2024

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

WARBURTON ROAD, FEROZE WATTOAN, SHEIKHUPURA

REPORT PREPARED BY

PAK GREEN ENVIRO-ENGINEERING PVT. LTD.

PAK GREEN
ENVIRO-ENGINEERING (PVT.) LTD.

46-M, Gulberg-III, Lahore, Punjab Pakistan
Email: info@pakgreen.pk
Contact: 042-35441444, 0303-4442335

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LIST OF ABBREVIATIONS

EIA	Environmental Impact Assessment
PEPA	Pakistan Environmental Protection Act
PEPA	Punjab Environmental Protection Act
NEQS	National Environmental Quality Standards
WAPDA	Water And Power Development Authority
WASA	Water and sanitation authority
EMP	Environmental Management plan
EMC	Environmental Monitoring Cell
WWTF	Wastewater Treatment Facility
NOC	No Objection Certificate
NCS	National Conservation Strategy
LAA	Land Acquisition Act
Pak-EPA	Pakistan Environmental Protection Agency
W.H.O	World Health Organization
LESCO	Lahore Electric Supply Company
SWM	Solid Waste Management
CSR	Corporate Social Responsibility
MSWs	Municipal Solid Wastes
TMA	Town Municipal Authority
dB (A)	Decibel
PPM	Part per million

$\mu g/m^3$	Microgram per cubic meter
KVA	Kilo Volt Ampere
PPEs	Personal protective equipment's
TDS	Total dissolve solid
TSS	Total suspended solid
SS	Suspended solid
COD	Chemical oxygen demand
BOD	Biological oxygen demand
HC	Hydrocarbons
PM	Particulate matter

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Title & Location of the project

It is the intention of Mr. Muhammad Nadeem Nasir S/o Muhammad Mushtaq proponent of M/s Sapphire Textile Mills Limited Unit 07 (Stitching Unit), to get Environmental approval by submitting the Environmental Impact Assessment for proposed establishment of the textile processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant) located at Warburton Road, Feroze Wattoan, Sheikhupura. The production capacity of (Dyeing/day, printing/day, apparel cut to pack/day) will be 3 million per month, while the ETP capacity/hrs will be 40 Cubic Meter. The total covered area of the project site is 525618 SFT, while the total land area is 1352768 SFT. The cost of the project will be 752 million PKR under section 12, PEPA, 1997 (Amended 2012).

According to the latter, the proposed project falls in Category B (Clause 6), Schedule II of Review of IEE and EIA Regulations, 2000 (Amended 2022). So, proponent is submitting an EIA Report.

Location

The proposed project is located at 1.5 KM Warburton Road, Feroze Wattoan, Sheikhupura.

Project land coordinates are as follows:

Latitude: 31°34'38.70"N
Longitude: 73°48'51.83"E

Front ---------- Road.

Back ---------- Open Land

Left ---------- Industrial Unit

Right ---------- Industrial Unit

Land Coordinates	31°34'38.70"N	73°48'51.83"E

For further details, layout map of the project is attached as ***Annexure B*** with the report.

Figure 1: Google map of the project area M/s Sapphire Textile Mills Limited

Name of the proponent

Name: Muhammad Nadeem Nasir S/o Muhammad Mushtaq

Designation: Proponent

CNIC: 35402-1991657-9

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

Name of organization preparing the report:

Pak Green Enviro-Engineering (Pvt.) Ltd, as independent consultants, has been appointed by the proponent to conduct Environmental Impact Assessment Study (EIA).

Company office address: 46-M, Gulberg III, Lahore

Contact: 042-35441444, 0303-4442335.

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

A brief outline of the proposal

Name of the project:	Proposed establishment of the Textile Processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant)
Title and Location of the project:	1.5 Km Warburton Road, Feroze Wattoan, Sheikhupura.
Name of the Proponent:	Muhammad Nadeem Nasir S/o Muhammad Mushtaq
Cost of the project:	Total cost of the project is Approx. PKR 752 Million
Project Description	Proposed establishment of the Textile Processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant) located at Warburton Road, Feroze Wattoan, Sheikhupura. The production capacity of (Dyeing/day, printing/day, apparel cut to pack/day) will be 3 million per month, while the ETP capacity/hrs. will be 40 Cubic Meter. The total covered area of the project site is 525618 SFT, while the total land

	area is 1352768 SFT. The cost of the project will be 752 million PKR
Raw materials	Gray Cloth, dyes and textile chemicals are the raw material for fabric processing unit process.
Production capacity	The production capacity of (Dyeing/day, printing/day, apparel cut to pack/day) will be 3 million per month, while the ETP capacity/hrs. will be 40 Cubic Meter.
Power Requirement:	Power requirement will be fulfilled by National Grid/WAPDA
Labor/ Workforce:	During Construction: 20-25 persons
Water Requirement:	During the operational phase of the project approx. 80 gallons/ year water is required for project process and domestic purposes.
Solid waste:	During operation: 0.75 kg/capita/day per person domestic waste will be produced that will be handed over to contractor Project related waste will be physical dry waste in solid form, that will be baled by bailing press for use by other mills.

The major impacts

In order to identify all the activities associated with the project during operation phase with potential to cause adverse environmental impacts and harm a thorough review has been conducted. Project will not have any significant adverse impacts on the nearby community and on environment. Overall the project will have positive impacts on the local population and country as a whole. Moreover, area for plantation is also reserved for air purification within the project vicinity.

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

Potential Impact	Criteria for determining	Key Mitigation Measures

	Significance	
Dust Emissions—Particulate matter emitted during construction activities and gaseous emissions from transportation vehicles can result in deterioration of ambient air quality in the vicinity of the project site, and be a nuisance to the surrounding workers.	An increase in visible dust beyond the boundaries of the construction site; or Concentration of PM_{10} in excess of 150 $\mu g/m^3$ PEQS for Ambient Air.	Sprinkling of water on unsealed surfaces is recommended Vehicle speed restrictions should be applied in the project area; Raw materials should be transported in covered trucks. Ensuring that no stockpile is within 250 m of the community.
Construction Noise- Disturbance to surrounding communities due to operation of construction machinery at the project site.	PEQS for Noise OSHA standards	Noise monitoring has been conducted at the project site before starting the construction activity. Reduce noise at source; Take noise levels in consideration during detailed design and construction planning; Reduce traffic noise.
Solid waste Management—Improper waste management may generate health and aesthetic issues	Generation of excessive waste; Recyclable waste and reusable waste is discarded; Improper disposal.	Development of a waste management plan; Constructional waste should be utilized for road filling and maintenance. Domestic waste should be disposed of properly, handed over

		to contractors, placed in bins.
Vegetation Loss/ Soil erosion—Loss of vegetation as a result of land clearance for the construction purposes	Unnecessary or excessive removal of trees and shrubs.	Preparation of a Reinstatement Plan; Minimization of the felling of trees and clearing of vegetation; and avoidance of the use of fuel wood
Water Resources— The extraction of water for the project construction activities can affect the groundwater availability for the project area communities	Water extracted for the project can directly affected the ability of the community to meet their water needs	No impact on the community groundwater needs is envisaged as a result of the project.
Soil Contamination—Oil can contaminate the soil	Presence of visible amount of hydrocarbon in soil	Provision of spill prevention and control kits; Use of impermeable surfaces in workshops, and storage areas
Socioeconomic Issues **Workers Safety**— Safety hazards associated with the construction activity, particularly with the increase in traffic at the project site.	No specific guidelines exist. A significant impact will be interpreted if there are complaints from the community or the occurrence of any injury or loss	Speed limit of 10 km/h will be maintained on the access road; Traffic controller will be stationed on the access road; night driving will be kept to a minimum
Project and Community Interface—Inter-cultural differences between the project staff from other areas and the local community	No community complaints	Training of the non-local project staff on local culture and norms;

		Avoidance of unnecessary interaction of local population with the non-local project staff

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

Potential Impact	Criteria for determining Significance	Key Mitigation Measures
Machinery Noise- Working of machinery can be a nuisance for the workers in the working area.	OSHA Standards	PPEs i.e. ear muffs should be provided to workers in case of high noise.
Health & Safety Issues- Health and Safety issues e.g. Cuts and Injuries may be caused during the machinery handling.	OSHA Standards	Proper training of the staff should be conducted to avoid the accidents. First aid measures should be provided at the workplace.
Solid waste management- Improper solid waste management may cause health problems and aesthetic issues	Exposure to potentially hazardous waste; Generation of excessive waste; Recyclable waste and reusable waste is discarded; Improper disposal.	Waste bins should be placed at suitable places. Domestic and process related waste should be handed over to contractors.
Groundwater—The increased withdrawal of groundwater for the project will affect the groundwater resources of the	Water extracted for the project can directly affected the ability of the community to meet their water needs	No impact on the community groundwater needs is envisaged as a result of the project.

project area		

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 on quarterly basis during operational phase 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.

- **Water quality**

Regular monitoring of water quality should be conducted on monthly basis during operation 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

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 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 2022) for obtaining No Objection Certificate (NOC)

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 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 proposed project falls under Schedule II of Review of IEE and EIA Regulations, 2022.

Proponent:

Name: Mr. Muhammad Nadeem Nasir

S/o Muhammad Mushtaq

Designation: Proponent

CNIC: 35402-1991657-9

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

Details of Consultant

Pak Green Enviro-Engineering (Pvt.) Ltd is an independent company, who conducts EIA, 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, wastewater priority parameters.

Contact: Pak Green Enviro-Engineering (Pvt.) Ltd.

Office No. 46-M, Gullberg III, Lahore

Tel: 042-35441444, 03034442335

Email: info@pakgreen.pk; pak.green@hotmail.com

The current study was carried out by the following professionals:

Sr. No.	Designation	Name/Qualification	Experience
1.	Chief Environmentalist/ Lead Environmental Professional	Abdul Hafeez Nasir PhD Scholar Environmental Management	Ten Years' Experience as Environmentalist
2.	Senior Environmentalist/ Environmental Professional	Iftikhar Ahmed M. Phil Environmental Sciences	Seven Years' Experience as Environmentalist
3.	Associate Environmental Professional	Sabeera Tauheed M.Phil Environmental Science, PU	4 Year experience
4.	Environmental Engineer	Muhammad Imran BS Environmental Engineering	2 Years' Experience

Brief description of Nature, Size and Location of Project

Subject project is the proposed establishment of the textile processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant) located at Warburton Road, Feroze Wattoan, Sheikhupura. The production capacity of (Dyeing/day, printing/day, apparel cut to pack/day) will be 3 million per month, while the ETP capacity/hrs will be 40 Cubic Meter. The total covered area of the project site is 525618 SFT, while the total land area is 1352768 SFT. The cost of the project will be 752 million PKR.

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Solid waste:	During operation: 0.75 kg/capita/day per person domestic waste will be produced that will be handed over to contractor Project related waste will be physical dry waste in solid form, that will be baled by bailing press for use by other mills.

Location

Subject project is located at 1.5 Km Warburton Road, Feroze Wattoan, Sheikhupura

Project land coordinates are as follows:

Front ---------- Road

Back ---------- Open Land

Left ---------- Industrial Unit

Right ---------- Industrial Unit

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

Screening:

Subject project is the Construction of Textile Processing Unit and Wastewater Treatment Plant under the name of M/s Sapphire Textile Mills Limited, at 1.5 Km Warburton Road, Feroze Wattoan, Sheikhupura.

Project falls under Schedule II, Clause 6 of Review of IEE and EIA Regulations, 2000. (Amended 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.***

Scoping

Spatial and Temporal Boundaries of Environmental Assessment

This project spans at the area of 1352768 SFT. The existing land use is industrial as the project lies in an Industrial area in District Sheikhupura. The surrounding plots are either a property of farmers with agricultural lands and will most probably be sold to industries in future, so currently they are open plots and industrial units. The main road along with the project site is Industrial Road. 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- B*** with the report

Important issues and concerns raised during consultation

Important issue and concerns raised by the community during consultation include the impact of untreated wastewater released from the spinning mills that may be discharged into the drinking water supply. The Proponent ensured that to treat the wastewater coming out from the industry before final disposal into the nearby drain. The community was also concerned about employment to local people. The proponent ensured that maximum job opportunities will be given to residents of the area.

Significant Impacts to be determined

The major impact from this kind of facility will be dust and particulate matter pollution from the spinning, combing and carding process. For this purpose, the proponent has ensured to proper ventilation system in the facility so avoid suffocation and any health hazards from indoor air pollution. Solid waste produced will be in dry form that will be baled with balling press for use by other mills.

CHAPTER 2:

DESCRIPTION OF THE PROJECT

CHAPTER # 2

DESCRIPTION OF THE PROJECT

Objectives of the Project

Objectives of the operational phase of the subject project are:

- To establish the business for the proponent.
- To contribute to the national economy of the country.
- Compensate to help poverty by providing employment.

