.
- ✓ Proper network of road is present at the project site.

Impact:

- **Aesthetics:**

  Installation of industry may have a negative impact on the aesthetics of the area, negative impact related to the design of the project.

Mitigation measures:

- ✓ Green belt areas had been constructed and sufficient plantation had been done to ensure the aesthetics of the area.
- ✓ Sufficient space is provided at the project site for the storage and disposal of solid waste and the treatment of domestic wastewater during operation phase.
- ✓ Trees and plants are planted to provide the habitat for the birds.

Impact:

- **Infrastructure design:**

Lack of efficiency of basic infrastructure design during the designing phase of the project may cause many issues in later stages.

Mitigation measures:

- ✓ Emergency exist points had been marked in the project area.
- ✓ Firefighting system are designed for the emergency situations.
- ✓ Electricity system is designed safe and sound.
- ✓ Electricity wires are covered by thick plastic/electricity resistant covers.

Impact significance: moderate to high or may be negative

Nature of impact: direct

Duration: Long-term

Timing: Operation phase

Reversibility: NA

Likelihood: moderate to high

Consequences: moderate to high or may be negative

Environmental Impacts during construction phase:

The said project is already established unit.

Environmental Impacts during Operation Stage

During the operation stage of the life of an industrial estate there will be possible impacts from:

Impact:

- **Pollution:**

Increased pollution levels are a major negative impact associated with the operational phase of the subject project.

Mitigation measures:

- It should be ensured that all the necessary measures will be taken by the industry to control their emission levels and PEQS/ NEQS compliance will be ensured.

Impact:

- **Health hazards and nuisance:**

  Health hazards and nuisance may be caused to the workers in the industrial unit during the operational phase of the subject project.

  Mitigation measures:

- Management of industrial unit will be responsible for ensuring the health and basic rights of workers.

  Impact:

- **Occupational health and safety issues:**

  Occupational health and safety issues are of important concern related to the operational phase of the subject project.

  Mitigation measures:

- Occupational health and safety of the workers should be ensured at the project site.

  Impact:

- **Extraction of ground water:**

  Extraction of ground water for the operational purposes of the project could affect the ground water availability for the community.

  Mitigation measures:

- No impact on community ground water needs is envisaged as a result of the subject project.

  Impact:

- **Inadequate operation and management facilities:**

  Inadequate operation and management facilities during the operational phase of the project may cause the failure of enforcement and implementation of regulatory framework.

Mitigation measures:

- Adequate operation and management facilities should be ensured at the project site.

Impact:

- **Wastewater:**

  Waste water generation due to domestic and process activities could be a negative impact related to the operational phase of the subject project.

Mitigation measures:

- Wastewater should not be disposed off without treatment at PEQS/ NEQS.
- Wastewater only be discharged from the domestic usage.

Impact:

- **Fire hazards:**

  Fire due to short circuits and other activities may be a hazard which may arise from the subject project.

Mitigation measures:

- Fire management system should be designed to cope with any emergency situation.
- Electricity system should be designed safe and sound.

Impact:

- **Solid waste:**

  Solid waste generation due to domestic and project related activities could be a major negative impact associated with the subject project.

Mitigation measures:

- Specific area for collection of solid waste is allocated and solid waste management system should be devised and implemented to manage the solid waste at the project site.

Impact:

- **Noise:**

  Noise pollution may be major negative impact associated with the operational phase of subject proposed project.

Mitigation measures:

- Noise abatement techniques should be implemented and PEQS/ NEQS compliance should be ensured.

Impact:

- **Heavy Traffic:**

  Vehicle access is required especially for transportation. The site is well served with the road network. Heavy traffic will be allowed only during night time during operational phase. The traffic issues at any stage of project life cycle will not arise.

Mitigation measures:

- Efficient road infrastructure and ample parking facilities is provided at the project site.

Impact significance: moderate to high or may be negative

Nature of impact: direct

Duration: Long-term

Timing: operational phase

Reversibility: NA

Likelihood: moderate to high

Consequences: moderate to high or may be negative

Potential Environmental Enhancement Measures

The said project is installed with all precautionary measures to enhance and safe the environment. Following necessary measures will be adopted during operational phase of the project:

- Sprinkling of water will be done on dusty roads and tracks.
- PPEs will be provided during operation activity.
- Domestic solid waste will be disposed-off properly.
- Machinery will never be left unattended.
- Efforts should also be made to discuss traffic conditions so that regular traffic is not disturbed. Transporters engaged for the project would be forced to adhere to the load specifications of the access road. No overloading would be allowed in any case.
- Safety signs and boards are placed during operation.
- Machinery will be kept maintained.
- Waste water will be treated through waste treatment system that will be installed within the premises of the subject project.

- Proper SOPs will be followed with proper schedule along with the HSE conditions.
- Area will be restored with native plants. A proper tree plantation plan will be formulated to save the environment.
- Solid waste will be handed over to contractors and agreement will be made.
- Noise will be controlled by adopting proper measures.
- Firefighting equipment's and system will be installed.
- Hygienic conditions will be ensured and proper quality will be maintained by quality control testing.
- First aid facilities will be made available.

Purpose of mitigation measures

What is the problem i.e. in terms of "major environmental impacts" which may arise by the subject project activity?

The major impacts may arise by the subject project could be particulate matter & dust, noise, solid waste and wastewater. Other impacts are of minor importance. These impacts will arise during operation but precautionary measures are adopted prior to start the activity, during the activity and post activity.

When the problem will occur and when it should be addressed?

Any impact that would arise due to the subject project activity will be addressed on site. Trainings will be conducted on site prior to start work while other precautionary measures will also be adopted to make the project safe and environmentally friendly.

Where and how the problem should be addressed?

HSE manager/environmental manager along with site manager is already appointed to assess any impact that could be arisen during operational phase. He would be responsible to address the problem and to mitigate it.

Whys of achieving mitigation measures

Improved monitoring and management practices:

Management of M/s Shafiq Pak Packaging Pvt Limited shall take appropriate measures to provide pollution free and safe environment during the project activity by implementing improved management practices and monitoring techniques suggested in EMP.

Compensation in money terms:

M/s Shafiq Pak Packaging Pvt Limited adopted such plan that will assure the minimum impact on the environment and health by implementing proper mitigation measures.

Replacement, relocation and rehabilitation:

M/s Shafiq Pak Packaging Pvt Limited has already developed Restoration/ reclamation or tree planation plan to restore the project area. Maximum Plantation is done with native species within the building, along the boundary wall and along the road side if directed by EPA. Also, in-front of main area, horticulture plan will be formulated and area for this will be kept reserved. Details of plantation that is already done is attached as **Annexure-F**.

CHAPTER # 6

ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

Purpose and Objectives of the Emp:

The primary objectives of the EMMP are to:

- Facilitate the implementation of the mitigation measures identified in the EIA.
- Define the responsibilities of the project proponent.
- Define a monitoring mechanism and identify monitoring parameters in order to:

1. Ensure the complete implementation of all mitigation measures.
2. Ensure the effectiveness of the mitigation measures.
3. Provide a mechanism for taking timely action in the face of unanticipated environmental situations.
4. Identify training requirements at various levels.

Management Approach:

The overall responsibility for compliance with the environmental management plan rests with the project proponent.

A certain degree of redundancy is inevitable across all management levels, but this is in order to ensure that compliance with the environmental management plan is crosschecked.

Institutional Capacity

The overall responsibility for compliance with the environmental management plan rests with the project proponent. He appointed HSE/Project Manager of relevant qualification. HSE/Project Manager act as Environmental Manager and managed all HSE conditions at the PEQS.

A certain degree of redundancy is inevitable across all management levels, but this is in order to ensure that compliance with the environmental management plan is crosschecked.

Following functionaries will be involved in the implementation of EMP:

- Project Proponent
- HSE Officer
- In-Charge Administration
- Supervisor of project

Organogram of authorities involved in the implementation of EMP in the proposed.

Schedule of implementation

Training for the management and workers on environmental aspects of the project are arranged on biannually basis during the operational phase of the project. It is imparted by a team of experienced trainers. Pictorial evidence of Health and Safety policy and SOPS are attached as attached as **Annexure-H**.

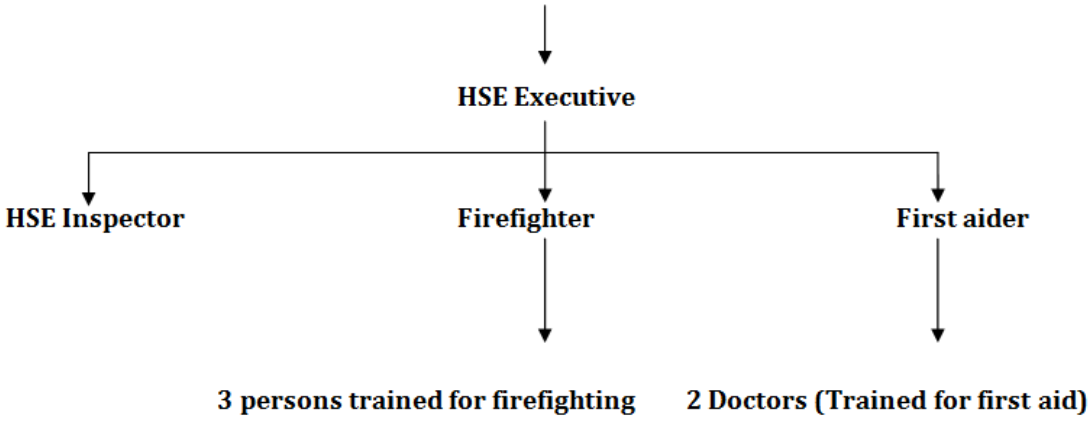


Figure: Institutional Capacity for the implementation of EMP

Management hired or appointed HSE officer before the initiation of work at the project site. HSE officer will be responsible for conducting the training of the labor, which will be organized either by the management of industry or by the contractor.

Following schedules of training will be implemented:

Table: Training Program

Sr. No.	Description of program	Personnel involved	Time/ duration

1)	General HSE Training	Trainers and whole production facility staff	Regularly as planned by HSE Manager
2)	Instrument use/ workplace specific items	Trainers and whole production facility staff	Regularly as planned by HSE Manager
3)	PPEs use and safe work practices at work site.	Trainers and whole production facility staff	Regularly as planned by HSE Manager
4)	Reporting and investigating accidents/ incidents	Trainers and whole production facility staff	Regularly as planned by HSE Manager
5)	Emergency procedures	Trainers and whole production facility staff	Regularly as planned by HSE Manager
6)	Medical and first aid	Trainers and whole production facility staff	Regularly as planned by HSE Manager
7)	Health and safety promotion	Trainers and whole production facility staff	Regularly as planned by HSE Manager

In order to raise the level of professional and managerial staff, there is a need to upgrade their knowledge in the related areas. HSE Manager should play a key role in this respect and arrange the training programs. HSE Manager will provide training to staff and workers about the best environmental management practices at the site and affective implementation of the EMMP. The training modules will include air, noise and water pollution monitoring, social awareness, Environmental Laws, National Environmental Quality Standards (PEQS), Usage of personal protection equipment, and health and safety related issues on the construction site.

The HSE Manager will train all workers & staff in basic sanitation and health care issues (e.g., how to avoid malaria, dengue and transmission of Sexually Transmitted Infections (STI) HIV/AIDS and in general health and safety matters, and on the specific hazards of their work. Training should also consist of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation.

HSE Manager is responsible to conduct Training on regularly basis regarding health & safety, hygiene, firefighting and first aid.

Training of Workers:

Training of workers will be the part of the TORs regarding the construction of the scheme. The provisions given in EIA Report *Chapter 4 Screening of Potential Environmental Impacts & Their Mitigation Measures* will be followed.

TORs will be including the training and submission of reports in the following area:

1. Handling of Machineries in a safe way
2. Use of PPEs
3. Maintenance of vehicles and submission of Environmental Monitoring Reports
4. Maintenance of Water Consumption records
5. Testing of water and waste water and submission of Environmental Monitoring Reports
6. Placement of safety signs/boards
7. Sprinkling of water on the roads and dusty tracks
8. Monitoring of generator emissions

Training regarding all other aspects of HSE will be ensured by the HSE manager.

Proposed Environmental Monitoring

To oversee the environmental performance of the project through its lifecycle enforcing the PEQS an Environmental Monitoring Program should be formulated which ensures effective surveillance of the environmental parameters at various stages of the project development and compliances with PEQS and legal obligations. Monitoring for following Environmental Parameters is recommended:

- **Ambient air**

Monitoring for ambient air should be conducted during operational activities of the project and report should be submitted to EPA Punjab.