Location and Site layout of the project

Location

Subject project is located at 1.5 Km Warburton Road, Feroze Wattoan, Sheikhupura

Project land coordinates are as follows:

Front ---------- Road

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For further details, layout map and Google earth map of the project is attached as ***Annexure-B*** with the report.

Land Use on site

The land is designated as an Industrial area.

Road Access

Main Road is present at the side of the project which provides access to the project area/ unit.

Vegetation features of the project

There is no dense vegetation, only shrubs like Parthenium and grasses are present in scattered quantity.

Cost and magnitude of the operation

Project is proposed establishment of the textile processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant) located at Warburton Road, Feroze Wattoan, Sheikhupura. The production capacity of (Dyeing, printing, apparel cut to pack) will be 3 million per month, while the ETP capacity/hrs will be 40 Cubic Meter. The total covered area of the project site is 525618 SFT, while the total land area is 1352768 SFT. The cost of the project will be 752 million PKR.

Schedule of Implementation

Detailed feasibility studies and designing of the project have been completed. Necessary legal, administrative and financial formalities are being finalized. The project is expected to be completed within 11-12 months from the date of environmental approval. Subsequently the operational and maintenance aspects of the project is undertaken by the proponent.

Description of the project:

Name of the project:	Proposed establishment of the Textile Processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant)
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ACTIVITIES OF THE PROJECT

Raw Materials Purchase & Storage

Raw material will include Fabric, Dyes, cutting accessories and packaging materials. Fabric and other raw materials required for the production will be obtained through the Suppliers in the local market as well as from international dealers.

Cutting

Cutting department will receive the fabric and work internally. Cutting will be done through auto as well as manual process in which machine will cut the fabric layers with respect to design. Re- Bundling will be done and processed pieces are attached to bundles. Inspection will be made before final record making.

Stitching

After cutting, pieces move to stitching unit where all these cut pieces assemble together under machines. These pieces come out in proper jeans shape in different sizes on which quality audit perform and move to next department.

Washing/ Laundry

Washing is the most important process, and it has innumerable variants now. Industrial washing machines play an important role, and depending on the market requirements, these machines can develop uniform color fading or appearance effects.

Butting/ Revert/ Bar Take Process

Buttons, reverts, and embellishments are done in this process

Pressing

After buttoning process, pressing of garments using steam irons.

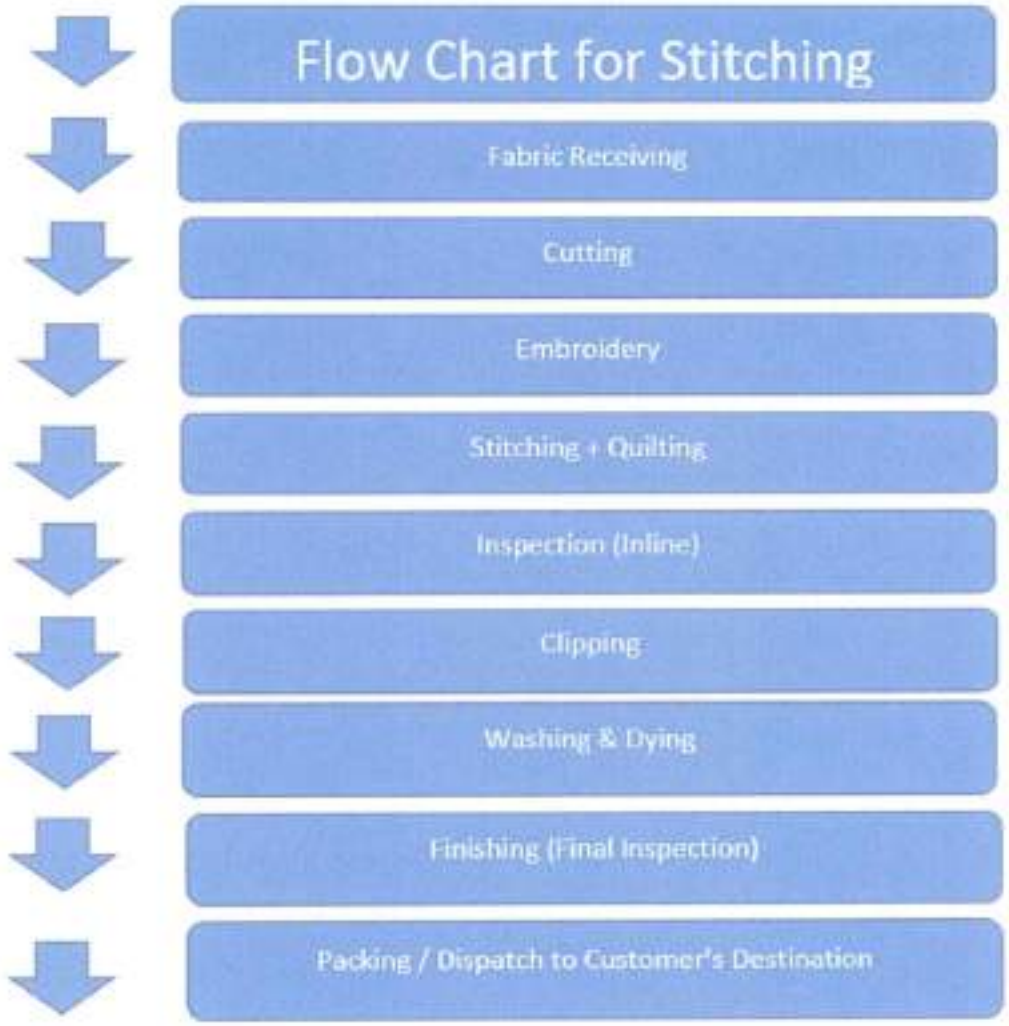
Finishing/ Packing

After stone washing, garments are placed to dry and provide required finishing look as per requirement. After this, the garments will be packed in the specified cartons through different processes such as taping, labeling, tagging etc.

Shipment Store:

After finishing and packing of garments these are dispatched to the garment store or to the local buyers.

Process flow diagram



Water requirements:

During construction phase 80 gallons/day/hr. of water will be used per day.

Wastewater treatment:

60-70% of the used water will be the wastewater from the fabric processing and other related activities- washing, dyeing etc., this will be treated in the proposed wastewater treatment plant on site and then discharged in the industrial drain after the treatment in the premises of industrial area. Design of wastewater treatment plant is attached with this report

Design of wastewater treatment plant

Wastewater Drain:

Industrial drain is present near the project site, in which wastewater will disposed of after treatment, it will be ensured that no wastewater will be disposed of without having been treated in ETP (wastewater treatment plant) throughout the project activities.

Solid waste:

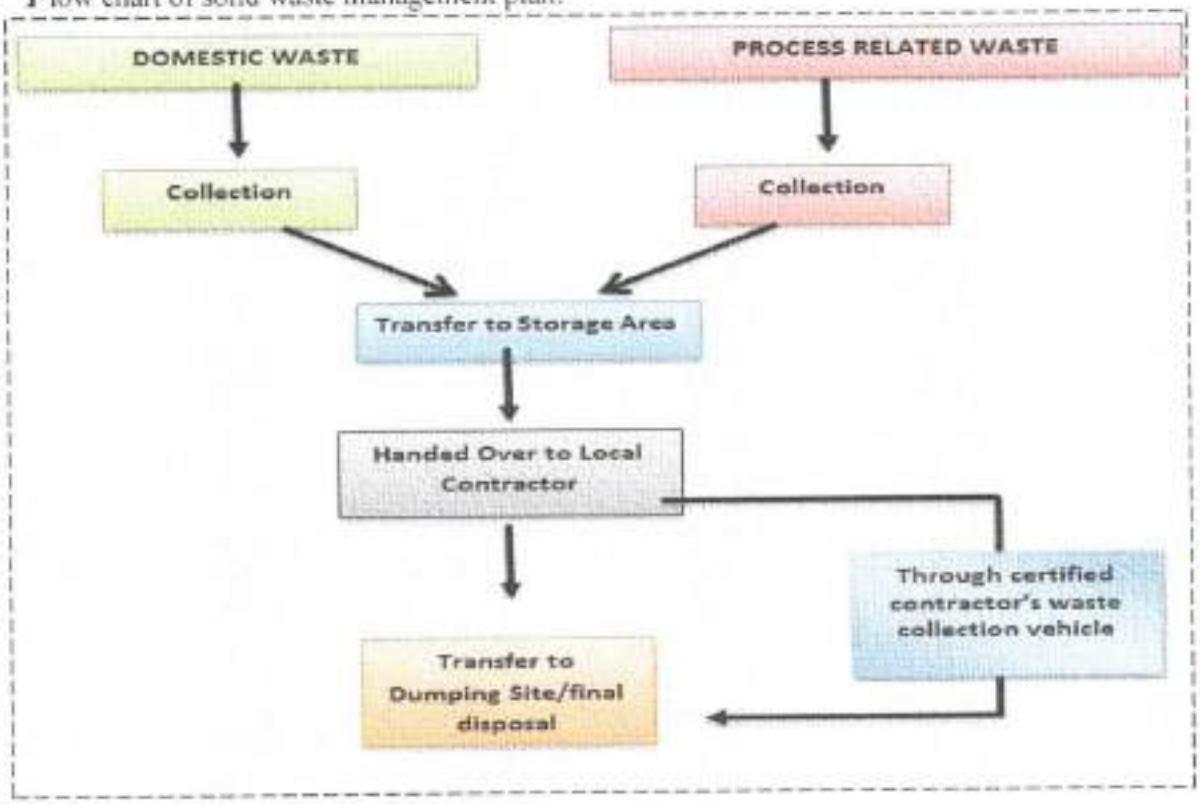
The project related solid waste will be produced during the operation phase of the project

Solid waste management system/practices

The Solid waste will be managed in proper way by following operations:

1. Placement of separate waste bins for domestic and project related waste in all working halls and designated points. Any waste generated will be segregated
2. Collection of waste from all the working halls at one designated point by the sanitary workers on daily basis.
3. Careful collection of waste on regular basis and temporary storage at designated point.
4. Collection of waste from designated area and handling to the solid waste contractors for its final disposal.

Flow chart of solid waste management plan:



All these measures will ensure the PEQS compliance of generators and emissions will not exceed the limits.

Plantation

Planation will be done within and outside the unit.

Parking Area:

Parking area will be made available within the unit for cars, motorcycles, trucks etc.

Occupational Health and Safety:

All the methods and procedures for machinery handling will displayed and implemented at the project site. Health and safety rules for workers has been maintained.

Personal Protective Equipment:

Following PPEs is available for the workers in the proposed unit:

- Ear Plugs
- Ear muffs
- Safety Boots
- Safety Gloves
- Safety Belt
- Helmet
- Goggles

Types of PPEs used during operational phase and Operational activities.

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.
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation	Glasses, shield protective, 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

Fire Protection System

An addressable fire protection system with detection and alarm annunciation and other installations etc. would be provided to protect against any fire hazards. Fire buckets and fire extinguishers will be installed at all sensitive places within the unit.

Emergency Exits:

Emergency exit points will be available for easy evacuation in case of any emergency.

Security:

The proposed unit/ industry will be constructed along with the presence of security guards round the clock which will improve the security of the project site and also in its vicinity.

Personal protective equipment:

Workers will be provided with dust mask, ear plug, ear muffs, safety boots, safety gloves, safety belt, helmet and goggles etc. during the working hours to ensure personnel health & safety. Implementation of PPEs will be ensured by the proponent for the proposed project also.

Power sources and transmission:

Power requirements for the project will be fulfilled by the National grid/WAPDA.

Restoration / Rehabilitation Plan

All possible precautions will be 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.

On completion of the project, the debris will be removed from the site in order to maintain aesthetics of the project. All measures are undertaken for ensuring occupational safety, security and clean environment in the project area. Ornamental trees and flower plants will be planted on inside peripheral of the unit premises to restore the land.

Government approvals required by the project:

All the approvals from concerned departments will be obtained after getting the approval from EPA Punjab.

CHAPTER .3:

DESCRIPTION OF THE ENVIRONMENT

CHAPTER # 3

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/ Resources

History:

Sheikhupura also known as Qila Sheikhupura is a city in the Pakistani province of Punjab. Founded by the Mughal Emperor Jehangir in 1607, Sheikhupura is now the 16th largest city in Pakistan, and is the headquarters of Sheikhupura District. Sheikhupura is also the headquarters of Sheikhupura Division. The city is an industrial center, and satellite town, located about 38 km northwest of Lahore. According to the 2017 Census of Pakistan, its population is 473,129.

The region around Sheikhupura was previous known as Virk Garh, or "Virk Fort", in reference to the Jat tribe that inhabited the area. The city, founded in 1607, was named by Mughal Emperor Jehangir himself - the city's first name is recorded in the Emperor's autobiography, the Tuzk-e-Jahangiri, in which he refers to the town as Jehangirabad. The city then came to be known by its current name, which derives from Jehangir's nickname Shekhu that was given to him by his mother, wife of Akbar the Great.