- **Noise**

Regular monitoring for noise level should be maintained periodically during operation phases of the project and report should be submitted to EPA Punjab as per rule.

- **Water quality**

Regular monitoring of water quality should be conducted during operational phases of the project and report should be submitted to EPA Punjab. Record should be maintained regarding the underground water pump and consumption.

Recommendation: Environmental Monitoring data log book should be maintained by the project proponent.

Responsibility of emp

Overall responsibility for implementation of EMP is of project proponent. He has appointed an HSE/Project Manager of relevant qualification. HSE/Project Manager acts as Environmental Manager and will manage all HSE condition at the PEQS.

Equipment Maintenance Detail

The subject project is the already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore. The company has maintained the records for Health Safety & Environment and hired HSE manager to check and deal with the HSE issues. The company shall maintain PPEs, medical facilities, firefighting Equipment's as fire buckets, fire hydrants and fire extinguishers and records for their periodic filings or replacement.

Environmental Budget

The cost which is required to effectively implement the mitigation measures is important for the sustainability of the Project in operation stage of the Project.

Company has allocated the Environmental Budget annually for the Training, maintenance and management of Environment that will include filling and maintenance of equipment's, restoration, plantation, and availability of PPEs, strategic planning to cope with any emergency situation and formulate the disaster management plan to cope with natural disaster. Any equipment or devices failure or replacement will not be included in this budget.

HSE training	On regular basis
Maintenance and management of environment	On regular basis
Maintenance of equipment	On regular basis
Availability of PPEs	During production hours
Strategic planning to cope with any emergency	As per policy
Formulate the disaster management plan to cope with natural disaster	As per policy

Environmental Management Plan of M/S Shafiq Pak Packaging Pvt Ltd

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures** **Operation**	**Responsibility**	**Monitoring**
AMBIENT AIR QUALITY					
1.	Air Quality	Production machinery Flue gas emissions from machinery and generators	Air quality monitoring is recommended on regular base Open disposal and burning of solid waste in the premises of building should be strictly banned. Pollution abatement technologies regarding air pollution will be adopted. Emissions inspection and monitoring should be done on regular basis	HSE Department	Environmental Consultant/EPA PUNJAB
NOISE & VIBRATION					
2.	Noise	The major sources of the noise are production related machinery. Noise from generators (if any)	Personal Protective Equipment PPEs including Ear muffs, Ear plugs and other noise abating equipment will be provided to the workers and other staff. Sound proof room should be built for generator (if any) to control the noise.	HSE department	Environmental Consultant/ EPA PUNJAB

HEALTH AND SAFETY					
3.	Health and safety	Health & safety issues of workers and nearby community	Trainings of the workers is recommended for health & safety, first aid and firefighting. Proponent must provide First aid facilities to workers in case of any injury or accident. Safe drinking water must be provided to workers, staff, and poor people of the area. Water consumption records should be maintained. Provision of Proper PPEs must be ensured at workplace. Assembly point and exit points must be available at workplace. Electric wires, D. Bs must be kept covered & closed to avoid any electric hazards. Smoking or any drugs should be prohibited during working hours or performing work. Safety signs & boards were placed at the time of construction activity. Security guards are already appointed at the said project site.	HSE Department	Environmental Consultant/ EPA

WASTE WATER					
4.	Waste water	Domestic waste water. Minor wastewater from production activities. Spread of diseases, underground water contamination.	Domestic waste water is being drained out in nearby drain after treated in wastewater treatment plant. Septic tanks are installed within the premises of the unit being used to treat sewage/waste water to achieve PEQS.	HSE department	Environmental Consultant
SOLID WASTE GENERATION					
5.	Solid Waste Generation	Aesthetic degradation, foul smell etc. Solid waste generation from the machinery installation and production activities, domestic and process sources	A solid waste management plan should be formulated to deal with the proper disposal of solid waste, supervised by HSE Manager. Waste segregation is recommended at the source. Industrial ecology practices will be adopted wherever possible. 7 R's of sustainability is recommended Hazardous waste should be disposed in separate bins and handed over to EPA approved contractors. Waste produced from building alteration/renovation should be sold to local market.	HSE Department	Environmental Consultant/ EPA PUNJAB
ODOR					

6.	Odor	Odor may produce from raw material and during product manufacturing	Raw material should be covered to reduce odor Face masks must be provided to the workers and employees on production floor	HSE Department	Environmental Consultant/ EPA PUNJAB
ENERGY REQUIREMENT					
7.	Energy requirement	Resource depletion	Do not waste the energy/electricity when there is no need of it. Use energy efficient and ecofriendly equipment Use energy saving appliances Conduct and maintain records for energy audits Do not leave the appliances in running when there is no need It is recommended to save and conserve the energy and adopt energy efficient technologies in the factory.	HSE Department	Environmental Consultant/ EPA PUNJAB
SOCIO ECONOMIC IMPACTS					
8.	Language	Change in cultural language	Maximum employment of Local people is recommended to preserve the local cultural language. It will help in communication with the local people to resolve any emerging issue near the project area	Proponent	NA
9.	Education	Change in social behavior and economic gains	School and colleges exist in the area. The project proponent will initiate an educational awareness	Proponent	NGO survey

			program with the coordination of the local people.		
10.	Health	Social performance of the individuals in the area	The project proponent will assist the local impacted community for the improvement of health services Health clinic must be established for the project workers.	Proponent	Proponent
11.	Culture and norms of the area	Change in culture by the influx of nomadic people	Maximum local employment should be ensured to preserve the culture of the area	Proponent	NGO survey/Environmental Consultant
12.	Sewage and waste disposal	Diseases caused by improper sanitation	Subject project will uplift the economic status of the nearest human settlements. Awareness program will be initiated regarding the disposal of waste.	Proponent/ local NGO	NGO survey/ Environmental Consultant

CHAPTER # 7

STAKEHOLDERS/ PUBLIC CONSULTATION

This section deals with the social acceptability of the project and the area. Consultation with the stakeholders is a tool for managing two-way communication between the project proponent and the affected public. Its goal is to improve decision making and build understanding by actively involving individuals, groups and organizations, which have stake in the project. This involvement increases project's long-term viability and enhances its benefits to locally affected people and other stakeholders. It gives the feeling of an ownership to the local population and public indolent is also helpful in smooth implementation and success of the project.

In order to evaluate the socioeconomic and environmental impacts, filed surveys are extremely essential. In addition to the surveys at the preliminary stage, consultation with the community and their active participation plays a vital role in successful implementation of the project. To identity the different types of stakeholders and ascertain their perceptions about the proposed project (Environmental Impact Assessment (EIA)) social survey was conducted. Informal group discussions were also held as an additional tool for obtaining feedback from the stakeholders that are being discussed in the following pages.

Objectives of Consultation

Public consultation plays a vital role in studying the effects of the project on the stakeholders and in the successful implementation and execution of the subject project. Public involvement is a compulsory feature of environmental assessment, which leads to better and more acceptable decision making. The objective of the consultation with stakeholders is to help verify the environmental and social issues that have been presumed to arise and to identify those which are not known or are unique to the operation of the proposed unit.

The important general objectives of the consultation process are:

- Information dissemination, education and liaison
- Informing the stakeholders about the subject project

- Providing an opportunity to local public to raise their views and helping in more sensitive considerations for the formation of mitigation measures for the subject project
- Providing those involved in the planning stage with an opportunity to ensure that the benefits of the proposal are maximized and that no major impacts have been overlooked
- It provides an opportunity to local public to influence the design of project in a positive manner
- Increasing public confidence in front of proponent, reviewers and decision makers
- Identification of problems and needs of the stakeholders and public
- Providing better transparency and accountability in decision making stage;
- Reducing conflicts through early identification of contentious issues and working on them to find acceptable solutions
- Reaction, comment and feedback of stakeholders on project
- Developing proposal which are truly sustainable

Methodology of Consultation:

The EIA team carried out public consultations at various locations around the Project Site. The stakeholder's consultation during this phase of the work targeted the project area, administrative and private offices, Govt. offices, shops, etc. near the Project area:

1) Selection of the stakeholders for consultation, reconnaissance of the project site and initial discussions with the neighboring factory workers, residents, shopkeepers, drivers etc.
2) Environmental consultants and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc.

Stakeholder Identification:

Stakeholders considered at all levels according to the importance of the project. They are at provincial, district and village level. The process of consultation is an ongoing process which continues during the project life cycle and even after the submission of this environmental assessment report and so on. Therefore, three-tier approach was adopted. Stakeholders were identified, categorized and consulted at provincial (EPD Punjab, Irrigation department, Agriculture department, Wildlife department etc.), district level (EPD, Irrigation department, Agriculture department, Wildlife department etc.) & village level (Direct & indirect affectees and Locals)

Consultations with government, provincial and district level departments were carried out through meetings and visits while consultations with locals, villagers, neighbors and directly affected peoples were under taken during baseline study of the area.

A series of public consultations were required to get the feedback/ concerns of the different departments, Industries, local public, PAPs, and general public residing near the subject area.

Proponent

Possible impacts and mitigation measures related to the proposed project were discussed with the project proponent and management. They assured to take all suggested mitigation measures to control any discrepancy arose by the project and to make the project environmentally friendly.

Responsible Authority

Management of M/s Shafiq Pak Packaging Pvt Limited is the responsible authority to take all measures throughout the life cycle of the project.

Other Departments and Agencies

For the impact analysis detailed meetings were held with the management of W & D Punjab Small Industries Corporations, local community, education institutes, health institutes, hospital and NGOs. Issues were discussed that may affect the environment and also the implementation of proposed project. All possible mitigation measures were considered and incorporated in the Environmental Management Plan.

Scoping sessions, focused group discussion and way side consultations were held with the relevant stakeholders in the area. The purpose of such consultations is to obtain the feedback from the relevant persons.

Environmental Practitioners and Experts

Team of M/s Environmental Services of Pakistan (ESPAK) visited the project site, had discussions with stakeholders and consulted with the local people of nearby and other villages to evaluate the project socio-economic impacts. People of the area belong to different professions like mostly belong to employment, own businesses, doctors, some in abroad, in Army, teaching, in agriculture, etc. Women were also consulted for their point of view regarding the betterment of the area by this project, some of them communicated but according to social value of the area they mostly hesitate to communicate comfortably and get pictured. People provide the massive information about the project and have positive remarks regarding the project development.

Affected & Wider Community

There is no affected community present in the radius of our study area. ESPAK team has consulted with the inhabitants of the Manak, Islampura, Nahla, Raiwind. They provided positive remarks regarding the proposed project. Stakeholders' participation Performa's and socioeconomic questionnaire were get filled by the inhabitants to evaluate the project socio-economic impacts.

Questionnaire filled during the public consultation/interview are attached as A**nnexure-J.**

Sample Size

40 sample sizes were selected by the Team of consultants for conducting the socioeconomic survey. Women were also consulted for the said survey; some of their names are mentioned in the above list of respondents while most of them were not willing to give personal information.

Statistical Analysis

SPSS 19.0 has been used for the statistical analysis of the data collected during the visit of study site villages through questionnaires.

Result & Discussion

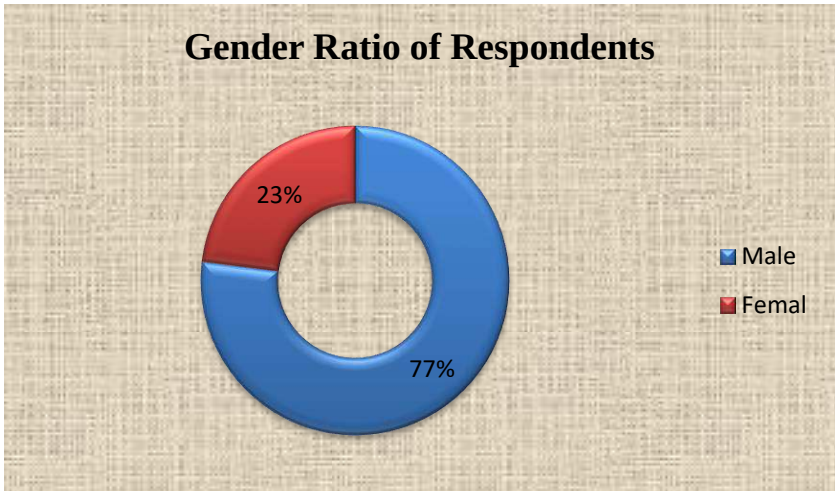


Figure 7: Gender Ratio of Respondents

Discussion

In the sampled population, 77% respondents were male while 23% respondents were female. The number of female respondents is less as compared to male respondents because according to the social binding female hesitates to respond or communicate comfortably.