Mughal:

Mughal Emperor Jahangir laid the foundations of Sheikhupura in 1607 near the older town of Jandiala Sher Khan, an important provincial town during the early to middle Mughal era. He also erected the nearby Hiran Minar, Sheikhpura's most renowned site, between 1607 and 1620 as a monument to his beloved pet deer, Mansiraj, at a time when the area served as a royal hunting ground for the Mughal Emperor. Jehangir laid the foundation of the Sheikhupura Fort in 1607, which is situated in the city's centre.

Sikh

Following the collapse of Mughal authority, the city came under the control of the Bhatti tribe. The tribe struggled to maintain control of the area, as bandits and Sikhs began encroaching upon the area. In 1797, the Durrani king Shah Zaman briefly seized the city and fortress during

his campaign to capture Lahore. The city's fort then was captured by the Sikh bandit, Inder Singh.

Sheikhupura was then captured from the Bhattis by the forces of Lehna Singh in 1799. Sheikhupura thus came under the rule of the Sikh Sukherchakia Misl state under Lehna Singh's ally, Ranjit Singh, forcing the Bhatti tribe to retreat to Pindi Bhattian and Jalalpur. Sheikhupura then changed hands several more times, before finally being captured by Ranjit Singh in 1808.

Sheikhupura remained under suzerainty of the Sikh Empire until 1847, when the British seized control of the area. The British imprisoned the last Queen of the Sikh Empire, Maharani Jind Kaur, at the Sheikhpura Fort for ten months until 1848 before ultimately condemning her to exile abroad.

British

Following establishment of British colonial rule, Bhatti possessions that had been seized by the Sikhs were restored. The large area between the Chenab and Ravi rivers were initially consolidated into a single district with Sheikhupura serving as its first headquarters, until 1851. The area around Sheikhupura attained District status in 1919, with M.M.L. Karry serving as its first administrator.

Partition

On the eve of the Partition of British India, Sikhs made up 19% of the district's population. Despite the area's Muslim majority, Sikhs had hoped that the boundary commission would award the area to India, given the proximity of Sheikhupura to the city of Nankana Sahib - revered as the birthplace of the founder of Sikhism, Guru Nanak. The city was spared the large-scale rioting that engulfed Lahore earlier in 1947, and the city's Sikh population did not shift to India before the Radcliffe Line that demarcated the border of the newly independent states of Pakistan and India was announced.

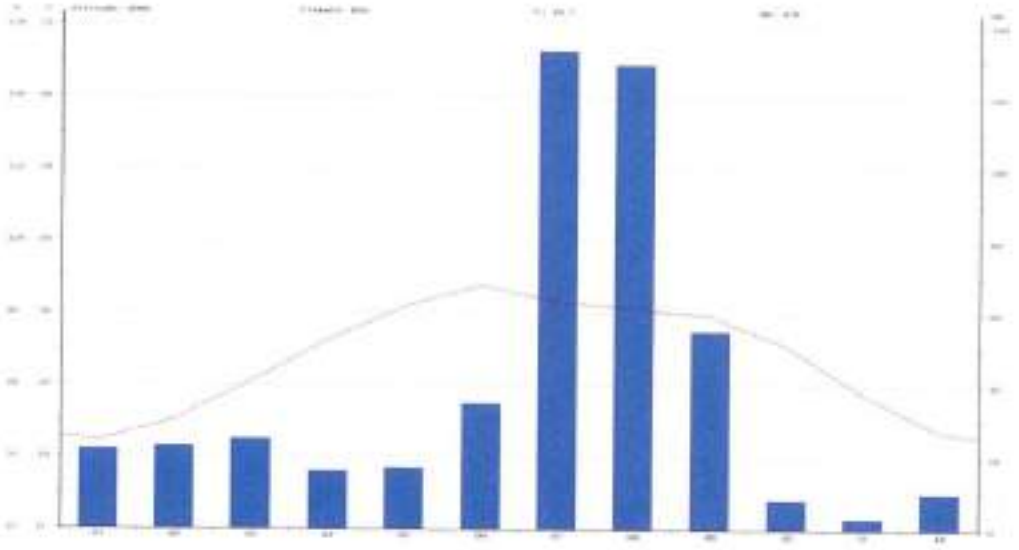
The Sikh population had not made arrangements to leave and remained trapped in the city until 31 August 1947. The city's Sacha Sauda refugee camp hosted upwards of 100,000 Sikh refugees who had come to the city after fleeing nearby Gujranwala and other surrounding areas earlier that year. Fierce violence erupted in the city, and an estimated 10,000 people were killed in Sheikhupura between 16 August and 31 August in communal rioting between Sikhs and Muslims. Large numbers of Sikh women were killed by Sikh men in an attempt to prevent Muslim rioters from reaching them.

Geography and Climate

Sheikhupura is situated at a distance of about 36 Km from Lahore, the provincial headquarters. Sheikhupura lies 31°42'51.16"N latitude and 73°59'3.49"E longitude. The city is well connected with its surrounding big urban centres like Faisalabad 94 Km, Sargodha 143 Km and Gujranwala 54 Km. Sheikhupura is also a railway junction. Sheikhupura is bounded by 6 other districts of Pakistani Punjab namely: Lahore, Nankana Sahib, Narowal, Hafizabad, and Gujranwala. The Bar jungle has almost disappeared owing to colonization and extension of canal irrigation.

Climate:

The climate here is considered to be a local steppe climate. In Sheikhupura, there is little rainfall throughout the year. This climate is considered to be BSh according to the Köppen-Geiger climate classification. The temperature here averages 24.1 °C. Precipitation here averages 476 mm. The driest month is November, with 3 mm of rain. With an average of 133 mm, the most precipitation falls in July. June is the warmest month of the year. The temperature in June averages 33.9 °C. January has the lowest average temperature of the year. It is 12.2 °C. There is a difference of 130 mm of precipitation between the driest and wettest months. During the year, the average temperatures vary by 21.7 °C.

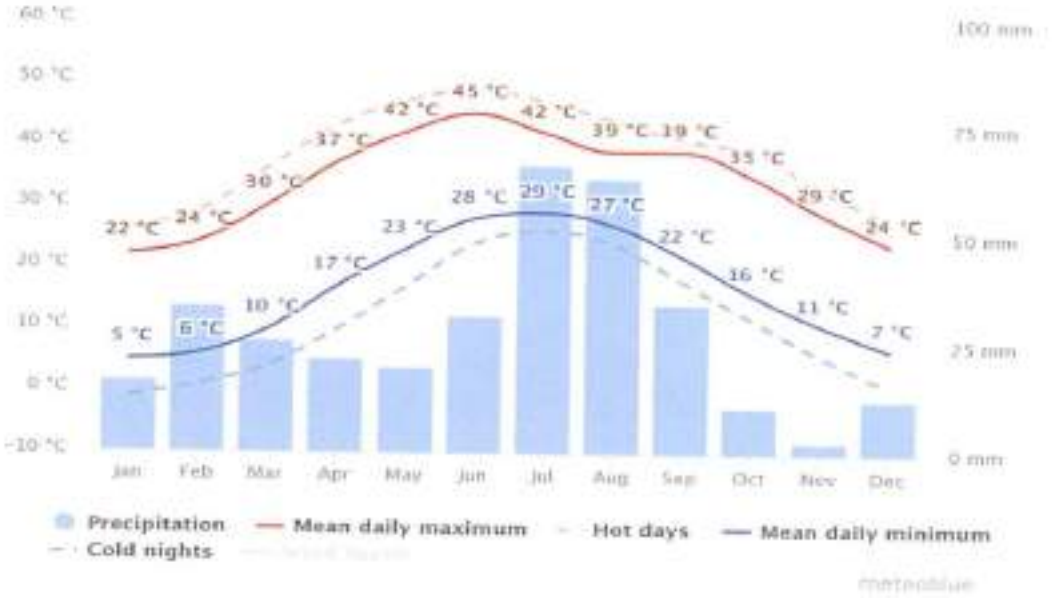


Source: https://en.climate-data.org/asia/pakistan/punjab/sheikhupura-3511/

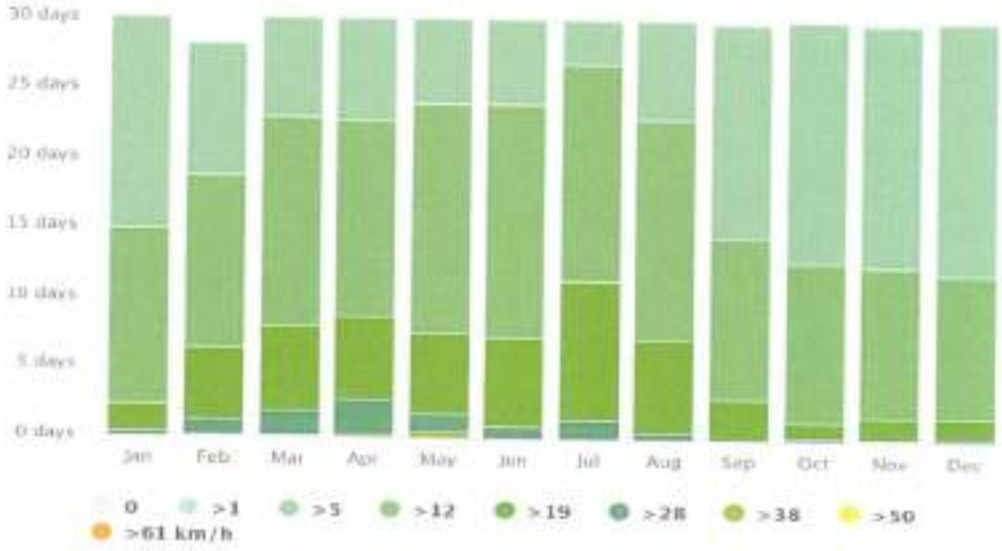
Muridke Climate:

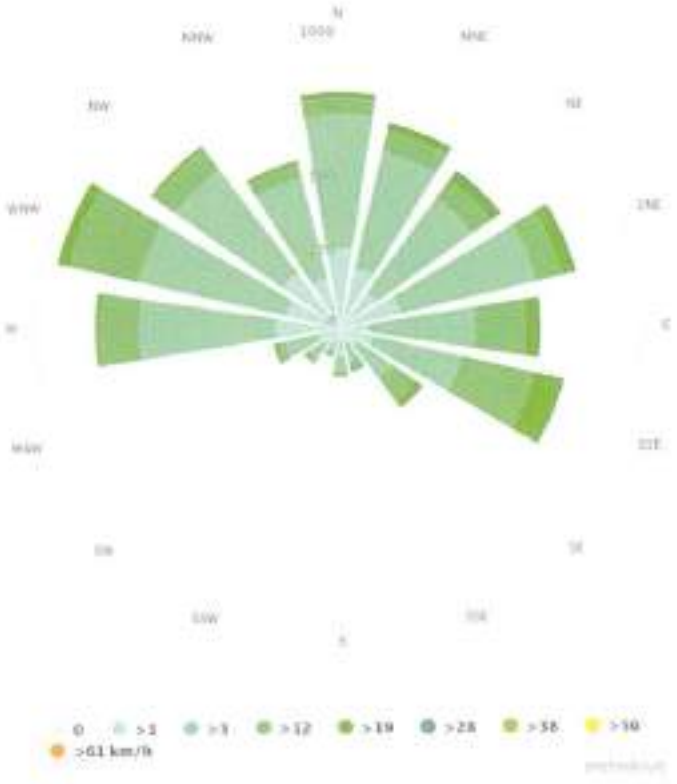
The "mean daily maximum" (solid red line) shows the maximum temperature of an average day for every month for Muridke. Likewise, "mean daily minimum" (solid blue line) shows the

average minimum temperature. Hot days and cold nights (dashed red and blue lines) show the average of the hottest day and coldest night of each month of the last 30 years.



Graphical representation of weather conditions of the area





Source:
https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/muridke_pakistan_1169692

Topography

Topography of Sheikhupura District is plain. The area is a part of Rechna Doab and consists of Sub-recent sediments brought by spill channel from the Chenab River. There are some old channel levees remnants and old basins filled up with clay materials. The material is probably of Late Pleistocene age derived from mixed calcareous sedimentary and metamorphic rocks of Lower Himalayas. Seepage from the canals in the Area has considerably raised the water table resulting in water logging and salinity.

Soils:

These are river transported deposits (alluvium), which are quite thick and fairly homogeneous in extent. The top soil consists of brown, soft to firm clayey silt / silty clay having slight plasticity and contents of dissolved salts. The top layer is likely to extend about 3 to 6 meter below natural ground, where it is underlain by silty fine sand/fine sand. This layer generally

continues to deeper depths. These layers of silty clay and sandy gravel may also exist below 10 meter depth.