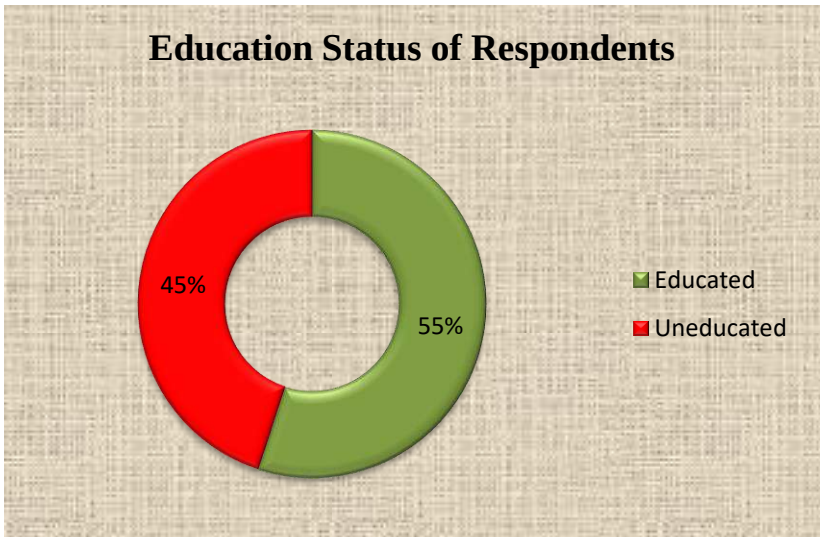


Figure 8: Education Status of Respondents

Discussion

In the sampled population, 55% respondents were educated while 45% were uneducated. So, according to the survey overall education status of the area is good.

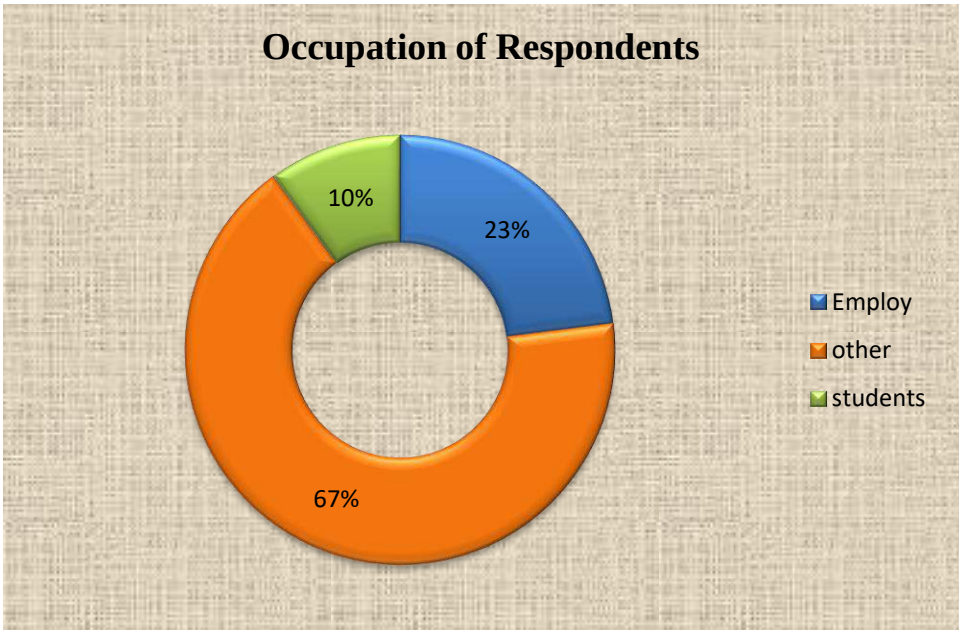


Figure 9: Occupation of Respondents

Discussion

According to above graphical representation, source of income of majority of the respondents in the area was mainly employee in the private and government sectors. In the sampled population, 10% were students while all other respondents' source of income was business man, farmers, doctors and teachers.

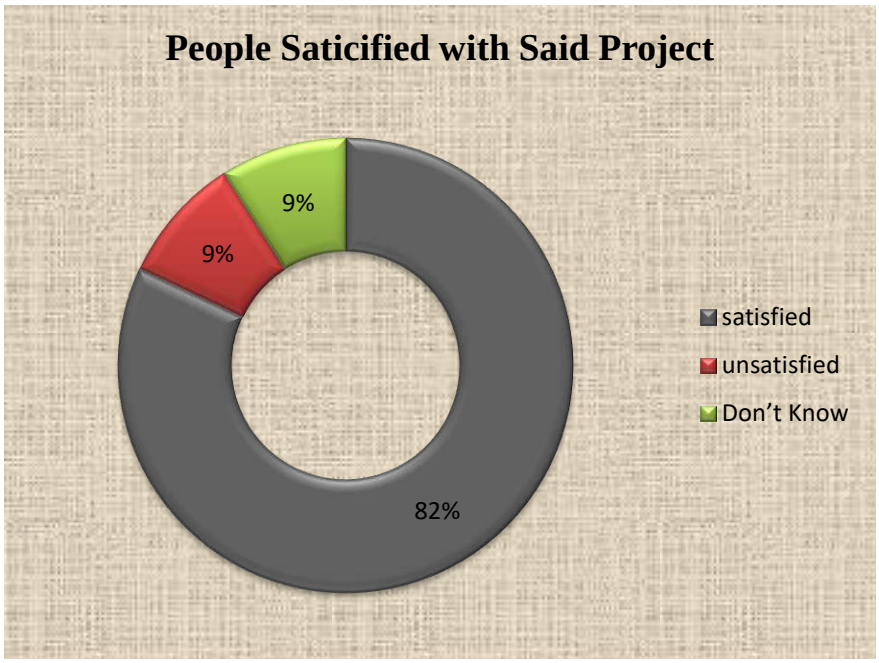


Figure 10: Ratio of people satisfied with Said Project

Discussion:

As per survey, 82% people were satisfied with the said project and they gave positive remarks about the Packaging Unit. They were hopeful to get job over there. While 9% respondents had no opinion regarding the project and 9% respondents were not satisfied with the said industrial unit due to their concerns regarding the pollution and no preference to local people for jobs.

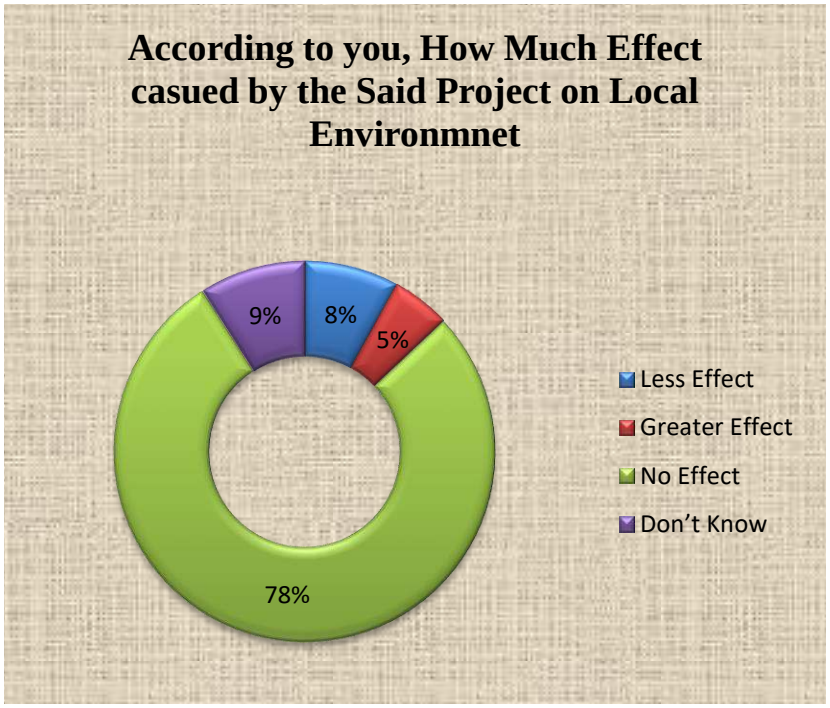


Figure 11: Ratio of Respondents having different views regarding Impact on Environment

Discussion:

As per survey, 78 % respondents remarked that the subject project will not cause much effect on the environment while 9% respondents had no point of view regarding the project activity, 8% respondents remarked that subject activity will have less effect on the environment of area and only 5% remarked that operational activity will have greater effect on the environment of the area.

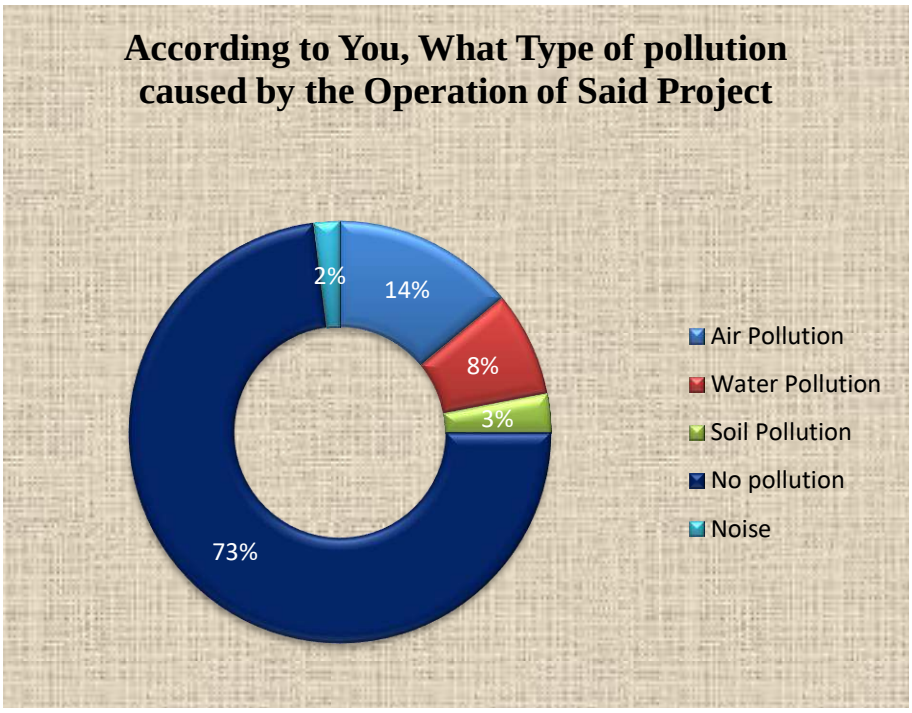


Figure 12: Types of Pollution cause by the Said Project

Discussion

When the people were asked that according to you, what type of pollution was caused by the subject project, 14% people said that project is the cause of higher air pollution, 3% said that project is the cause of soil pollution due to its activities. 8% said that it is the cause of water pollution, 2% said that it is the cause of noise pollution while 73% of the sampled population said that project is not causing any pollution according to their point of view.

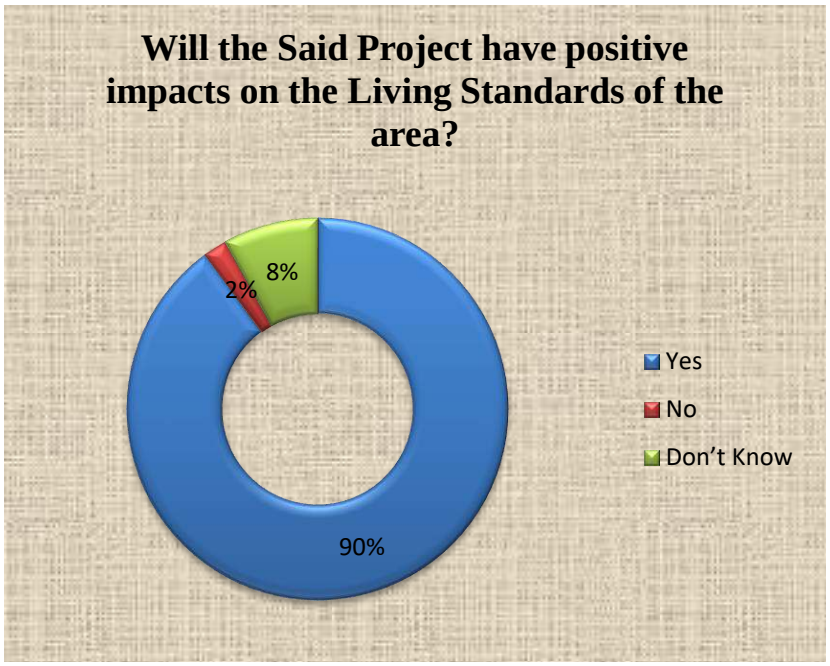


Figure 13: Effect of Said Project on the Living Standard of people

Discussion:

When people were asked that "Will the said industrial unit have positive impacts on the living standards of the area?", 90% respondents said that subject project will enhance the living standard and income level of the area, 2% said that there will be no effect on the living standards and income level while only 8% respondents had no remarks regarding the subject project.