Air Quality:

Ambient air monitoring at the project site was conducted by the team of Pak Green Laboratories. Lab reports are annexed as **annexure-D.**

Noise Level:

Major source of noise generation is vehicular traffic (particular loaded and unloaded truck, van) along the main road. Noise levels were monitored at different location of the project site.

Lab reports are annexed as **annexure-D.**

Noise Level Monitoring:

Basic Environmental conditions:

During the measurement following conditions were prevailed on workplace:

Metrological Conditions:

During the noise level monitoring weather was dry and sky was clear. Air was blowing at normal speed.

Monitoring Instrument:

The description of the instrument used for the noise level monitoring is given below:

Name: Digital sound level meter

Model: AR824

Company: Intel Instruments plus

Frequency Range: 31.5 Hz to 8 kHz

Methodology adopted:

Noise level was monitored at four points; lab results are attached as **Annexure-D.**

Ground water:

The underground water will be used as a source of water at the project site. Sample was taken from the tube well near the project area to test its parameters. Lab results are attached as **Annexure-D.**

Ecological Resources

Fisheries:

The project area is almost free from any commercial fishing activity. There are no lakes, even natural water ponds in the vicinity. Therefore, Fishery or any worth mentioning aquatic biology in this area is out of question.

Biodiversity:

Natural capital of a country mainly includes all of the country's wilderness areas and scenic landscapes, including also with their associated flora and fauna. Pakistan has a total of nine major ecological zones. The contribution of the "Natural Capital" is recognized at three distinct levels: species, genera, and communities (habitat and ecosystem) both collectively and within each level, the range or variety of the resources are referred to as the "Biological Diversity". The term has relevance for each of Pakistan's administrative units district, province, and particularly country. The more the number of species, genera, and habitats and ecosystems present within these units, the greater is said to be the Biodiversity. The biodiversity of the area, with this background, is discussed as under.

Flora:

Project site is free from any protected species.

Fauna:

Project site is free from any protected species.

Rare or endangered species:

There are no game reserves or protected lands/areas or endangered or rare species either in the area in the range of 5km from the project site.

Social and Cultural Study

Demographics

Muridke is a city and headquarters of Muridke Tehsil in Sheikhupura District of Punjab, Pakistan. It is the 2nd largest city in Sheikhupura Division. It is situated near the city of Lahore, at an elevation of 205 m (675 ft) and is situated on the Grand Trunk Road. In 2005 Muridke became the headquarters of the newly created Muridke Tehsil of Sheikhupura District. According to the 2017 Census of Pakistan, its population is 166,652. It is ranked 53rd

in the List of most populous cities in Pakistan. Chand Bagh School is situated on the Muridke-Sheikhupura road.

Industries:

A variety of important industrial units are operating in district Sheikhupura including leather tanneries, rice mills, fertilizer, chemicals, polyester fibre/yarn and rayon yarn, tractor and motor cycle assembling, electric domestic appliances, tyres and tubes (trucks, buses, cars and light vehicles), jute products, ceramics, electrical goods, pharmaceutical, cotton/woolen textile, etc. Paper and paper board industry is also concentrated in district Sheikhupura.

Demand Based Industries:

District Sheikhupura is one of the major industrially developed districts of the country. It possesses requisite physical/social infrastructure facilities and developed industrial base. Therefore, in view of overall provincial/national requirements and export potential, there exists good prospects for pharmaceutical, cosmetics, disposable syringes, glass ampoules, artificial leather, fibre glass, boilers, pumps and compressors, ball bearing, generators, foundry and forging, automobile transmission, etc.

List of Identified Projects:

The following industrial units have been identified for investment in district Sheikhupura

- Auto Parts
- Artificial Leather
- Automobile Transmission
- Corn Oil
- Cosmetics
- Furniture
- Fertilizer
- Fiber Glass
- Foundry and Forging
- Leather Products
- Packaging Unit
- Pharmaceutical
- Wood Pulp for Paper Industry

Livestock:

There are 28 tanneries, one milk processing unit, one ice cream unit, 11 leather products units and 5 leather shoes units already operating in the district. In view of the above, there exist good prospects for dairy farms, cattle/goat/sheep fattening farms, leather garments, leather products, etc.

Agriculture:

Major crops and fruit of district Sheikhupura are sugarcane, wheat, rice and guava. A variety of vegetables are also grown in the district. There are 23 flour mills, 93 rice mills, 4 fruit juices, 4 solvent extraction units and 15 vegetable ghee/cooking oil units already operating in the district. In view of the availability of various raw-materials and existing industries, there exist little additional scope for flour mills and rice husking units. However, there exist good prospects for fructose from rice bran, rice husk briquettes, corn oil, furfural from maize cobs, fruit juice/pickles/squashes and vegetables dehydration units.

Education:

Chand Bagh School is an independent boarding school for boys at Muridke in Sheikhupura District, Punjab, Pakistan, approximately 40 km north of Lahore. The school opened in September 1998, having been conceived as a Pakistani version of The Doon School of India. The name "Chand Bagh" refers to the Doon School's estate at Dehradun, India. The origins of the school lie in the independence of Pakistan in 1947 and the series of Indo-Pakistani wars and conflicts which have since followed. In 1985 a group of Pakistan's "Ex-Doscos", alumni of the Doon School, who had attended it in the days of British India, travelled to Dehradun in India to attend the school's 50th anniversary celebrations. On their return they formed a Doon School Society of Pakistan, which aimed to create a Pakistani version of their old school. After many years in gestation, the school was finally founded by Lieutenant General Ghulam Jilani Khan, a former Governor of the Punjab Province, himself a Dosco, and ten fellow-trustees. In many respects Chand Bagh is modelled on Doon School, Dehradun.

The name "Chand Bagh" means "moon garden" and was chosen in memory of the original Doon School, which had been established in 1935 on the Chand Bagh estate at Dehradun, now in the Indian state of Uttarakhand.

The principal architect of the new buildings, which have Romanesque influences, was Kamil Khan Mumtaz. The school opened its doors in September 1998 and occupies a campus of some 190 acres. Around the campus are the Chand Bagh Farms, a further 270 acres.

Archaeological sites of the District:

Sheikhupura, on the outskirts of Lahore, derived its name from a nickname for Prince Jahangir. It was one of Jahangir's princely dominions during his father Akbar's reign, just north of Sheikhupura town lies a hunting complex known as the Hiran Minar. Hunting grounds were an important part of the physical environment of Mughal emperors, and the Hiran Minar is one of the best known and most beautiful of such sites. Sheikhupura has a number of historical places in the city which attracts visitors to the city:

- Hiran Minar
- Sheikhupura Fort (Qila Sheikhupura)
- Company Bagh
- Shrine of Shah Jamal
- Muqadssa-e-Mariam
- Sacha Sodha
- Tomb of Mian Sher Muhammad Sharaqpuri

Notable persons:

Aaqib Javed; played as fast bowler for Pakistan cricket team.

Anjum Saeed; played one Olympics for Pakistan hockey team.

Anzhelika Tahir; Miss Pakistan World 2015, a beauty queen from Pakistan.

Ghulam Jilani Khan; the founder of the Chand Bagh School

Kulwant Singh Virk; author

Mohammad Asif; a right arm medium fast bowler in cricket

Muhammad Javed Butta; a former justice of Supreme Court of Pakistan

Nawab Kapur Singh; one of the pivotal figures of the Sikh Confederacy and founder of the Singhpuria Misl.

Rana Naved-ul-Hasan; player for the Pakistan National Cricket Team

Rana Tanveer Hussain; Federal Minister

Saeed Anwar; played three Olympics for Pakistan hockey team.

Sheikh Salim Chishti; Sufi saint of the Chishti Order during the Mughal Empire

Waris Shah; A Great Punjabi Sufi Poet

Zaka Ullah Bhangoo; Pakistani army aviator

Zia Ullah Khan; attributed with major contributions in the military such as serving as Corps Commander of XII Corps Quetta<ref>'XII Corps (Pakistan)'

Quality of Life Values:

Recreational Resources and Development:

The project area has not any private recreational facilities.

Aesthetic Values:

Like the general trend among the citizens of area, most of the people have low awareness about environment. Even then, some people take cleanliness and neatness of the environment lightly. Some people throw municipal solid wastes (MSWs) on the streets. Sense of personal responsibility to keep the environment clean as good citizens is even now lacking among a few people.

Archaeological and Historical Treasures:

Archaeological or historical treasures within the project area are not available.

CHAPTER 4:

CONSIDERATION OF ALTERNATIVES

CHAPTER # 4

Consideration of the Alternatives

Site alternatives, their selection and rejection criteria

Rejected sites

Rejected site A

Alternative site that was considered was near to Gujranwala. Alternative site was not suitable because following factors:

i. Proponent was not owner of this land
ii. Site was adjacent to populated area

Rejected site B

Alternative site that was considered was near to Jaranwala. Alternative site was not suitable because following factors:

i. Available site was rich in nutrients and was best for agricultural purpose.

ii. Area was not large enough for establishment for the project

iii. Heavy traffic movement cause major issue of traffic management

Selected site

Subject project site is located at 1.5 Warburton Road, Feroze Wattoan, Sheikhupura. The aim of proposed project is to textile processing unit (dyeing, printing, washing, home textile and apparel cut to pack & wastewater treatment plant) under the name of Sapphire textile Mills Ltd. as a world class multiuse space for fashion good manufacturing industries.

Reason of selecting existing site:

- Easy access of road, power supply and other basic facilities.
- Economically Feasible
- No vegetation clearance
- Land is plain
- Availability of water is plenty

Design/Technology alternatives, their selection and rejection criteria

The proposed project will consist of establishment of textile processing unit under the name of M/S Sapphire Textile Mills Ltd. The final product is apparel products. The subject project will involve the textile processing (Dyeing, printing washing) to get high quality product.

Textile processing (Dyeing, printing washing) are conventional methods and have some limitations. The preference is given to most advance and eco-friendly methods in all over the project process. State of the art technology will be installed so that it may not release any harmful chemicals or emissions into the environment.

Environmental alternatives, their selection and rejection criteria

The project is located in the outskirt of Sheikhupura District. The site is located at an industrial zone. Construction of project in this area will have minimal impact on the daily life people living in Sheikhupura. The project proponent is recommended to make sure that emission produced during the project operations are within the PEQS limits. The Proponent has ensured that that wastewater treatment will be installed within the proposed project.

Economic alternative, their selection and rejection criteria

The project proponent intends to Construction of Textile Processing Unit by Sapphire Textiles Mills Ltd. With Installation of Wastewater Treatment Plant under the name of M/S Sapphire Textile Mills Ltd. This project will provide employment 200 laborer during construction phase and 300 workers and managerial staff at operation phase. This project will accelerate the economic development of the district Sheikhupura and in turn Pakistan.

CHAPTER 5

SCREENING OF ENVIRONMENTAL POTENTIAL IMPACTS & MITIGATION MEASURES

Chapter # 5

Screening of Potential Environmental Impacts & Their Mitigation Measures

Assessing Impacts

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 operation of the said project have been assessed and mitigation measures have been suggested in this report.

Methodology for Impact Evaluation:

The methodology adopted for impact evaluation includes the Modified Leopold Matrix.

Leopold Matrix

The analysis is performed with the Leopold Matrix (LM). This matrix has

1. On the horizontal axis, the actions which cause environmental impact, and
2. On the vertical axis, the existing environmental conditions which may be affected by those actions.

This provides a format for comprehensive review of the interactions between proposed actions and environmental factors.

The most important blocks marked are evaluated individually, and a number between 0 and 10 is placed in the upper left-hand corner to indicate the relative magnitude of the impact (0 represents the least magnitude, and 10 the greatest). Likewise, a number between 0 and 10 is placed in the lower right-hand corner to indicate the relative importance of the impact (again, 0 represents the least magnitude and 10 the greatest).

Scale Table of Importance & Magnitude

Sr. No.	Type of Impact	Scale of Magnitude (0 – 10)	Scale of Importance (0 – 10)
1	No Impact	0	0
2	Low Impact	1 – 4	1 – 4
3	Medium Impact	5 – 6	5 – 6
4	High Impact	7– 10	7– 10

Construction Phase

Magnitude / Importance			Actions: Transportation of raw material	Construction Activities	Operation of generators	Water consumption	Wastewater generation	Storage of raw materials	Social activities	Public welfare	Economic activities	Employment	Infrastructure improvement	Total Score of Impact	Average Score of Impact
PHYSICAL ENVIRONMENT	Soil	Soil Quality	2 / 1	3 / 2	0 / 0	1 / 1	5 / 2	4 / 4	1 / 1	0 / 1	1 / 1	1 / 3	4 / 6	22 / 22	2 / 2
		Erosion	2 / 1	6 / 6	0 / 0	0 / 0	2 / 2	1 / 1	2 / 1	0 / 0	1 / 1	1 / 1	3 / 4	18 / 17	1.6 / 1.5
		Geomorphology	0 / 0	5 / 5	0 / 0	4 / 2	5 / 3	2 / 1	0 / 0	0 / 0	1 / 1	2 / 1	4 / 6	23 / 19	2.09 / 1.7
	Water	River	0 / 0	0 / 0	0 / 0	6 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	6 / 0	0.5 / 0
		Coastal Zone	0 / 0	0 / 0	0 / 0	6 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	6 / 0	0.5 / 0
		Subsurface Water	1 / 2	1 / 1	0 / 0	7 / 8	5 / 7	1 / 1	0 / 0	0 / 0	1 / 1	0 / 0	2 / 2	18 / 22	1.6 / 2
		Sea Quality	0 / 0	0 / 0	0 / 0	3 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 0	0.2 / 0
	Air	Air Quality	5 / 5	8 / 8	7 / 7	6 / 1	5 / 4	4 / 4	5 / 5	1 / 1	6 / 4	4 / 6	8 / 8	54 / 53	4.9 / 4.8
		Odors	1 / 1	1 / 1	3 / 3	0 / 0	5 / 7	4 / 6	1 / 1	0 / 1	0 / 1	1 / 1	1 / 1	17 / 23	1.5 / 2.0
		Noise	5 / 6	9 / 10	7 / 8	0 / 0	5 / 4	2 / 2	5 / 6	0 / 1	5 / 6	4 / 6	4 / 6	46 / 55	4.1 / 5
Total Score of Impact			16 / 16	33 / 33	17 / 18	33 / 12	32 / 29	18 / 19	14 / 14	1 / 4	15 / 15	14 / 18	26 / 33	-	-
Average Score of Impact			1.6 / 1.6	3.3 / 3.3	1.7 / 1.8	3.3 / 1.2	3.2 / 2.9	1.8 / 1.9	1.4 / 1.4	0.1 / 0.4	1.5 / 1.5	1.4 / 1.8	2.6 / 3.3	-	-

Construction phase

Magnitude / Actions

BIOLOGICAL EVIRONMENT		Importance												Total Score	Average
	Flora	Forest	2 / 1	3 / 5	2 / 2	5 / 1	5 / 1	2 / 0	3 / 1	0 / 1	3 / 1	4 / 1	1 / 2	30 / 16	2.7 / 1.5
	Flora	Crops	2 / 2	5 / 6	3 / 2	0 / 0	4 / 6	2 / 2	2 / 3	4 / 3	5 / 7	3 / 3	3 / 3	33 / 37	3 / 3.3
	Flora	Wetlands	0 / 0	0 / 0	0 / 0	3 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
	Flora	Sea Grasses	0 / 0	0 / 0	0 / 0	3 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 0	0.5 / 0
	Flora	River Flora	0 / 0	0 / 0	0 / 0	3 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 0	0.5 / 0
	Fauna	Mammals	5 / 4	6 / 7	2 / 2	2 / 1	4 / 3	2 / 1	3 / 3	0 / 0	4 / 3	3 / 4	3 / 3	34 / 31	3.3 / 2.8
	Fauna	Birds	2 / 2	7 / 7	5 / 5	2 / 1	4 / 4	1 / 1	5 / 4	0 / 0	5 / 5	3 / 4	4 / 4	34 / 37	3.4 / 3.3
	Fauna	Fishes	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
	Fauna	Other Vertebrates	5 / 4	6 / 7	2 / 2	2 / 1	4 / 3	2 / 1	3 / 3	0 / 0	4 / 3	3 / 4	3 / 3	34 / 31	3 / 2.8
	Fauna	Invertebrates	6 / 6	6 / 7	2 / 2	4 / 3	5 / 4	4 / 3	4 / 4	1 / 1	4 / 3	3 / 4	3 / 3	42 / 40	3.8 / 3.6
	Ecosystem	Ecosystem Quality	2 / 1	5 / 6	5 / 5	5 / 5	5 / 6	4 / 4	5 / 5	1 / 1	4 / 5	3 / 3	2 / 2	41 / 43	3.7 / 3.9
	Ecosystem	Ecosystem Destruction	2 / 2	5 / 6	4 / 4	2 / 2	5 / 6	2 / 2	4 / 4	0 / 0	4 / 5	3 / 3	2 / 2	33 / 36	3 / 3.2
	Total Score of Impact		26 / 22	43 / 51	29 / 24	28 / 14	36 / 33	21 / 2	29 / 27	6 / 6	33 / 32	25 / 26	21 / 22		
	Average Score of Impact		2.1 / 1.8	3.5 / 4.2	2.4 / 2	2.3 / 1.1	3 / 2.8	1.75 / 2	2.4 / 2.2	0.5 / 0.5	2.7 / 2.6	2 / 3.1	1.7 / 1.8		

Construction Phase

Magnitude	Actions	Total Score	Average

SOCIO-ECONOMIC EVIRONMENT		Importance	Transportation of raw material	Construction Activities	Operation of generators	Water consumption	Wastewater generation	Storage of raw materials	Social activities	Public welfare	Economic activities	Employment	Infrastructure improvement		
	Land Use	Rural	2 / 1	5 / 6	5 / 5	5 / 4	5 / 7	2 / 3	5 / 4	5 / 6	4 / 5	7 / 8	7 / 7	52 / 56	4.7 / 5
		Fisheries	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	6 / 7	0 / 0	0 / 0
		Urban	3 / 4	6 / 6	7 / 7	5 / 5	7 / 8	5 / 5	6 / 5	4 / 4	5 / 6	7 / 8	6 / 7	61 / 65	5.5 / 5.9
		Industrial	5 / 6	7 / 7	5 / 5	4 / 6	6 / 7	4 / 5	6 / 6	5 / 6	8 / 8	9 / 9	7 / 7	66 / 72	6 / 6.5
		Recreational Use	2 / 3	3 / 4	2 / 3	3 / 3	3 / 3	1 / 1	3 / 4	4 / 5	4 / 5	2 / 1	4 / 3	31 / 35	2.8 / 3.1
	Patrimony	Landscape	3 / 3	6 / 7	1 / 1	4 / 3	5 / 5	4 / 2	3 / 3	3 / 3	6 / 6	3 / 2	4 / 4	42 / 39	3.8 / 3.5
		Historical Cultural	2 / 2	7 / 7	2 / 2	2 / 1	4 / 4	1 / 1	5 / 4	4 / 4	5 / 5	3 / 4	4 / 4	39 / 38	3.5 / 3.4
		Heritage	2 / 2	7 / 7	2 / 2	2 / 1	4 / 4	1 / 1	5 / 4	4 / 4	5 / 5	3 / 4	4 / 4	39 / 38	3.5 / 3.4
		Wilderness Quality	2 / 2	2 / 1	2 / 2	2 / 1	4 / 3	1 / 1	3 / 3	1 / 1	4 / 3	1 / 1	2 / 2	24 / 20	2.1 / 1.8
	Social	Population Density	5 / 4	6 / 7	4 / 4	5 / 4	4 / 3	2 / 1	5 / 5	3 / 3	4 / 3	5 / 4	6 / 7	49 / 45	4.5 / 4.1
		Employment	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
		Hazards	5 / 4	6 / 7	2 / 2	2 / 1	4 / 3	2 / 1	3 / 3	1 / 1	4 / 3	5 / 4	4 / 5	38 / 34	3.4 / 3.1
	Total Score of Impact		31 / 35	55 / 59	38 / 35	36 / 29	46 / 44	23 / 21	44 / 41	34 / 37	49 / 49	42 / 44	50 / 57		
	Average Score of Impact		2.8 / 3.4	5 / 5.56	3.4 / 3.4	3.2 / 2.6	4.1 / 4.4	2.1 / 1.9	4 / 3.7	3.1 / 3.4	4.5 / 3	3.8 / 4	4.5 / 5.4		

Operational Phase													
Magnitude	Actions											Total Score of	Average Score
	Tr an sp	Pr od uc	O pe rat	W at er	W as te	St or ag	So ci al	Pu bli c	Ec on o	E m pl	In fr as		

		Importance														
PHYSICAL	Soil	Soil Quality	2 / 1	3 / 2	0 / 0	1 / 1	5 / 2	4 / 4	1 / 1	0 / 1	1 / 1	1 / 3	4 / 6	22 / 22	2 / 2
		Erosion	2 / 1	6 / 6	0 / 0	0 / 0	2 / 2	1 / 1	2 / 1	0 / 0	1 / 1	1 / 1	3 / 4	18 / 17	1.6 / 1.5
		Geomorphology	0 / 0	5 / 5	0 / 0	4 / 2	5 / 3	2 / 1	0 / 0	0 / 0	1 / 1	2 / 1	4 / 6	23 / 19	2.09 / 1.7
	Water	Surface Water	0 / 0	0 / 0	0 / 0	6 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	6 / 0	0.5 / 0
		Subsurface Water	1 / 2	1 / 1	0 / 0	7 / 8	5 / 7	1 / 1	0 / 0	0 / 0	1 / 1	0 / 0	2 / 2	18 / 22	1.6 / 2
	Air	Air Quality	2 / 1	6 / 6	0 / 0	0 / 0	2 / 2	1 / 1	2 / 1	0 / 0	1 / 1	1 / 1	3 / 4	18 / 17	1.6 / 1.5
		Odors	1 / 1	1 / 1	3 / 3	0 / 0	5 / 7	4 / 6	1 / 1	0 / 1	0 / 1	1 / 1	1 / 1	17 / 23	1.5 / 2.0
		Noise	5 / 6	9 / 10	7 / 8	0 / 0	5 / 4	2 / 2	5	0 / 1	5 / 6	4 / 6	4 / 6	46 / 55	4.1 / 5
BIOLOGICAL	Fauna & Flora	Crops	2 / 2	5 / 6	3 / 2	0 / 0	4 / 6	2 / 2	2 / 3	4 / 3	5 / 7	3 / 3	3 / 3	33 / 37	3 / 3.3
		Birds	2 / 2	7 / 7	5 / 5	2 / 1	4 / 4	1 / 1	5 / 4	0 / 0	5 / 5	3 / 4	4 / 4	34 / 37	3.4 / 3.3
		Mammals	5 / 4	6 / 7	2 / 2	2 / 1	4 / 3	2 / 1	3 / 3	0 / 0	4 / 3	3 / 4	3 / 3	34 / 31	3.3 / 2.8
SOCIO-ECONOMIC	Social	Industrial	5 / 6	7 / 7	5 / 5	4 / 6	6 / 7	4 / 5	6 / 6	5 / 6	8 / 8	9 / 9	7 / 7	66 / 72	6 / 6.5
		Recreational Use	2 / 3	3 / 4	2 / 3	3 / 3	3 / 3	1 / 1	3 / 4	4 / 5	4 / 5	2 / 1	4 / 3	31 / 35	2.8 / 3.1
		Historical / Cultural	2 / 2	7 / 7	2 / 2	2 / 1	4 / 4	1 / 1	5 / 4	4 / 4	5 / 5	3 / 4	4 / 4	39 / 38	3.5 / 3.4

Overall, the impact of project is positive in term of employment and infrastructure improvement. Mostly the average values are falling in 0.2-6.5 range which means the overall impact will be low to moderate. Due to the construction activities dust and gases will generate which may affect ambient air quality, the biological environment will disturb at low level and socio-economic environment will disturb at low moderate level At operation phase any impacts will be managed through control technologies . To counter with the negative impacts Environmental Management plan is formulated which will be ensured by the project proponent. Beside this Environmental monitoring plan is also formulated for Environmental monitoring of various parameters which will be also implemented by the proponent.

Impact analysis and prediction:

In order to evaluate the socioeconomic and environmental impacts, filed surveys are extremely essential. In addition to the surveys, 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. 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 said 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:

Impact assessment criteria:

The impacts were assessed in the light of criteria given as under: -

- Magnitude or degree of impact
- Time and duration of impact
- Likelihood of impact occurrence
- Sensitivity of impact
- Risk related to impact

Environmental Parameters:

Environmental Impacts due to Project Location:

Project is present in the area of the District Sheikhupura. This unit is being constructed in already allocated industrial area. The project is proposed construction of Textile processing unit; the site does not fall in the category of sensitive area and no environmentally sensitive localities exist within radius of study area. Access road network is available at the project site. If the project

proponent maintains HSE conditions and comply with the PEQS limits than, there will not be any significant impacts of the project on the environment.

If the mitigation measures are effectively implemented, the residual impact of the Subject project activities on the area's geophysical environment is expected to be insignificant.