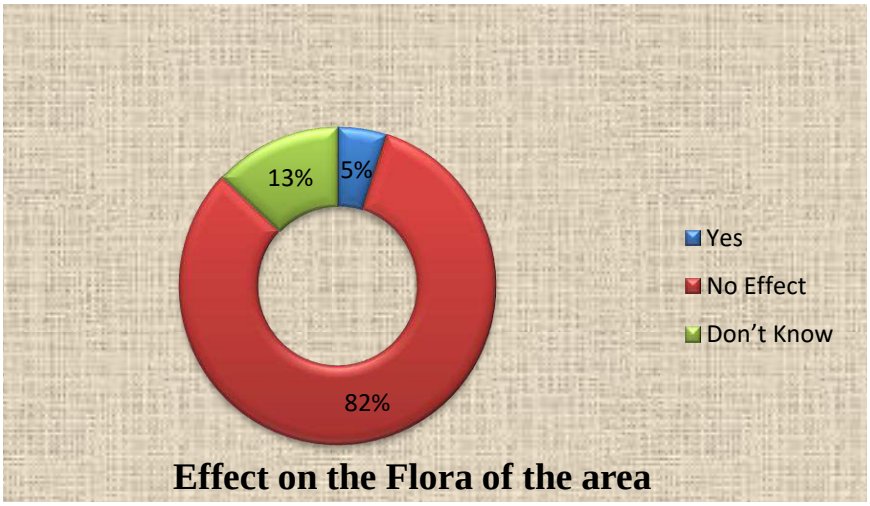


Figure 14: Effect of Said Project on Flora

Discussion

When the people were asked "is the project affect the Flora of the area?" 82% of the respondents remarked that the project have no effect on the plants by the operation of the said project, 5% said that said project is not affecting the plant species of the area and 13% gave no comments regarding the question.

Findings of the overall discussion:

- It will enhance the socio-economic conditions/values of the area.
- Project will increase revenue generation for the Government.
- It will create employment opportunities.
- Local people will be given preference for employment in the proposed project.

There is no significant additional load on the existing infrastructure i.e. utilities of water, telephone, electricity etc. due to the development of the said project

CHAPTER # 8

CONCLUSION AND RECOMMENDATIONS

Based on the study conducted for Environment Impact Assessment (EIA) for the subject project, the following conclusions are made:

Conclusions

- The EIA study reveals that the project is economically viable, socially acceptable and environment friendly.
- It will generate additional jobs during operation phases.
- The proponent has committed to implement the project in the environment friendly manner.
- M/s Shafiq Pak Packaging Pvt Limited intends to register the project with local Government.
- M/s Shafiq Pak Packaging Pvt Limited has prepared and implemented very comprehensive Emergency Preparedness and Response Standard Operating Procedures.
- M/s Shafiq Pak Packaging Pvt Limited has prepared and implemented very comprehensive Security and Fire Fighting Standards Operating Procedures.

Recommendations

- In view of the comprehensive screening process and findings of the present study there is no need of conducting further investigations.
- Tree plantation inside the unit and near the unit is recommended.
- The untreated wastewater will not be reused for irrigating the vegetation and lawns.
- High standards of bio-security and safety will be enforced during operation stage. Safety of the workers will be top priority for the management.

- The management of M/s Shafiq Pak Packaging Pvt Limited will continue to assist the local communities as a corporate/social responsibility.

- The present EIA report is enough to meet the administrative and legal framework. Therefore, the environmental approval may be accorded for the present project.

ANNEXURE-A

TERM OF REFERENCES (TORS)

TERMS OF REFERENCES (TORS)

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

OF M/S SHAFIQ PAK PACKAGING PVT LIMITED LOCATED AT PLOT NO 9, 10 & 11 SUNDAR INDUSTRIAL ESTATE, RAIWIND ROAD, LAHORE

TERM OF REFERNCES

These terms of references are being submitted for the subject EIA study under 5 (f) of policy and procedure for the filing, review and approval of environmental assessment. These TORs of EIA have been prepared by the environmental consultants, in consultation with the project proponent.

Introduction of project:

Subject project for which this Environmental Impact Assessment study has been conducted is already established Packaging unit under the name of M/s Shafiq Pak Packaging Pvt Limited located at Plot no 9, 10 & 11 Sundar Industrial Estate, Raiwind road, Lahore.

Total area of the project is 193745 SFT. The Cost of operation is 300 million rupees. Products of the said project are Metallized Film, Pouches, Holographic Film, Retail Shopping Bags and rolls. Said project is the manufacturer of ecolean Packaging. The production capacity of the Packaging unit is 350 T per month.

Cost of Project:

The Cost of operation is 300 million rupees.

Area of the Project:

Total area of the project is 193745 SFT.

Name & Address of proponent

Name: Mr. Shafiq Ur Rehman

Environmental Consultant & Client

Proponent has appointed the Environmental Services Pakistan Pvt Ltd (ESPAK), as the Consultant for the subject project to conduct the EIA. M/S Environmental Services Pakistan Pvt Ltd (ESPAK), will be called as "Consultant" and M/s Shafiq Pak Packaging Pvt Limited as the "Client".

Objective of the EIA study

The Objective of study includes Compliance of section 12 of PEPA 1997 (Amended 2012) & PEQS.

Purpose of the EIA

The key objectives of the EIA are to:

- Document the ecological and socioeconomic baseline conditions of the study area and the affected communities
- Inform and obtain input from stakeholders, (e.g., governmental authorities, the public, and indigenous communities) and capture their relevant issues and concerns

- Assess in detail the environmental, social, and health impacts that would result from the Project
- Identify environmental and social mitigation measures to address the impacts identified
- Develop the EMPs as discussed above, based on the mitigation measures developed in the EIA.
- Meet the requirements or recommendations of the applicable national Environmental Laws and Guidelines

Scope of Services

1. Review of existing regulatory framework
    - 1.1 Laws and Regulations
    - 1.2 National and International Guidelines and Policy
    - 1.3 Guidelines of Labor & Human Resource Department
    - 1.4 Punjab Local Government Ordinance
2. Methodology for carrying out this study
    - 2.1 Project Description
    - 2.2 Site Selection
    - 2.3 Project Alternatives
3. Process Description
    - 3.1. Detailed review of the processes
    - 3.2 Design Parameters
    - 3.3 Details related to Plant and Equipment's
4. Environmental profile of the environmental study area
    - 4.1 Climatology
    - 4.2 Geographical features
    - 4.3 Geological and Hydrological features
    - 3.5.4 Historical review
    - 3.5.5 Land Use
    - 3.5.6 Ecology, i.e. Flora and Fauna etc.
    - 3.6 Analysis of EPA required environmental parameters
        - 3.6.1 Sampling for Air, Water, and Noise Level

3.7 Investigate Socio-Economic and Socio-Environmental aspects and cultural values within and around the operating facility

3.7.2 Cultural and Social Values

3.7.4 Interviews from different groups

3.8 Development activities and Waste Management

3.9 Identify and evaluate major environmental impacts

3.10 Identify mitigation measures and develop Environmental Management and Monitoring plan

3.11 Conclusions based on the study conducted for this EIA

3.12 1-2 Site Visits for data acquisition

3.13 Environmental Monitoring plan

3.14 Preparation of Lab Analysis Report

3.15 Preparation of Environmental Management Plan EMP

3.16 Briefing & Presentation to the Expert Committee in the EPA Punjab.

3.17 Reply to technical Environmental Objections/Review

3.18 Presentation in the office of DG EPA, Punjab (if required)

CLIENT RESPONSIBILITY

- Proponent will be responsible to nominate a senior officer as Coordinator who will be responsible for all coordination activities as required by the Consultants and to whom the Consultants will refer for information and assistance. All correspondence between the Consultants and the CLIENT will be routed through the Coordinator
- Consultants will require free access to all relevant information available with the Client
- The report developed for the CLIENT shall be the property of the CLIENT and the Consultants shall adhere to confidentiality morally as well as legally.
- Client will provide relevant documents as:
    - Signed application on company letter head
    - Pay Order in favor of DG EPA as review fee 30,000/-
    - Undertaking on Stamp Paper as per EPA Format
    - Affidavit on Stamp Paper as per EPA Format
    - Copy of CNIC of proponent
    - Dually filled and Sign Schedule IV
    - Details of firefighting Equipment's
    - Layout Maps of the project
    - Other NOCS/Certificates from other concerned departments (if any)
    - Any other relevant documents/details required by the consultant.

Signatures:

Environmental Consultant

Environmental Services Pakistan

(ESPAK) Lahore

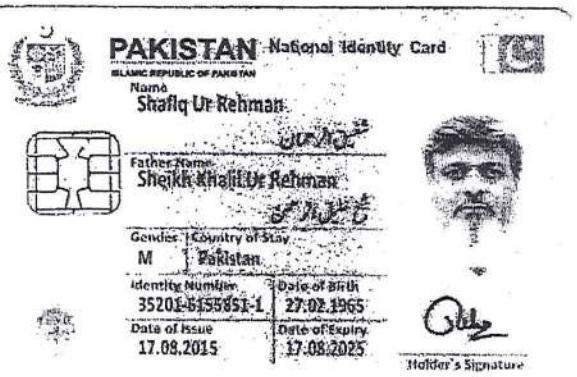
Signatures:

Client: Shafiq Ur Rehman

M/s Shafiq Pak Packaging Pvt Limited

ANNEXURE-B

CNIC & OTHER DOCUMENTS



PAKISTAN National Identity Card

ISLAMIC REPUBLIC OF PAKISTAN

Name
Shafiq Ur Rehman

شفیق الرحمان

Father Name
Sheikh Khalil Ur Rehman

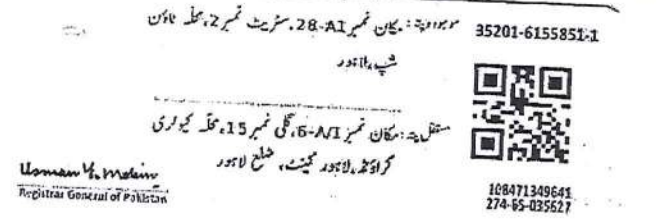
شیخ خلیل الرحمن

Gender	Country of Stay
M	Pakistan

Identity Number	Date of Birth
35201-6155851-1	27.02.1965

Date of Issue	Date of Expiry
17.08.2015	17.08.2025

Holder's Signature



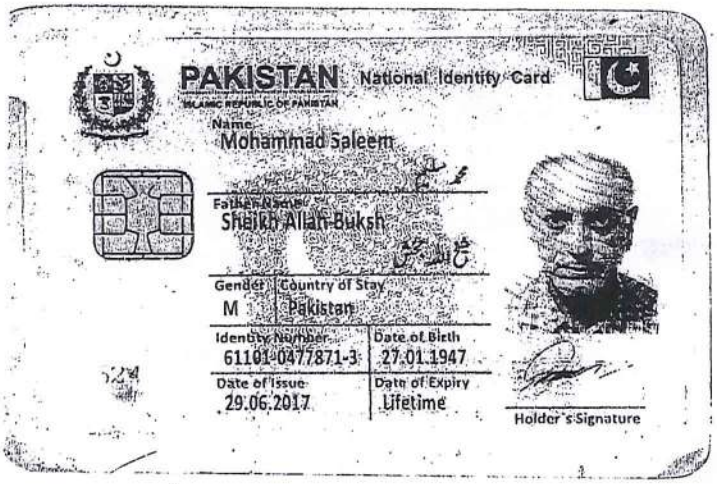
مستقل پتہ: مکان نمبر B-811، گلی نمبر 15، محلہ کیولری گراؤنڈ، لاہور کینٹ، ضلع لاہور

35201-6155851-1

Usman Y. Mahiar
Registrar General of Pakistan

108471349641
274-65-035627

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں



PAKISTAN National Identity Card

ISLAMIC REPUBLIC OF PAKISTAN

Name
Mohammad Saleem

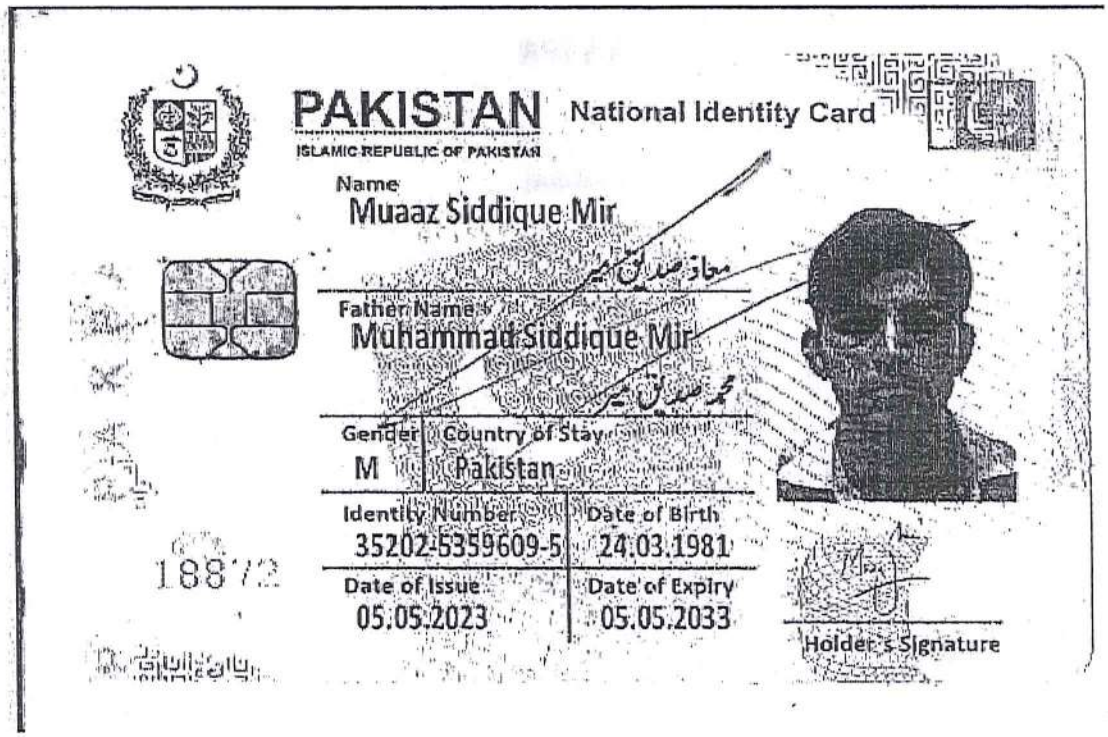
Father Name
Sheikh Allah Buksh

Gender	Country of Stay
M	Pakistan

Identity Number	Date of Birth
61101-0477871-3	27.01.1947

Date of Issue	Date of Expiry
29.06.2017	Lifetime

Holder's Signature



PAKISTAN National Identity Card

ISLAMIC REPUBLIC OF PAKISTAN

Name
Muaaz Siddique Mir

معاذ صدیق میر

Father Name
Muhammad Siddique Mir

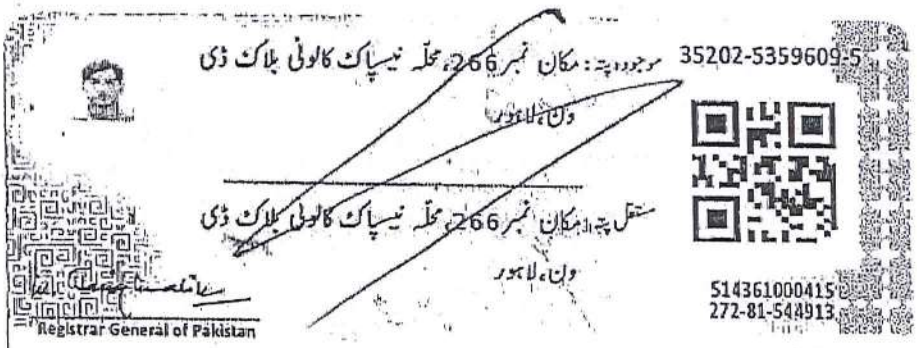
محمد صدیق میر

Gender	Country of Stay
M	Pakistan

Identity Number	Date of Birth
35202-5359609-5	24.03.1981

Date of Issue	Date of Expiry
05.05.2023	05.05.2033

Holder's Signature



موجودہ پتہ: مکان نمبر 266، محلہ نیسپاک کالونی بلاک ڈی
ون، لاہور

35202-5359609-5

مستقل پتہ: مکان نمبر 266، محلہ نیسپاک کالونی بلاک ڈی
ون، لاہور

Registrar General of Pakistan

514361000415
272-81-544913

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں

PUNJAB INDUSTRIAL ESTATES
DEVELOPMENT AND MANAGEMENT COMPANY

PIE/SIE/1036
February 14 , 2013

Mr. Shafiq –Ur-Rehman
R/o 159-A/M, Quaid-e-Azam Industrial Estate
Kot Lakhpat, Lahore.

SUBJECT: POSSESSION OF PLOT NUMBER 09

Dear Sir,

This is with reference to your letter regarding subject matter. Please contact the Site Engineer of Sundar Industrial Estate in connection with the possession of **Plot No. 09** SIE transferred to your name/firm/company through **Exit Policy**, 2012.

Thanking you,

Yours Truly,
For Punjab Industrial Estates

Nasir Qadir Bhadal
Company Secretary

A copy is forwarded to Mr. Kashif Tanveer, Site Engineer (0300-4527932), Sundar Industrial Estate with the request to please hand over the possession of Plot No. **09** to its Allottee **Mr. Shafiq –Ur-Rehman.** The attached possession slip may please be returned after doing the needful.

Note.

This Possession Letter is issued with the approval of Competent Authority of PIEDMC (Chief Executive Officer) vide approval dated 06-02-13.

Please do not proceed with excavation of boundary wall with out supervision of the site representative. Any damage done to the utilities without supervision will be borne by you.

Head Office: Commercial Area (North) Sundar Industrial Estate, Raiwind Road, Lahore.
Tel: 042-35297203-6, Fax: 042-35297207
Website: www.pie.com.pk

PUNJAB INDUSTRIAL ESTATES
DEVELOPMENT AND MANAGEMENT COMPANY

PIE/SIE/1005
September 03, 2012

Mr. Shafiq Ur Rehman.
House No. 6A, Street No. 15,
Cavalary Ground,
Lahore.

SUBJECT: **POSSESSION OF PLOT NUMBER 10-11**

Dear Sir,

This is with reference to your letter regarding subject matter. Please contact the Site Engineer of Sundar Industrial Estate in connection with the possession of **Plot No. 10-11** SIE transferred to your name/firm/company through Exit Policy, 2012.

Thanking you,

Yours Truly,
For Punjab Industrial Estates

Nasir Qadir Bhadal
Company Secretary

A copy is forwarded to Mr. Kashif Tanveer, Site Engineer.(0300-4527932), Sundar Industrial Estate with the request to please hand over the possession of **Plot No. 10-11** to its Allottee **Mr. Shafiq Ur Rehman.** The attached possession slip may please be returned after doing the needful.

Note.
Please do not proceed with excavation of boundary wall with out supervision of the site representative. Any damage done to the utilities without supervision will be born by you.

Taxpayer Profile Inquiry

Printed On: 6/20/2024 2:41:57 PM

Registration No	5571781
Reference No	5571781-7
Registered for Sales Tax	Yes. w.e.f. 19-SEP-19
Name	SHAFIQ PAK PACKAGING (PRIVATE) LIMITED
Category	Company formed and registered under the Companies Ordinance, 1984 or any other law repealed thereunder
PP/REG/INC No.	0135884
Email	pak****age***otmail.com
Cell	00923**844**48
Address	PLOT NO 9, 10 & 11, SUNDAR INDUSTRIAL ESTATE, RAIWIND ROAD, Lahore Iqbal Town
Registered On	16-JUL-2019
Tax Office	CTO LAHORE
Registration Status	Income Tax: Active , Sales Tax: OPERATIVE

Sr.	Business/ Branch Name	Business/ Branch Address	Principal Activity
1	SHAFIQ PAK PACKAGING (PRIVATE) LIMITED	Plot # 9, 10 & 11, Sundar Industrial Estate, Raiwind Road, Lahore	181100-Manufacturing/Printing and service activities related to printing/Printing

A058557

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN

COMPANY REGISTRATION OFFICE,
LAHORE

CERTIFICATE OF INCORPORATION

[Under section 16 of the Companies Act, 2017 (XIX of 2017)]

Corporate Unique Identification No. **0135884**

I hereby certify that **SHAFIQ PAK PACKAGING (PRIVATE) LIMITED** is this day incorporated under the Companies Act, 2017 (XIX of 2017) and that the company is **limited by shares.**

Given under my hand at **Lahore** this **Third** day of **July,** Two **Thousand** and **Nineteen**

Incorporation fee Rs. **1610500.0/=** only

(ASIF MUZAFFAR SHEIKH)
Joint Registrar
Lahore

NO.ARL/ 137

Date. 3/7/2019

ANNEXURE-C

LAYOUT MAP OF PROPOSED SITE

ANNEXURE-D

LAB REPORTS (AIR, NOISE, WATER)

ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF THE PUNJAB
National Hockey Stadium, Gate No. 08
Gaddafi Stadium Complex, Lahore

Validation for Stack & Ambient Monitoring / Sampling

Validation # 1271-A
Issue Date: 15-07-2024

Emission Monitoring under CTM-34 or OTM-39				
Facility Name & Address Phone	M/S Shafiq Pak Packaging Private Limited. Plot No 9,10,11 Sundar Industrial Estate, Lahore.		No of Stacks /Sampling Point 01 (Ambient Air)	
Industry Category	Baseline Study			
Analyzer Model & Make	Thermo scientific ✓			
Average stack emission Values of CO, NOx (in mg/nM3)				
Excess Air / Excess Oxygen (%age):-				
Analyzer exposed for Ramp-Up phase to the sample gas for 5 minutes		Yes	NO	NA
Analyzer flow rate and EC temperature monitored during calibration and testing		Yes	No	NA
Test Data Phase of sample gas recorded with 15 second interval		Yes	No	NA
All key requirements to ensure QA/QC complied for said EPA approved Method		Yes	No	NA
Particulate Matter (PM) Monitoring / Sampling under USEPA Method 5 / 17				
Model & Make of Iso-kinetic PM Assembly				
The PM sampling train is complete as per Method 5 & 17		Yes	No	NA
Leak Test performed prior to sampling		Yes	No	NA
Field data Sheet for PM Sampling filled during PM sampling		Yes	No	NA
Data for determining of "K" factor & DGM "Y" Factor filled during sampling		Yes	No	NA
All method key requirements during sampling were compiled to ensure QA/QC		Yes	No	NA
Filter of Particulate matter is suitable for metal Testing		Yes	No	NA
SOx sampling as per Method 8 (Thorin Indicator Method)				
The right absorbent solution are available for SOx Sampling		Yes	No	NA
The equipment is capable to maintain flow rate @ 2.0LPM or as per method 3 requirement		Yes	No	NA
Sampling for SOx is performed as per method		Yes	No	NA
Ambient Air Quality Monitoring by Automatic Monitors for CO, O3, SO2, NOx, PM2.5 & PM10				
In case of continuous monitoring at a site, One Point QC Check Single analyzer & zero/span check is performed every 14 days.		Yes	No✓	NA
The CE of NOx analyzer is ensured to be maintained within 96% - 104.1%		Yes	No✓	NA
Zero/span check is performed prior to starting ambient monitoring		Yes	No✓	NA
All key requirements for Critical & Operational Criteria for ambient air monitoring by automatic monitors were compiled during monitoring		Yes✓	No	NA
The measuring techniques of monitors comply PEQS		Yes✓	No	NA
Ambient Air Sampling of SPM, PM10, Pb by High Volume Sampler				
In case of Sampling for SPM through samplers, the flow rate of sampler comply PEQS (1.1m3/min).		Yes✓	No	NA
Calibration of Sampler performed prior to sampling		Yes	No✓	NA
Vehicular Emissions & Noise Measurement				
Sampling of Vehicle emissions and noise measurement have been performed as per method and SOPs		Yes✓	No	NA