Impact significance: Low to moderate

Nature of impact: Direct

Duration: Long-term

Timing: Construction & Operation phase

Reversibility: NA

Likelihood: Low

Consequences: Mild or may be positive

Mitigation Measures

- Project site will have good and efficient road infrastructure that already exists there at the project site.
- Location can be considered as the positive impacts due to enhanced infrastructure.
- The project will also have positive socioeconomic impacts because of provision of jobs to the local residents of the area.
- No human settlement within the radius of the study area
- There would be no issue of congestion of traffic due to presence of good road network in the area.
- Provision of embankments, designed by considering the Geotechnical investigation studies. Due consideration should be given to aesthetic improvement during the design phase.

Land Acquisition Resettlement:

One of the major impacts may include acquisition of land from the land owners and the resulting displacement of their families and disturbances in the livelihood of the affected persons (AP) in

the project area. But present project land is ownership of M/S Sapphire Textile Mills Limited and will not involve any type of land acquisition and resettlement activity.

Nature of impact: direct

Timing: Planning stage

Duration: not applicable

Likelihood: Nil

Consequences: no change

Impact significance: Not significant

Mitigation measures:

No resettlement will be involved.

Environmental Impacts due to the Project Design

Subject project is proposed Construction of Fabric Processing unit under the name of M/s Sapphire Textile Mills Limited. Area for parking, wastewater treatment facility and solid waste management will be reserved within industry. Firefighting plan, health & safety plan, tree plantation plan, emergency response plan will be incorporated during the design phase of the project.

Following are the major Environmental impacts due to the development related to the design:

- Low utilization of available space
- Soil structure and soil bearing capacity
- Improper road infrastructure design
- Emergency exit in the proposed project
- Firefighting system
- Wastewater disposal system design
- Rain water harvesting capacity of the drainage system
- Electricity hazards
- Low social acceptability & functionality of design

Impact significance: moderate to high

Nature of impact: direct

Duration: Long-term

Timing: Constructional phase & Operation phase

Reversibility: NA

Likelihood: moderate to high

Consequences: moderate to high

Mitigation measures and recommendations

Following are the mitigation measures and recommendations to minimize the anticipated impacts:

- Industrial unit will incorporate all HSE measures regarding the design of project.
- Structure stability of the building should be ensured.
- Emergency exist points should be marked within the project building and in overall plan.
- Firefighting system should be designed for the emergency situations.
- Electricity system should be design safe and sound.
- Electricity wires should be covered by thick plastic/electricity resistant covers.
- Design should be professional which accommodate the maximum space and has high social acceptability & functionality

Environmental Impacts during Construction Phase:

Impacts on Physical Environment

Topography

Project has plan land and some digs. In the proposed area there are little trees and excavation and leveling is involved in this construction.

Impact:

- Change in topography due to excavation
- Land filling of the area

- Construction of roads

Impact significance: Low

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Very Low

Mitigation:

- Cuttings of trees will be avoided
- Use of existing paved tracks as many as possible.
- Working should be in such a way that minimum excavation is involved

Air Quality:

Air quality will be affected by fugitive dust emissions from construction machinery; dust from the unpaved surface and construction vehicles. The critical sources of dust pollution during the construction phase will be;

- Unpaved road surface
- Transportation of materials and other construction activities that create dust emissions

Impact significance: Low

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Very Low

Impact:
Air quality deterioration, particulate matter/dust emissions due to construction activities; stand by generator (if any), equipment's and vehicle.

Mitigation:

- Sprinkling of water on track will reduce dust pollution
- Provision of dust masks for workers.
- Air quality monitoring is recommended on regular base
- Proper paved road infrastructure is recommended
- All vehicles, machinery, equipment and generators used during construction activities should be kept in good working condition and be properly tuned and maintained in order to minimize the exhaust emissions
- Blowing of dust and particulate matter from stockpiled loose materials (e.g., sand, soil) should be avoided either by sheeting them with tarpaulin or plastic sheets or by sprinkling them with light shower of water
- Open burning of solid waste from the Contractor's should be strictly banned;

Noise
Noise is a by-product of human activity, and area of exposure increases as function of mobility and construction activities. Sources of noise during construction are heavy machinery such as bulldozers, excavators, stabilizers and other equipment. Noise generated by construction machinery is likely to affect sensitive receptors located within 50 meters of the proposed Project.

Impact

- Persistently higher noise levels can produce psychological effects of distraction of attention, irritation and short temperedness in the exposed persons
- Noisy settings and higher background levels can cause temporary threshold shift and the consequent habit of speaking loudly, which may cause damage to vocal cords in the persons exposed
- Noise produced from moving construction vehicles and blowing of pressure horns, at times, could be intolerable particularly during quiet hours of night

Impact significance: Low

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Low

Mitigation:

- Selection of up-to-date and well-maintained plant or equipment with reduced noise levels ensured by suitable in-built damping techniques or appropriate muffling devices
- Confining excessively noisy work to normal working hours in the day, as far as possible
- Providing the construction workers with suitable hearing protection like ear cap, or earmuffs and training them in their use
- Preferably, restricting construction vehicles movement during night time
- Vehicles and equipment used should be fitted, as applicable, with silencers and properly maintained
- Use of low noise machinery, or machinery with noise shielding and absorption
- Contractors should comply with submitted work schedule, keeping noisy operations away from sensitive points; implement regular maintenance and repairs; and employ strict implementation of operation procedures

Water Resources

There will be no significant surface water resource of the project area so there will be no impact on surface water quality during the construction of the project area. Persistent and prolonged withdrawal of groundwater higher than the safe yield limits of the aquifer can initiate early depletion of aquifer. This situation can result in reduced water supplies for other users who share the same groundwater resource. Abstraction of the groundwater over and above the safe yield limit can produce serious hydrological and environmental consequences.

Impact:

- Early depletion of the aquifer resources
- Persistent lowering of the water table
- Reduced availability or non-availability of the groundwater to the neighboring communities sharing the same aquifer

These impacts are temporary and minor negative in nature

Impact significance: Low

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Low

Mitigation:

- Water required for construction will be obtained in such a way that the water availability and supply to nearby communities remain unaffected
- Regular water quality monitoring according to determined sampling schedule
- Prohibit washing of machinery and vehicles in surface waters, provide sealed washing basins and collect wastewater in sedimentation/retention pond
- Continuous withdrawal and over pumping of groundwater should be avoided. Instead, intermittent pumping be carried out to conserve the groundwater resources
- Take precautions construct temporary or permanent devices to prevent water pollution due to increased siltation

Soil

The project area is open land with no paved area. Soil erosion and contamination may occur on site due to the following likely impacts:

Impact:

- Excavation of earth/cutting operations

- Land leveling activities
- If the excavated area will be left unfilled for long, which may lead to rainfall induced soil erosion;
- The unspent materials and debris produced from consumed up materials, if left as such and allowed to mix with soil underneath, can degrade the quality of receiving soils and may render them unfit for plantation later on
- Leakages of oils, lubricants, chemicals, and other similar substances from their storage sites and from engines of the generators, machines, equipment and vehicles can spoil the receiving soils and may undermine ability of the spoiled soils to support growth of vegetation and plants (if any)
- Non-provision of septic tanks with the temporary worksite toilets, constructed for the labor and others, can contaminate the effluent receiving soils because of raw nature of the effluents
- Washing of the gadgets, machinery and equipment without proper drainage of the washout water can adversely affect the soil quality. This impact is, however, temporary.
- Onsite storage of the construction materials such as sand, aggregate, crushed stone, cement, bricks, lubricants, fuels and iron bars on the land without an intervening barrier, can degrade soil quality and may smear them with fine particulates of the dumped material

Impact significance: Low to Moderate

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Low

Mitigation:

- Non-bituminous wastes from construction activities will be dumped in approved sites, in line with the legal prescriptions for dumpsites, and covered
- As applicable and needed, plantation of grasses and shrubs will be done at appropriate place where required
- Unnecessary excavations should be avoided
- Oils, lubricants, chemicals, and other listed hazardous materials should be stored safely at their designated spots, enclosures or store rooms, which should be safe from rainfall and away from any potential source of fire
- Septic tanks of adequate capacities should be constructed for receiving and treating wastewater from all temporary worksite toilets and at the temporary container offices, if any. The toilet wastewater should not be discharged untreated onto the adjacent lands
- All machineries and materials should be stored at the designated areas and compounds
- All the unspent and left-over materials should be completely removed offsite upon completion of construction
- Washout from washing of equipment and gadgets should be drained into either a septic tank or a sand-gravel bed for removal of the grit and contaminants

Wastewater Impact:

Wastewater generation due to construction activities. Sources of wastewater during construction include;

- Construction site surface runoff
- Wastewater from vehicle washing
- Wastewater from boring works

Mitigation:

- Wastewater generated during construction and domestic activities will be stored temporarily in septic systems comprising of septic tanks from where it will be routed to local drain/ nallah present near the project.
- Waste segregation measures will be employed to minimize entry of solid waste into the wastewater stream.

- An appropriately designed septic tank will be used to treat sewage/wastewater to achieve PEQS
- Periodic cleaning of the septic tank is recommended.

Solid Waste

Due to construction activities waste will be generated at construction and contractors camp site. The construction waste will include wastewater, oil spillage from machinery, domestic waste and solid waste etc. The handling and storage of oil, asphalt/bitumen may be a source of environmental pollution as a hazardous waste. This will result in unhygienic conditions, health risk to work force and public at the camp site.

Impact

- Insecure and unhygienic disposal of the solid wastes generated at the worksite, particularly garbage and trash may cause degradation of soil and land
- Insecurely disposed off heaps of wastes containing kitchen garbage and food waste can serve as breeding grounds for the disease spreading vectors and rodents
- Throwing away of solid wastes into water channels and the wastewater network can result into choking of the latter.

Impact significance: Low

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Moderate

Mitigation:

- An efficient and responsive solid waste management system should be devised for the entire duration of the construction phase. Such a system should provide for separate collection of different categories of constructional wastes. The wastes which will be

reusable/recyclable (iron bars, aluminum) should be sold to waste vendors and those which cannot be sold out (brick pieces) may be used as a filling material for leveling the depressions, subject to technical feasibility

- Training of working force in the storage and handling of materials and chemicals that can potentially cause soil contamination
- Solid waste generated during construction and camp sites will be safely disposed in demarcated waste disposal sites or handed over to the contractor

Health and Safety

Health risks and work safety problems may result at the workplace if the working conditions provide unsafe and/or unfavorable working environment and due to storage, handling and transport of hazardous construction material. Workers should be provided with safe and healthy working environment taking into account risks inherent to the particular sector and specific classes of hazards in project area. Mitigation measures will include:

Impact significance: Low to Moderate

Nature of impact: Direct

Duration: Short-term

Timing: Constructional phase

Reversibility: NA

Likelihood: moderate

Consequences: Moderate

Mitigation:

- Providing basic medical training to specified work staff and basic medical service and supplies to workers
- Layout plan for site, indicating safety measures taken by the contractor, e.g., firefighting equipment, safe storage of hazardous material, first aid, security, fencing, and contingency measures in case of accidents

- Work safety measures and good workmanship practices are to be followed by the contractor to ensure no health risks for laborer's
- Protection devices (ear muffs) should be provided to the workers doing job in the vicinity of high noise generating machines
- Provision of adequate sanitation, washing, cooking and dormitory facilities including light up to satisfaction
- Provision of protective clothing for laborers handling hazardous materials, e.g., helmet, adequate footwear for bituminous pavement works, protective goggles, gloves etc.
- Ensure strict use of wearing these protective clothing during work activities
- Instruct foremen to strictly enforce the keeping out of non-working persons, particularly children, off work sites
- Adequate signage, lightning devices, barriers, yellow tape and persons with flags during construction to manage traffic at construction sites, haulage and access roads.

Impact on Biological Environment

There is no any fauna or flora is present on the proposed project site. Few trees are there. On their behalf a complete plantation plan has been provided.

Impact on Socio-economic Environment

Economic Activity

Due to the construction of the proposed Project, economic activity will be generated in the project area as the laborers and semi-skilled staff will have an opportunity to work for the construction of the proposed project. This will help in developing their skills and capacities. This is a moderate positive impact.

Lifestyle and Culture

There are chances of arising of issues related to cultural differences/conflict between the Contractor's workforce and the local inhabitants, conflicts arising due to the mix of local and migratory job seekers as the use of local resources and products will be increased. In this situation, local residents may resist contractor's workforce attitudes, cultural clashes particularly when local/international contractors are engaged, social disturbance and dissatisfaction with employing outsiders may arise. This impact is temporary and minor negative in nature.

Mitigation

- Timely public notification and announcement of mobilizing equipment
- Local labor should be employed for construction works

Analysis of Impacts and Recommended Mitigations

Impacts during Operational Phase:

The positive and negative impacts of subject project, during its operation are discussed below:

Impacts on Physical Environments

Solid waste/ sludge management:
In the operation of said project proper solid waste management system will be adopted for the prompt, timely and efficient disposal of solid waste & sludge for the reduction of its impacts. Impacts due to solid waste & sludge may be temporary and minor in nature.