Remarks (if Any):-

Signature

Research Officer
Environment Protection Agency
Punjab Lahore

Monitoring Date

04/05-07-2024

Signature
Assistant Analyst
Mehmood Aslam

ENVIRONMENTAL SERVICES PAKISTAN ESPAK

ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF THE PUNJAB
National Hockey Stadium, Gate No. 08
Gaddafi Stadium Complex, Lahore

Validation for Wastewater & Drinking Water

Validation # 1271-B

Issue Date: 15-07-2024

Project / Unit Name with Address and contact details	**M/S Shafiq Pak Packaging Private Limited.**	**Sampling Point** Tap Water
	Plot No 9,10,11 Sundar Industrial Estate, Lahore.	
Validation No		
Name of Private Lab	**ESPAK.**	

~~Waste Water (WW) Treatment facility~~ Primary Secondary Tertiary ~~NA~~

~~Drinking Water (W) Treatment Facility~~ Chemical RO ~~NA~~

~~Total WW collected Sample .....~~

~~Total Collected Drinking water samples.....~~

Sample Tag for testing parameter is assigned on sample container	Yes	NO	NA
Sample is preserved properly for each testing parameter	Yes	NO	NA
Sample size is adequate for testing the target parameters	Yes	NO	NA
Wastewater Flow Measurement performed to ensure sample representativeness	Yes	NO	NA

No. of Waste Water outlets	Waste Water Flow m^3/hr from each outlet (Optional)	Water intake m^3/hr (Optional)	Water Mass balance complied during sampling (Optional)	Sample Type
			Yes No	GROUND WATER: Grab✓ Composite

Parameter	Matrix W	Matrix WW	Container	Sample Size	Preservation	Yes	NO	NA
Coliform, Total or Fecal	✓	——	Sterile Container	100 mL	Refrigerate 6 C	✓		
Coliform, Total or Fecal, Chlorinated Water	✓	——	Sterile Container	100 mL	0.008% Thiosulphate & cooled 6 C	✓		
Color, Turbidity	✓	——	P,G	500 mL	Cool 6 C	✓		
Hardness, Total	✓	——	P,G	500ml	HNO3 to pH<2	✓		
Nitrogen, Nitrate + Nitrite, Phenolic Compounds, ~~Oil & Grease, COD, NH3~~	✓	——	P,G	2000 mL	H2SO4 to pH < 2, Cool 6C	✓		
Metals, General	✓	——	P,G Rinsed 1.1 HNO3	500 mL	HNO3 to pH < 2	✓		
Cyanide, Total	✓	——	P,G	500 mL	NaOH to pH > 12, Cool 6C	✓		
Pesticides, General	——	——	Glass	1 Liter	Cool 6 C	——		

Field Parameters*

Field parameter		pH meter, Model Make	Measurement Method	Calibrated in Field	Measured value
pH				Yes NO	
Temp					
Cl					

Signature

Research Officer
Environment Protection Agency
Punjab Lahore

Monitoring Date
04/05-07-2024

Signature
Assistant Analyst
Mehmood Aslam

ESPAK

ENVIRONMENTAL SERVICES PAKISTAN

ESPAK

CHEMICAL ANALYSIS TEST REPORT (AMBIENT AIR)

Reference Number: ESPAK/00657P/24/AA/05333/00532 **Date:** 10/07/2024

Name of Industry/Client: Shafiq Pak Packaging Pvt Limited

Address: Plot No.9, 10 & 11 Sundar Industrial Estate, Raiwind Road, Lahore

Validation Officer.: Muhammad Nadeem, Research Officer

Nature of Sample: Ambient Air **Monitoring Location:** Mid Point of Site (GPS: 31°17'59.06"N, 74°10'4.92"E)

Date of Sample Collection: 04/07/2024

Sample Collected/Sent By: Mehmood Aslam, Analyst (Field), ESPAK **Grab / Composite:** Continuous - 24 Hours

Date of Completion of Analysis: 05/07/2024

S. No	Parameters	Limit Values (PEQS-24 Hours)	Concentration	Method / Equipment Used	Remarks
1	Carbon Monoxide (CO)	5 mg/m³ (8 Hours)	2.8 mg/m³	Non Dispersive Infrared Absorption (NDIR)	Within Prescribed Limits
2	Sulfur Dioxide (SO_2)	120 µg/m³	19.2 µg/m³	UV Fluorescence (UVF)	Within Prescribed Limits
3	Ozone (O_3)	130 µg/m³ (1 Hour)	23.5 µg/m³	Non Dispersive UV Absorption	Within Prescribed Limits
4	Oxides of Nitrogen as NO	40 µg/m³	20.2 µg/m³	Chemiluminescence Detection	Within Prescribed Limits
5	Oxides of Nitrogen as NO_2	80 µg/m³	26.2 µg/m³	Chemiluminescence Detection	Within Prescribed Limits
6	Particulate Matter $PM_{2.5}$	35 µg/m³	31.1 µg/m³	Particulate Sensor	Within Prescribed Limits
7	Particulate Matter PM_{10}	150 µg/m³	144 µg/m³	Particulate Sensor	Within Prescribed Limits
8	Suspended Particulate Matter (SPM)	500 µg/m³	490 µg/m³	Particulate Sensor	Within Prescribed Limits

PEQS: Punjab Environmental Quality Standards for Ambient Air, 2016

- Uncertainty of Measurement (UoM) data will be provided on request, where available. The statement of conformity, if provided in the report, is based on the decision rule of simple acceptance or rejection with equal shared risk due to measurement uncertainty.

Note:

- **The report should be reproduced as a whole and not in parts.**
- **The responsibility of the ethical use of this report lies with the client.**
- **The values represent sample conditions when monitoring/testing was carried out.**
- **The report data is not intended to be used legally by the client.**

1. **Sample Analyzed By:** Mehmood Aslam, Analyst (Field)
2. **Name of Chief Analyst with Seal:** Muhammad Arfan
3. **Signature of Incharge of the Environmental Laboratory:**

Name: Imran Malik
General Manager
Date: 10/07/2024

Environmental Services Pakistan * Tel: +92 (42) 3515 4012-17 * ESPAK

---------- End of Report ----------

Lahore Office
Office No. 731,
Block - 2, Sector D1,
Shah Jilani Road, Township
Lahore, Pakistan.
Tel: +92 (42) 3515 4015-16

Islamabad Office
Office No. 314, 3rd Floor, Gulberg Empire,
Gulberg Greens,
Islamabad, Pakistan.
Tel: +92 (51) 5915060

Peshawar Office
Unit No. 244-TF,
Dean's Trade Center
Sadar Cantt,
Peshawar, Pakistan.
Tel: +92 312 0849999

NOISE MONITORING REPORT

Reference Number: ESPAK/00657P/24/N/05334/00421 **Date:** 10/07/2024

Name of Industry/Client: Shafiq Pak Packaging Pvt Limited

Address: Plot No.9, 10 & 11 Sundar Industrial Estate, Raiwind Road, Lahore

Validation Officer.: Muhammad Nadeem, Research Officer

Nature of Sample: Noise

Date of Sample Collection: 04/07/2024 **Grab / Composite:** Continuous-24 Hours

Sample Collected/Sent By: Mehmood Aslam, Analyst (Field), ESPAK

Date of Completion of Analysis: 05/07/2024

Method/Equipment Used: Sound Level Meter

S. No	Measurement Point	Limit Values (PEQS)	Noise Level in dB(A) Leq	Remarks
1	Mid Point of Site (GPS: 31°17'59.06"N, 74°10'4.92"E) - Day time	75 dB(A)	72 dB(A)	Within Prescribed Limits
2	Mid Point of Site (GPS: 31°17'59.06"N, 74°10'4.92"E) - Night time	65 dB(A)	61 dB(A)	Within Prescribed Limits

PEQS: Punjab Environmental Quality Standards for Noise in Industrial Area, 2016 Day Time Hours (6:00 am to 10:00 pm) Night Time Hours (10:00 pm to 6:00 am).

- Uncertainty of Measurement (UoM) data will be provided on request, where available. The statement of conformity, if provided in the report, is based on the decision rule of simple acceptance or rejection with equal shared risk due to measurement uncertainty.

Note:

- **The report should be reproduced as a whole and not in parts.**
- **The responsibility of the ethical use of this report lies with the client.**
- **The values represent sample conditions when monitoring/testing was carried out.**
- **The report data is not intended to be used legally by the client.**

1. **Sample Analyzed By:** Mehmood Aslam
   Analyst (Field)
2. **Name of Chief Analyst with Seal:** Muhammad Arfan
3. **Signature of Incharge of the Environmental Laboratory:**

Name: Imran Malik
General Manager
Date: 10/07/2024

Environmental Services Pakistan ESPAK Tel: 924235154012-17

---------- End of Report ----------

Lahore Office
Office No. 731,
Block - 2, Sector D1,
Shah Jilani Road, Township
Lahore, Pakistan.
Tel: +92 (42) 3515 4015-16

Islamabad Office
Office No. 314, 3rd
Floor, Gulberg Empire,
Gulberg Greens,
Islamabad, Pakistan.
Tel: +92 (51) 5915060

Peshawar Office
Unit No. 43-TF,
Dean's Trade Center
Sadar Cantt,
Peshawar, Pakistan.
Tel: +92 312 0849999

www.espak.com.pk info@espak.com.pk

CHEMICAL ANALYSIS TEST REPORT (GROUND WATER)

Reference Number: ESPAK/00657P/24/GW/05335/00426 **Date:** 10/07/2024
Name of Industry / Client: Shafiq Pak Packaging Pvt Limited
Address: Plot No.9, 10 & 11 Sundar Industrial Estate, Raiwind Road, Lahore
Validation Officer.: Muhammad Nadeem, Research Officer
Nature of Sample: Ground Water
Date Sample Received: 05/07/2024 **Grab / Composite:** Grab
Date of Sample Collection: 04/07/2024
Sample Collected / Sent By: Mehmood Aslam, Analyst (Field), ESPAK
Date of Completion of Analysis: 10/07/2024

S. No	Parameters	Limit Values (DW-PEQS)	Concentration	Method / Equipment Used	Remarks
1	Total Coliforms	----	ND	SMWW 9221 B	----
2	E. Coli	Must not be detectable in any 100mL Sample	ND	SMWW 9221 F	Within Limits
3	Color	≤15 TCU	ND	SMWW 2120 C	Within Limits
4	Taste	Non Objectionable / Acceptable	Acceptable	Organoleptic	Within Limits
5	Odor	Non Objectionable / Acceptable	Acceptable	Organoleptic	Within Limits
6	Turbidity	<5 NTU	2.9 NTU	SMWW 2130B	Within Limits
7	Total Hardness as $CaCO_3$*	<500 mg/L	236 mg/L	SMWW 2340C	Within Limits
8	Total Dissolved Solids (TDS)*	<1000 mg/L	701 mg/L	SMWW 2540C	Within Limits
9	pH*	6.5-8.5	7.8	SMWW 4500H+B	Within Limits
10	Nitrate (NO_3^-)	≤50 mg/L	5.6 mg/L	SMWW 4500NO_3^-B	Within Limits
11	Nitrite (NO_2^-)	≤3 mg/L	ND	SMWW 4500NO_2^-B	Within Limits
12	Residual Chlorine	0.2-0.5 mg/L	ND	SMWW 4500-Cl B	----
13	Chloride (as Cl^-)*	<250 mg/L	62 mg/L	SMWW 4500Cl^-B	Within Limits
14	Fluoride (F^-)*	≤1.5 mg/L	1.0 mg/L	U.S. EPA 9214	Within Limits
15	Phenolic Compounds (as Phenols)	NGVS	ND	SMWW 5530 C	----
16	Cyanide (CN^-)	≤0.05 mg/L	ND	SMWW 4500 CN^- F	Within Limits
17	Cadmium (Cd)	0.01 mg/L	ND	U.S. EPA-200.7	Within Limits
18	Chromium (Cr)	≤0.05 mg/L	ND	U.S. EPA-200.7	Within Limits
19	Copper (Cu)	2.0 mg/L	ND	U.S. EPA-200.7	Within Limits
20	Lead (Pb)	≤0.05 mg/L	ND	U.S. EPA-200.7	Within Limits
21	Mercury (Hg)	≤0.001 mg/L	ND	U.S. EPA-200.7	Within Limits
22	Nickel (Ni)	≤0.02 mg/L	ND	U.S. EPA-200.7	Within Limits
23	Zinc (Zn)	5.0 mg/L	ND	U.S. EPA-200.7	Within Limits

Lahore Office
Office No. 731,
Block - 2, Sector D1,
Shah Jilani Road, Township
Lahore, Pakistan.
Tel: +92 (42) 3515 4015-16

Islamabad Office
Office No. 314, 3rd
Floor, Gulberg Empire,
Gulberg Greens,
Islamabad, Pakistan.
Tel: +92 (51) 5915060

Peshawar Office
Unit No. 43-TF,
Dean's Trade Center
Sadar Cantt,
Peshawar, Pakistan.
Tel: +92 312 0849999

www.espak.com.pk info@espak.com.pk

CHEMICAL ANALYSIS TEST REPORT (GROUND WATER)

Reference Number: ESPAK/00657P/24/GW/05335/00426 **Date:** 10/07/2024

Name of Industry / Client: Shafiq Pak Packaging Pvt Limited

S. No	Parameters	Limit Values (DW-PEQS)	Concentration	Method / Equipment Used	Remarks
24	Arsenic (As)	≤0.05 mg/L	ND	U.S. EPA-200.7	Within Limits
25	Barium (Ba)	0.7 mg/L	ND	U.S. EPA-200.7	Within Limits
26	Aluminum (Al)	≤0.2 mg/L	ND	U.S. EPA-200.7	Within Limits
27	Manganese (Mn)	≤0.5 mg/L	ND	U.S. EPA-200.7	Within Limits
28	Boron (B)	0.3 mg/L	ND	U.S. EPA-200.7	Within Limits
29	Fecal Coliform Bacteria	Must not be detectable in any 100mL sample	ND	SMWW 9221 F	Within Limits
30	Antimony (Sb)	≤0.005 mg/L	ND	U.S. EPA-200.7	Within Limits
31	Selenium (Se)	0.01 mg/L	ND	U.S. EPA-200.7	Within Limits

DW-PEQS: Punjab Environmental Quality Standards for Drinking Water, 2016
SMWW: Standard Methods for the Examination of Water and Waste Water 23rd Edition, American Public Health Association, American Water Works Association, Water Environment Federation USA (2017)
USEPA: United States Environmental Protection Agency
NGVS: No Guideline Value Set
ND: Not Detected

- Laboratory tests and measurements were carried out at 25 ± 5 °C and 50 ± 20 % Relative Humidity conditions unless required otherwise.
- Uncertainty of Measurement (UoM) data will be provided on request, where available. The statement of conformity, if provided in the report, is based on the decision rule of simple acceptance or rejection with equal shared risk due to measurement uncertainty.

Note:

- **The report should be reproduced as a whole and not in parts.**
- **The responsibility of the ethical use of this report lies with the client.**
- **The values represent sample conditions when monitoring/testing was carried out.**
- **The report data is not intended to be used legally by the client.**
- **Only parameters marked with asterisk (*) are ISO 17025:2017 accredited.**

1. **Sample Analyzed By:** Riaz Ahmad (Analyst (Chemical)), Abdul Aziz (Analyst (Chemical)), Muhammad Shahid (Analyst (Chemical)), Khizra Bano (Analyst (Microbiology)), Samahir Khalid (Analyst (Chemical))
2. **Name of Chief Analyst with Seal:** Muhammad Arfan
3. **Signature of Incharge of the Environmental Laboratory:**

Name: Imran Malik
General Manager
Date: 10/07/2024

Environmental Services Pakistan * Tel: +924235154012-17 * ESPAK

---------- End of Report ----------

Lahore Office
Office No. 731,
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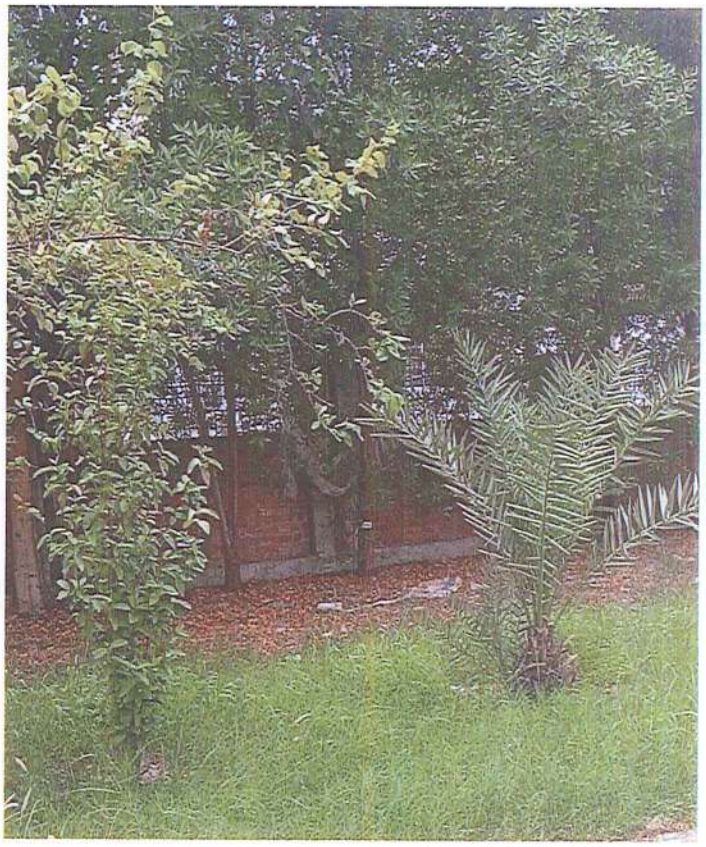
ANNEXURE-E

GOOGLE EARTH MAP


Shafiq Pak Packaging Pvt Ltd
31°17'59.06"N
74°10'4.92"E
Legend
BAK Packaging (Pvt) Ltd
Feature 1
Fine Packages
Gate 1 Office Sunder Industrial Estate
Green Chilli Restaurant Al Khan Plaza
Pak Packages
Shafiq Pak Packaging Pvt Ltd
PAF HS 2
Dr Rana Farooq Rd
Roshan Packages Limited - Corrugation Unit
DSP Dairy Farm
Gate 1 Office Sunder Industrial Estate
BAK Packaging (Pvt) Ltd
Head Office, Sun Fiber Pvt. Ltd, Sundar...
Pak Packages
Shafiq Pak Packaging Pvt Ltd
Sundar Raiwind Rd
Fish farm
T.M Rubber (Pvt) Ltd
Fine Packages
Glaciers Private Limited
Google Earth
N
1000 ft

ANNEXURE-F

PICTORIAL EVIDENCE OF PLANTATION



ANNEXURE-G

FLOW PROCESS OF PRODUCTION

Production Process:

The packaging unit process where films are made and printing is done involves several stages. Here's a detailed breakdown:

Raw Material Preparation:

- **Polymer Granules:** The process begins with raw polymer granules, typically polyethylene, polypropylene, or polyester, which are the base materials for film production.
- **Additives:** Various additives (like colorants, UV inhibitors, anti-static agents) may be mixed with the polymer granules to impart desired properties to the film.

Film Extrusion

- **Extruder:** The polymer granules are fed into an extruder, which melts them and forces the molten polymer through a die.
- **Die:** The die shapes the molten polymer into a thin film. There are several types of dies, such as flat or blown film dies.

Film Treatment

- **Corona Treatment:** The surface of the film is treated with a corona discharge to increase its surface energy, which improves ink adhesion during printing.
- **Annealing:** The film may undergo an annealing process to relieve internal stresses and stabilize its dimensions.

4. Printing

- **Printing Press:** The film is fed into a printing press, which uses various printing techniques (such as digital printing) to apply the desired graphics and text.
- **Ink Preparation:** Inks are prepared according to the design specifications and the type of film being printed.
- **Printing Process:** The film passes through several stations where different colors are applied in sequence to create the final image.
- **Drying:** The printed film is dried using heated air or UV lamps to set the ink.

5. Lamination

- **Lamination Process:** In some cases, a second layer of film (or another material) is laminated onto the printed film to provide additional strength, barrier properties, or aesthetic appeal.
- **Adhesive Application:** An adhesive is applied between the layers to bond them together.
- **Curing:** The laminate is cured under heat and pressure to ensure a strong bond.

6. Slitting and Rewinding

- **Slitting Machine:** The large rolls of film are slit into narrower rolls or specific widths as required by the customer.
- **Rewinding:** The slit film is rewound into rolls of the desired length and width.

7. Quality Control

- **Inspection:** Throughout the process, the film is inspected for defects such as pinholes, wrinkles, or color inconsistencies.
- **Testing:** Samples of the film are tested for properties such as thickness, tensile strength, and adhesion to ensure they meet specifications.

8. Packaging

- **Rolls or Sheets:** The finished film is either rolled or cut into sheets, depending on customer requirements.
- **Labeling:** Each roll or batch is labeled with information such as material type, dimensions, batch number, and any other relevant details.
- **Final Packaging:** The rolls or sheets are packaged in protective materials (such as plastic wrap or boxes) to prevent damage during transportation and storage.

9. Storage and Shipping

- **Storage:** The packaged film is stored in a controlled environment to maintain its quality.
- **Shipping:** Orders are processed, and the packaged film is shipped to customers as per their delivery requirements.

Project process flow chart:


Design and Printing
Lamination
Extrusion
Slitting
Bag Making
Quality Control
Packaging
Storage and Shipping

ANNEXURE-H

SOPS REGARDING HEALTH AND SAFETY

Integrated Management System Policy

Pak Packages is committed to maintaining a leading position in safe flexible packaging through teamwork, continual improvement, implementation and sustainability of good practices, maintenance of hygiene, Halal food aspects, food excellence and safety standards to the entire satisfaction of our value chain.

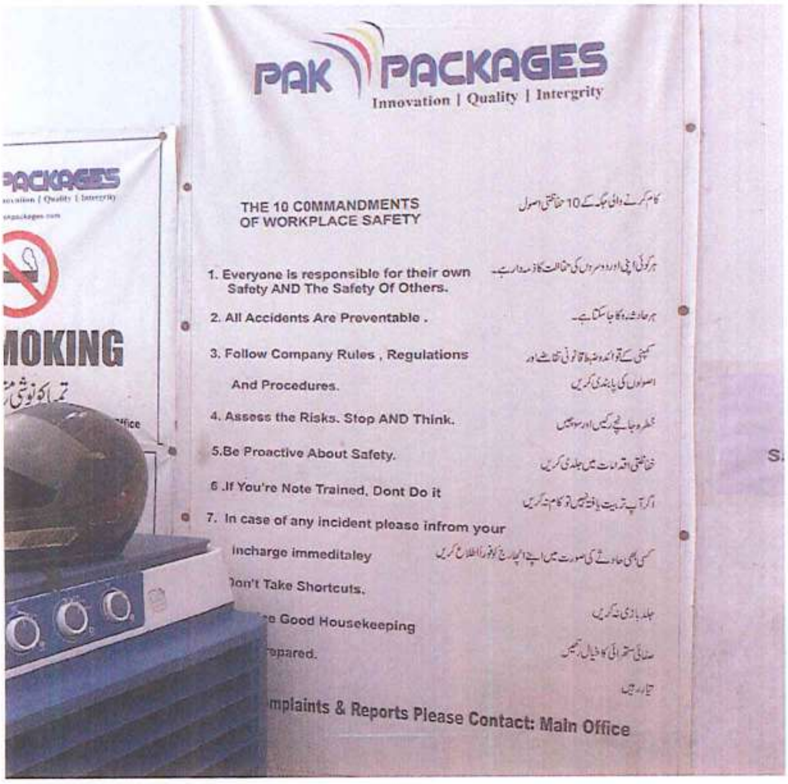
We understand our role in the food chain from procurement of raw material till delivery of product to customer and committed to play our role. We are committed to compliance with national & international laws & regulations, company's own standards, responsibilities with regard to food safety, occupational health & safety, hygiene, Halal aspects as per Shariah laws & regulations, quality and environmental aspects applicable to Pak Packages.

We are also dedicated to take concrete measures for minimizing waste, prevent pollution, preserve natural resources & environment and prevent injury and ill health. In order to achieve our desired results we train and increase the awareness among our employees & all stakeholder in our INTEGRATED MANAGEMENT SYSTEM. Reviews of defined targets/objectives and their fulfilment for continual improvement are the hall mark of all activities undertaken by Pak Packages."