Nature of impact: Direct

Duration: Short term

Timing: operation

Reversibility: Not applicable

Likelihood: Low (unlikely) if mitigation measures are being ensured that Solid waste management in efficient way.

Consequences: Mild, as removed from site within few hours

Impact significance: Low, based upon low likelihood and mild to moderate consequence.

Mitigation measures: Devise plan & develop guidelines for the safe handling, storage & disposal;

- Sludge is placed at the site after cleaning of wastewater treatment facility;
- PPEs are strongly recommended for workers for the handling of sludge;
- Separate bins at various places must be present for solid waste collection and segregation;

- Process Waste will be handed over to Local waste contractor;
- Packaging waste will be recycled within the factory;
- Industrial ecology practices will be implemented wherever possible;

Wastewater

Wastewater produced only from domestic activities.

Nature of impact: Direct

Duration: Short term

Timing: Operation

Reversibility: Not applicable

Likelihood: Low

Consequences: Mild

Impact significance: Low.

Mitigation measure

- Wastewater that is finally disposed off, will be in limits of PEQS
- Septic tanks will be available.
- Water conservation approaches will be followed by industry to reduce its wastewater

Gaseous Emissions:

Emissions can be produced by boilers, generators, vehicles and equipment, similar to those produced by generators (if any) in terms of the resulting pollutants (SO_2, NO_X, PM, etc.). However, the extent to which they can produce should keep considerably lower, since much smaller engines will be used in vehicles.

Nature of impact: Direct

Duration: long term

Timing: operation

Reversibility: irreversible

Likelihood: moderate if mitigation measures are being ensured.

Consequences: moderate, if pollutants level in the ambient air will be controlled within acceptable limits by adopting proper mitigations.

Impact significance: moderate, based upon low likelihood and mild to moderate consequence.

Mitigation Measures

- None of the potential effects discussed will exceed to acceptable limits.
- The mitigation measures given below used to reduce their impact, and ensure that they remain within acceptable limits.
- All equipment and vehicles during the operation of project will be properly tuned and maintained in good working condition in order to minimize exhaust emissions.
- Speed limits will be imposed and encourage more efficient journey management worked to reduce the dust emissions produce by vehicular traffic. Water sprinkling will be done where necessary.
- The Industrial Unit will have proper ventilation system incorporated in their layout in order to mitigate indoor pollution like VOCs.
- PPEs will be provided to worker and shit rotation will be ensured to reduce exposure
- Management will make sure that process will be environment friendly

Dust/particulate matter

Particulate/Dust emission can be a major issue during the process of carding and roving which can be a cause of indoor air pollution.

Nature of impact: Direct

Duration: long term

Timing: operation

Reversibility: irreversible

Likelihood: moderate if mitigation measures are being ensured.

Consequences: moderate, if pollutants level in the ambient air will be controlled within acceptable limits by adopting proper mitigations.

Impact significance: moderate, based upon low likelihood and mild to moderate consequence.

Mitigation measures

- The Industrial Unit will have proper ventilation system incorporated in their layout in order to mitigate indoor pollution like dust and particulate matter
- PPEs will be provided to worker and shit rotation will be ensured to reduce exposure

Energy Requirement

Energy consumption in industrial area is usually very high. Machinery work runs all day in different industries. Energy conservation technique should be in mind.

Mitigation measures

- Do not waste the energy/electricity when there is no need of it.
- Use energy efficient machinery and equipment
- Use energy saving products
- Conduct and maintain records for energy audits
- Do not leave the machinery in running form when there is no working being done
- Machinery must never be left unattended

Noise level:

Noise will be the major concern during the operation phase. It can be generated from the traffic on the road and from the machinery used for operations.

Nature of impact: Direct

Duration: long term

Timing: operation

Reversibility: Not applicable

Likelihood: low

Consequences: slightly significant

Impact significance: moderate, based upon low likelihood and mild to moderate consequence.

Mitigation measures:

- Machinery and vehicles will be tuned and maintained
- Limits will be imposed on unnecessary use of horns

- Safety signs will be displayed. public & drivers will be aware of them

Employment opportunities:

Subject project will help in generating new jobs for the local population. The requirement of Managers, Engineers, Workers, technicians, skilled and unskilled labor etc. About 25-30 persons will be employed during operations phase. Hence, there will be large number of employment opportunities especially for the locals of District

Potential Environmental Enhancement Measures

Following necessary measures should be adopted during operational phase of the project and most of them are being adopted:

- Sprinkling of water will be done on dusty roads and tracks.
- Machinery should 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 should be allowed in any case.
- Machinery will be kept maintained.
- Wastewater will be treated through septic tanks that were installed within the premises of the subject project.
- Proper SOPs are being followed with proper schedule along with the HSE conditions.
- A proper tree plantation plan will be formulated to save the environment.
- Solid waste will be handed over to local contractors.
- Noise will be controlled by adopting proper measures.
- PPEs will be provided to workers during working.
- Hygienic conditions will be ensured and proper quality will be maintained by quality control testing.

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 which may arise by the subject project can be air, water and noise pollution. Other impacts are of minor importance. These impacts may arise during operational phase of the project, during the operational phase of the subject project, it will be ensured that precautionary measures are being adopted, during the activity and post activity to cause minimum impacts to the environment.

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

Negative impacts may arise during the operational phase of the project if proper precautionary measures and procedures will not be followed. If proper precautionary measures and procedures will be i.e., implemented, there should not be any major problem. If any impact would arise due to the subject project activity, it will be addressed on site. Trainings will be conducted on site while other precautionary measures will also be adopted to make the project safe and environmentally friendly.

Where and how the problem should be addressed?

The problem should be address at the site and immediate response should be provided to address the problem which may arise. Institutional capacity responsible for the implementation of EMMP is responsible for addressing such problems if arise.

Whys of achieving mitigation measures

Improved monitoring and management practices:

Management of M/S Sapphire Textile Mills Ltd. will take appropriate measures to provide pollution free and safe environment during the said project activity by implementing improved management practices and monitoring techniques suggested in EMP.

CHAPTER 6:

ENVIRONMENT MANAGEMENT AND MONITORING PROGRAM

Chapter # 6

Environmental Management and Monitoring Program

The primary objectives of the EMMP are to:

1) Facilitate the implementation of the mitigation measures identified in the EIA.
2) Define the responsibilities of the project proponent.
3) Define a monitoring mechanism and identify monitoring parameters in order to:
4) Ensure the complete implementation of all mitigation measures.
5) Ensure the effectiveness of the mitigation measures.
6) Provide a mechanism for taking timely action in the face of unanticipated environmental situations.
7) Identify training requirements at various levels.

Institutional Capacity

The overall responsibility for compliance with the environmental management plan rests with the project proponent. He will appoint an HSE/Project Manager of relevant qualification. HSE/Project Manager will be acting as Environmental Manager and is managing all HSE conditions at the PEQS at current stage of the project.

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.

Training Schedule

Training for the management and workers on environmental aspects of the project will be arranged during the operational phase of the project.

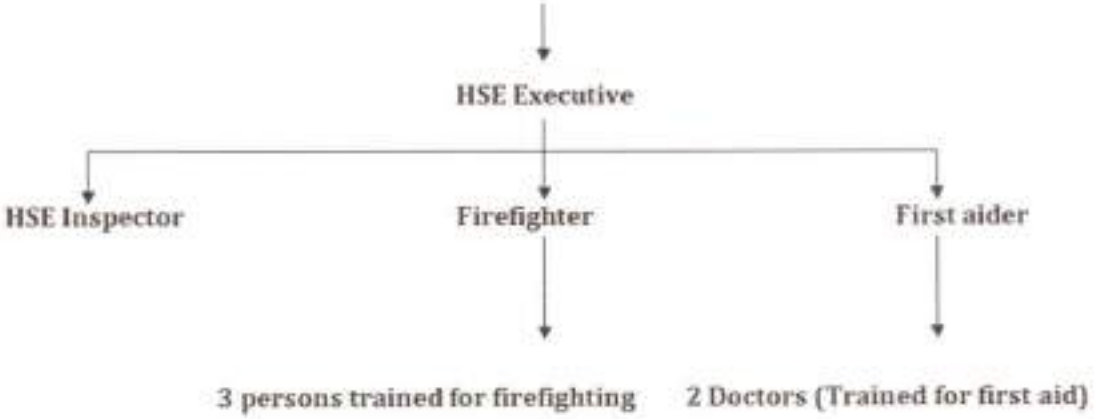


Figure 8: Institutional Capacity for the Implementation of EMP

Management of Textile Spinning unit will be hiring or appointing HSE officer. HSE officer will be responsible for conducting the training of the labor, which will be organized either by the management of Textile Spinning unit. Following schedules of training will be implemented:

Table 7: Training Programs

Sr. No.	Description of program	Labor/ Personnel involved	Time/ duration
1)	General HSE Training	Trainers and whole labor	Quarterly for 1 hour
2)	Instrument use/ workplace specific items	Trainers and whole labor	Quarterly for 1 hour
3)	PPEs use and safe work practices at work site.	Trainers and whole labor	Quarterly for 1 hour

4)	Reporting and investigating accidents/ incidents	Trainers and whole labor	Quarterly for 1 hour
5)	Emergency procedures	Trainers and whole labor	Quarterly for 1 hour
6)	Medical and first aid	Trainers and whole labor	Quarterly for 1 hour
7)	Health and safety promotion	Trainers and whole labor	Quarterly for 1 hour

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

The HSE/Project Manager will train all workers & staff in basic sanitation and health care issues (e.g., how to avoid malaria 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/Project Manager will be conducted Training on quarterly basis regarding health & safety, hygiene, firefighting and first aid

Equipment Maintenance Detail

Subject project is Proposed construction of Textile processing Unit under the name of M/s Sapphire textile Mills Ltd.

The Company should maintain the records for Health, Safety & Environment and hiring HSE manager to check and deal with the HSE issues. The company is maintaining PPEs, medical facilities, firefighting Equipment's as fire buckets, fire hydrants and fire extinguishers and records for their periodic fillings 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. Proponent is allocating a specific amount of total cost of the project as Environmental Budget for meeting the following purposes:

Table 8: Allocation of Environmental Budget

HSE training	On quarterly basis
Maintenance and management of environment	On regular basis
Maintenance of equipment	On regular basis
Restoration	As per requirement
Plantation	During the operation phase
Strategic planning to cope with any emergency situation	As per policy
Formulate the disaster management plan to cope with natural disaster	As per policy

Implementation of all these parameters will be included in the environmental budget. Any equipment failure will not be included in this budget

ENVIRONMENTAL MANAGEMENT PLAN OF M/s Sapphire Textile Mills Limited. (Textile Processing Unit)

Serial No.	Environmental Parameter/ Element	Mitigation measure to be taken during construction stage		
		Construction	Regular operations	Responsibilities
1.	Gaseous/ Dust emissions	1- Construction materials i.e. sand, clay shall be transported to the project site during night time and will be stored away from the road or foot path. They will be kept under cover to avoid any fugitive dust.	Management will ensure that PPEs i.e. masks will be provided to workers during the working hours.	**HSE/Environment Manager**
		2- The site proposed for the construction of Manufucturing Unit is located away from human settlements.	Vehicles to use for the transportation of raw materials Manufucturing Unit, should be properly tuned.	
		3- All equipment, generators, and vehicles used during the project will be properly tuned and maintained in good working	One diesel fired generator shall cater for emergency situation only. Their exhaust will be emitted through an adequately	

		condition in order to minimize exhaust emissions.	fabricated stack. It will also be kept in mind that the generators will only function during emergency condition for limited period.	
		4- All project vehicles will be checked regularly to ensure that engines are in sound working condition and are not emitting smoke.	Monitoring should be conducted on Monthly basis as per EPA PEQS Rules.	
2.	Noise	1- All activities will be under PEQS level of noise during construction phase.	All activities will be under PEQS level of noise during operation phase.	**HSE/Environment Manager**
		2- Ear plugs will be provided & implemented (ensured by the management of Sapphire Textile Mills Limited	PPEs i.e. ear muffs should be provided to workers in case of high noise.	
3.	Health & safety	1- Local people will be informed in advance when work is about to start in an area. This may result in people keeping young children away from work areas.	1- The EMP guidelines will be followed strictly (committed by the management). 2- Training of workers will be conducted regarding health and safety.	**HSE/Environment Manager**

		2- Machinery will never be left unattended. 3- Safe driving practices will be adopted, particularly while passing through settlements. 4- Basic health facilities will be provided to workers. 5- PPEs will be provided & implemented. 6- Electrical wires, D.Bs will be kept covered to avoid electrical hazards.	3- PPEs will be provided and implemented. 4- First aid measures will be provided to workers. 5- Shift Rotation, proper ventilation will be provided to workers in case of thermal stress. 6- Safety signs, safety boards, exit arrows etc. will be placed on site. 7- An Assembling point will be kept to gather in case of emergency situation such as fire hazards. 8- Floors will be kept clean without slippery to avoid any hazard. 9- Firefighting system will be installed to avoid any health hazards. 10- Electrical wires, D.Bs will be kept covered to avoid electrical hazards.	