Shafiq ur Rehman

(CEO)

EXPERT FIRE



PAK PACKAGES
Innovation | Quality | Intergrity
THE 10 COMMANDMENTS OF WORKPLACE SAFETY
کام کرنے والی جگہ کے 10 حفاظتی اصول
1. Everyone is responsible for their own Safety AND The Safety Of Others.
2. All Accidents Are Preventable .
3. Follow Company Rules , Regulations And Procedures.
4. Assess the Risks. Stop AND Think.
5.Be Proactive About Safety.
6 .If You're Note Trained, Dont Do it
7. In case of any incident please infrom your incharge immeditaley
on't Take Shortcuts.
e Good Housekeeping
epared.
mplaints & Reports Please Contact: Main Office
MOKING

PAK PACKAGES
Innovation | Quality | Integrity
ہدایات برائے پروڈکشن سٹاف
(1) وقت کی پابندی کریں۔
(2) یونیفارم اور سیفٹی شوز پہن کر پروڈکشن ہال میں داخل ہوں۔
(3) موبائل فون کا استعمال سختی سے منع ہے۔
(4) موبائل فون لاکر میں رکھ کر پروڈکشن ہال میں داخل ہوں۔
(5) پروڈکشن ہال / مشین پر کھانا کھانے کی ممانعت ہے۔
(6) پروڈکشن ہال میں غیر ضروری سامان لے کر جانا منع ہے۔
(7) سگریٹ، پان، چھالیا، نسوار پروڈکشن ہال میں لیجانا منع ہے۔
(8) صفائی کا خاص خیال رکھیں۔
(9) مشین پر کام کرتے ہوئے کوالٹی پر فوکس کریں۔
مندرجہ بالا ہدایات پر عمل کرتے ہوئے آپ پروڈکشن ہال کے ماحول میں بہتری اور کام کی کوالٹی کو بہتر کرنے میں مددگار ثابت ہوں
Wear Mask
6 Feet
Shafiq ur Rehman

اندرون گھر ڈینگی لاروے کی موجودگی کی ممکنہ جگہیں
dustrial
ore-Pakistan.


FIRE SAFE


ABC
A
B


FIRE EXTINGUISHER

ANNEXURE-I

RELEVANT GOVERNMENT APPROVALS

بلدیہ مستحکم – پنجاب مستحکم

OFFICE OF THE METROPOLITAN OFFICER (PLANNING)
METROPOLITAN CORPORATION, LAHORE (042-99212814)

No. 573-M.O(P)MCL/24

Dated 09--07-2024

The Additional Deputy Commissioner (HQ),
O/O Deputy Commissioner, Lahore.

Subject: **GRANT OF "NO OBJECTION CERTIFICATE" FOR THE IMPORT, STORAGE, 04/07/24 TRANSPORT AND USAGE / SALE OF DP (PRODUCTS) I.E. ISO PROPYL ALCOHOL (IPA), N-PROPYL ALCOHOL (NPA), ETHYLENE GLYCOL EG, ETHANOL AND ETHYL ACETATE AT PLOT NO. 9, 10, 11 SUNDAR INDUSTRIAL ESTATE, LAHORE (M/S SHAFIQ PAK PACKAGING PVT. LIMITED).**

This is with reference to your office letter issued vide No. ADC(HQRS)/PC/885/571 dated 22-06-2024 on the subject cited above.

2. It is intimated that as per report of concerned Zonal Officer (Planning), the subject property falls in the Industrial Zone of Master Plan. However, Plots No. 9, 10 & 11 falls in Sundar Industrial Estate and its building control is performed by the Sundar Industrial Estate / Punjab Industrial Estates Development & Management Company (PIEDMC).

Metropolitan Officer (Planning),
Metropolitan Corporation, Lahore.

A copy is forwarded for information to:

i. The Chief Officer, Metropolitan Corporation, Lahore.
ii. PSO to Administrator, Metropolitan Corporation, Lahore.
iii. The Zonal Officer (Planning), Allama Iqbal Zone, Lahore.
iv. The applicant concerned.

CIVIL DEFENCE OFFICE,
OUT FALL ROAD, LAHORE.

To,

The Additional Deputy Commissioner (HQ),
Lahore.

No.CDL-FC-2024/1873 Dated: 03-07-2024.

Subject: **ISSUANCE OF NO OBJECTION CERTIFICATE FOR IMPORT STORAGE TRANSPORT AND USAGE / SALE OF DP (PRODUCTS) I.E. ISO PROPYLE ALCOHOL (IPA), N-PROPYL ALCOHOL (NPA), ETHYLENE GLYCOL EG, ETHANOL AND ETHYL ACETATE AT PLOT NO. 9 10. 11 SUNDAR INDUSTRIAL ESTATE, LAHORE (M/S SHAFIQ PAK PACKAGEING PVT LIMITED).**

Kindly refer to your letter No. ADC (HQRS) / PC / 885/571 dated 22-06-2024 on the subject cited above.

Inspection of the said site for the Import, storage, Transport and sale of DP Products Plot NO. 9.10.11 Sundar Industrial Estate Lahore, has been carried out by this office

The proposed site is at plot No.9.10.11 Sundar Industrial Estate Lahore. The wide Road is on front and Industrial buildings on the right and left side of the site. plot size is for commercial activity 452':4" wide on front, 415':0" wide on the left, 660':46" rear side of the site while 302':18" on the right side of the site

In the light of above, this office has No Objection for issuing the NOC in favour of (M/S Shafiq Pak Packaging Pvt Limited) subject to the following terms and conditions: -

1. The applicant / owner of the site has furnished an affidavit to the effect that he will be responsible to maintain all requisite Fire / Safety arrangements throughout and availability of trained staff / worker in order to meet with any emergent situation.
2. Provision of all Fire/Safety arrangements according to the prevalent Civil Defence Rules / Schedule and the management will be bound to get physical checking of the said arrangements by this office before functioning / storage DP Products.
3. The management will be responsible for any mishap that takes place due to incompetence / negligence.

CIVIL DEFENCE OFFICER
LAHORE.

Cc:-

1. The Assistant Director (CD) Lahore region Lahore.

OFFICE OF THE ASSISTANT COMMISSIONER/
SUB-DIVISIONAL COLLECTOR,
TEHSIL RAIWIND, LAHORE

No.AC(RWD)/PA _____
Dated: _____

To

The Additional Deputy Commissioner (Revenue),
Lahore.

Subject: **GRANT OF NO OBJECTION CERTIFICATE FOR THE IMPORT, STORAGE , TRANSPORT AND USAGE / SALE OF DP (PRODUCTS) I.E ISO PROPYL ALCOHOL (IPA), N-PROPYL ALCOHOL (NPA), ETHYLENE GLYCOL EG, ETHANOL AND ETHY ACETATE AT PLOT NO. 3, 10, 11 SUNDAR INDUSTRIAL ESTATE LAHORE (M/S SHAFIQ PAK PACKGING PVT) LIMITED.**

Kindy refer to your office letter No. ADC(HQRS)/PC/885/571 dated: 22-06-2024 on the subject cited above.

2. It is submitted that the requisite information / report regarding the subject matter has been collected from Revenue Field Staff through Tehsildar Raiwind, Tehsil Raiwind, Lahore which is detailed & self-explanatory. The same is hereby forwarded to your good self for information and further necessary action please. (Original report is attached herewith).

ASSISTANT COMMISSIONER/COLLECTOR,
TEHSIL RAIWIND, LAHORE

No.74/2024(RTO/RAIWIND)
RESCUE TEHSIL OFFICE
(RESCUE 1122)
Lahore, Dated 06th July, 2024.

The District Emergency Officer,
(P.E.S.D) Rescue 1122,
Lahore.

Subject: **GRANT OF NO OBJECTION CERTIFICATE FOR THE IMPORT, STORAGE, TRANSPORT AND USAGE / SALE OF DP (PRODUCTS) I.E. ISO PROPYL ALCOHOL AND ETHYL ACETATE (NPA) ETHYLENE GLYCOL EG,ETHANOL AND ETHYL ACETATE AT PLOT NO. 9, 10, 11 SUNDAR INDUSTRIAL ESTATE, LAHORE (M/S SHAFIQ PAK PACKAGING PVT. LIMITED).**

Reference to the letter NO.ADC(HQRS)/PC/885/571 on dated 22/06/2024, and the directions forwarded by your kind office regarding the subject cited above.

It is submitted that the proposed site has been visited by the undersigned and analyze the scene regarding emergency response / approach.

It is further said that the said location is clear and accessible in case of any untoward incident.

The report is submitted for information and necessary action please.

(GHULAM YASIR)
RESCUE & SAFETY OFFICER
TEHSIL RAIWIND
LAHORE

ANNEXURE-J

STAKEHOLDER' CONSULTATION FORMS

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Wajid

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☐ Female

Qualification: B.S

Profession: Factory Manager

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Wajid

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Zohaib

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☒ Female

Qualification: Matric

Profession: Shopkeeper

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Zohaib

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Khalida

Residence: Rainwad Road

CNIC:

Gender: ☐Male ☑Female

Qualification: B.A

Profession: Teacher

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Adeel

Residence: Raiwind Road

CNIC:

Gender: ☑Male ☐Female

Qualification: Matric

Profession: factory worker

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Adeel

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Jamshaid

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☐ Female

Qualification: MSC

Profession: Teacher

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☐	☑
Will the project cause any type of pollution in the area?	☐	☐	☐	☐	☑

Signature of Interviewed

Jamshaid

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: M. Muaaz

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☐ Female

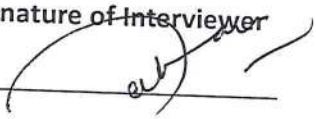
Qualification: MBA

Profession: Banker

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Signature of Interviewer



PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Ali Raza

Residence: Rawind Road

CNIC:

Gender: ☑Male ☐Female

Qualification: Matric

Profession: Shopkeeper

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Ali Raza

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Mustaza

Residence: Islampura

CNIC:

Gender: ☑ Male ☐ Female

Qualification: F.A

Profession: Factory worker

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Mustaza

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Shahbaz Ahmad

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☐ Female

Qualification: Matric

Profession: Shop keeper

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Shabbaz

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Qaiser

Residence: Islampura

CNIC:

Gender: ☑ Male ☐ Female

Qualification: F.A

Profession: Factory Worker

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☐	☑	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☐	☑
Will the project cause any type of pollution in the area?	☐	☐	☐	☐	☑

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: M. Ahad

Residence: Raiwind Road

CNIC:

Gender: ☑ Male ☐ Female

Qualification: B. Com

Profession: Cashier

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "PACKAGING UNIT"

Name: Khan Mohammad

Residence: Rawind Road

CNIC:

Gender: ☑Male ☐Female

Qualification: Matric

Profession: Shopkeeper

	Strongly Agree	Agree	No Comments	Disagree	Strongly Disagree
Are you in favor of project?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐
Will the project affect the plant species of the area?	☐	☐	☐	☑	☐
Will the project cause any type of pollution in the area?	☐	☐	☐	☑	☐

Signature of Interviewed

Khan Mohammad

Signature of Interviewer

ANNEXURE-K

LIST OF ABBREVIATIONS

LIST OF ABBREVIATIONS

W & D	Works and Development
OSHA	Occupational Safety and Health Administration
EPA Punjab	Environmental Protection Agency, Punjab
EIA	Environmental Impact Assessment
IEE	Initial Environmental Examination
PEQS	Punjab Environmental Quality Standards
PEPA	Punjab Environmental Protection Act
TORs	Term of references
WAPDA	Water And Power Development Authority

ANNEXURE-L

GLOSSARY

GLOSSARY

Words	Dictionary
Mitigation	The action of lessening in severity or intensity
Legislation	law enacted by a legislative body
Compliance	Acting according to certain accepted standards
Flora	All the plant life in a particular region or period
Fauna	All the animal life in a particular region or period
Demarcated	Separate clearly, as if by boundaries
Screening	The display of a motion picture
Substitutions	An event in which one thing is substituted for another
Regulations	An authoritative rule
Stakeholders	A person or organization with an interest or concern in something
Vulnerable	Susceptible to attack

ANNEXURE-M

STUDY TEAM

#	Name of Team Members	Designation	Qualification
1	Maham Ahsan	Environmentalist	M.S Environmental Science
2	Ali Ramzan	Environmentalist	B.S Environmental Sciences
3	Asma Akram	Environmentalist	M.S Environmental Science
4	Taha Nadeem	Environmentalist	B.S Environmental Sciences
5	Shahzad Ahmad Khan	Project Manager	MBA Marketing

ANNEXURE-N

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REFERENCES

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