			11- Machinery will never be left in running condition.	
4.	Generation of domestic & project process related solid waste.	Construction Solid waste will be stored in solid waste bins and will be reused for land filling and maintenance purposes and domestic waste will be handed over to the certified contractors.	Domestic, process related solid waste and sludge will be stored in solid waste bins and will be handed over to certified contractors.	**HSE/Environment Manager**
5.	Waste effluents	Wastewater must be treated	The sewage to be generated shall be treated in current treatment facility of unit & then will be drained out in the nearby Sundar Industrial Estate drain.	**HSE/Environment Manager**
6.	Water supply	It shall be ensured that no activity tempers with the water supply system and water availability	It shall be ensured that no activity tempers with the water supply system and water availability	**HSE/Environment Manager**
7.	Soil erosion	The clearing of vegetation along proposed site will be minimized as far as possible.	Plants will be planted during operation phase of the subject Division.	**HSE/Environment Manager**
8.	Enhancement of aesthetic beauty of	---	1- Flower pots containing flowers and plants will be provided in front of the building to add to the	**HSE/Environment Manager**

	the building and the area.		improvement of the environment around. 2- All other necessary measures will be taken to maintain standards of cleanliness so that the building may add to the scenic/aesthetic beauty of the area around.	
9.	Staff for catering the Environmental Management Plan	---	1- Special staff will be recruited to implement this Environmental Management Plan on regular basis.	**HSE/Environment Manager**
10.	**Sludge from Effluent treatment plant**	----	Sludge will be handle properly and after successful removal from tanks It will hand over to contractors	**HSE/Environment 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 on quarterly basis during operational phase 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.

- **Water quality**

Regular monitoring of water quality should be conducted on monthly basis during operation 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.

Proposed EMP Reporting and Reviewing Procedures

To oversee the environmental performance of the project through its lifecycle to 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.

HSE manager is responsible for reviewing the performance of the project with respect to the guidelines mentioned in EMP related to following aspects:

- Health and safety
- fire safety arrangements,
- emergency evacuation plan
- emergency preparedness response
- provision of PPEs to workers

Internal audits should be done on biannual basis to check to the project performance with respect to the guideline proposed in EMP

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

CHAPTER 7:

STAKEHOLDER PARTICIPATION

CHAPTER # 7

STAKEHOLDERS PARTICIPATION

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.

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 project, an Environmental Impact Assessment (EIA) 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 proposed 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 operational phase of the proposed unit.

The important general objectives of the consultation process are:

- Information dissemination, education and liaison;
- Identification of problems and needs;
- Collaborative problem solving;
- Reaction, comment and feedback on proposed project;
- Documenting mitigation measures proposed by the stakeholders;

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:

- Selection of the stakeholders for consultation, reconnaissance of the proposed project site and initial discussions with the neighboring industry workers, villagers, shopkeepers, drivers etc.
- Environmental consultants and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc.

Proponent's environment management team

Possible impacts and mitigation measures related to the subject 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 environmental friendly.

Responsible Authority

Management of M/s Sapphire Textile Mills Limited is the responsible authority to take all measures prior to start the activity.

Environmental Practitioners and experts

Team of M/s Pak Green Enviro-Engineering Pvt. Ltd 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 provide the massive information about the project and have positive remarks regarding the project development.

Other departments and agencies

For the impact analysis detailed meetings were held with the management of M/s Sapphire Textile Mills Limited , 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.

Affected & Wider Community

There is no affected community present in the radius of our study area. PGEE team has consulted with the inhabitants of the different nearby areas and Villages . They provided positive remarks regarding the subject project and in the favor of the subject activity for the proposed plant. Stakeholders participation Performa's and socioeconomic questionnaire were get filled by the inhabitants to evaluate the project socio-economic impacts. List of respondents and socioeconomic questionnaires are attached as **Annexure-E** with the report.

In addition to the above categories, authorities of administrative and educational institutions, commerce and Investment Department (C&I), Environmental Protection Department (EPD) etc. were also consulted for more effective participation and appraisal of the proposed project.

Issues Discussed:

Following issues were discussed during the stakeholder consultation:

- Overall activities of the project;
- Possible impacts on natural vegetation, air, land and properties;
- Possible mitigation measures;
- Benefits of the project specifically for the local people.

Sample size

Sample size of 20 respondents was 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.

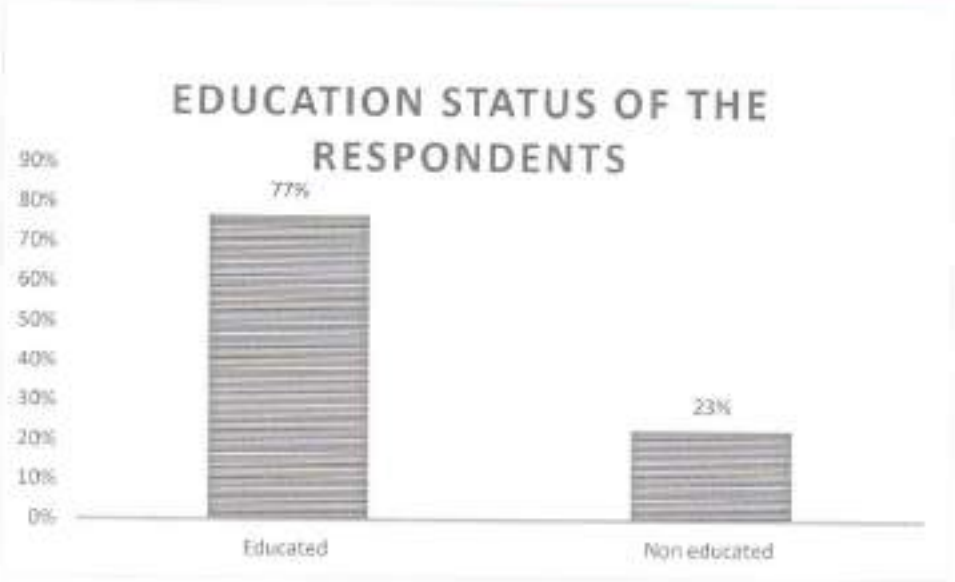
Statistical Analysis

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

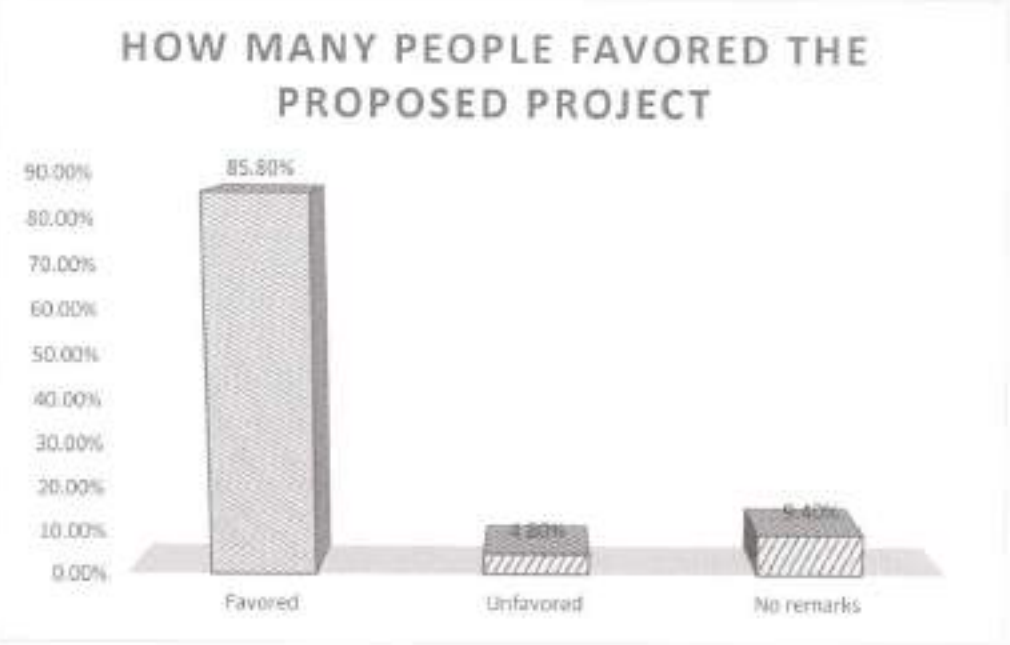
Sr. No	Name	Status /Education	Age
1	Tashfeen Ul haq	Bachelors	30
2	Chaudry Hussain	Matric	25
3	Ghulam Ali	Matric	23
4	Afnan Asif	Bachelors	33
5	Sanwal Nadeem,	Intermediate	31
6	Zia Ur rehmam	Middle	29
7	Shakeel Afridi	Masters	27
8	Shumaila Nadeem	Bachelors	24
9	Qurat ul ain	Intermediate	36
10	Kinza Ishfaq	Nil	34
11	Mojtaba Ali	Matric	31
12	Samreen Chaudhry	Middle	39
13	Muhammad Shafique	Bachelors	41
14	Abdul Qadir	PhD	41
15	Naveed Sohail	Nil	19
16	Hasham Khurshid	Nil	42
17	Mustafa Wahab	Nil	36
18	Umair Ali	Matric	38
19	Abdul Ahad	Intermediate	41
20	Muhammad Ismail	Bachelor	36

Graphical representation of analysis is given below:

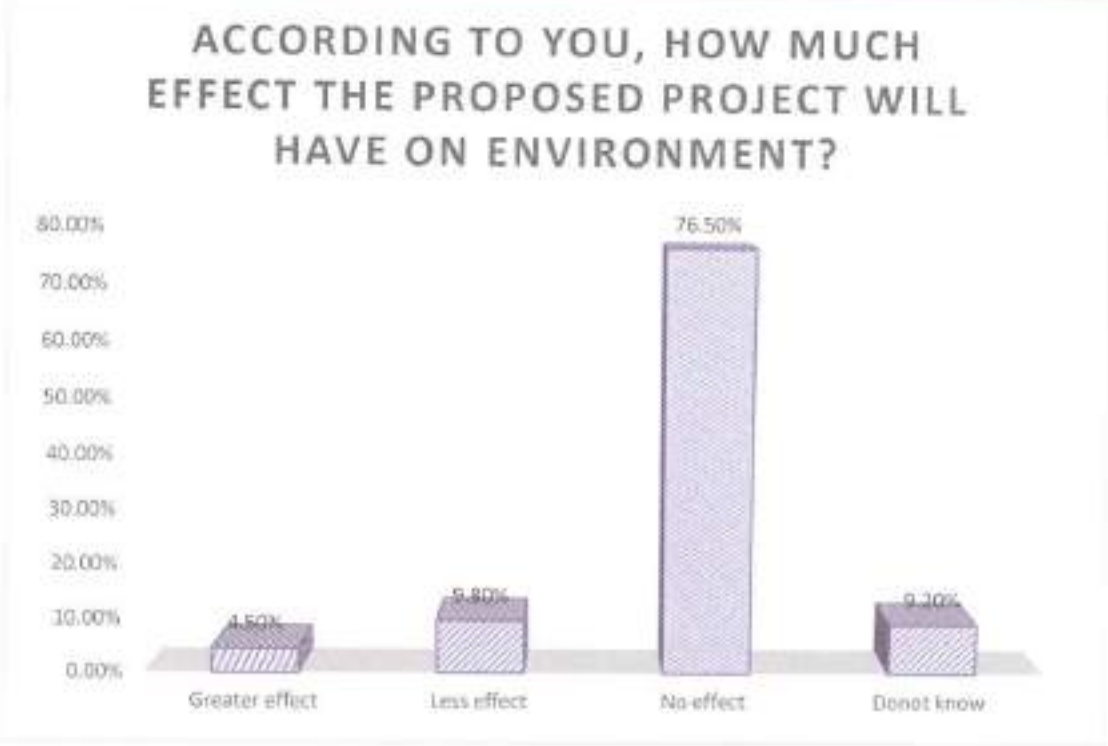
In the sampled population, 85% respondents were male while 15% respondents were female. The number of female respondents is less as compared to male respondents because according to the social binding female hesitates to respond or communicate comfortably.



In the sampled population, 77% respondents were educated while 23% were uneducated. Overall education status of the area is good.



As per survey, 85.80 % people favored the proposed project and they gave positive remarks regarding the subject project. While 9.40% respondents had no opinion regarding the project and 4.80% respondents don't gave satisfactory remarks about the proposed project.



As per survey, 4.5% respondents said that subject project will affect the environment of the area, 9.8% said that there is less effect on the environment, 76.5% respondents said that the project will not affect the environment and 9.2% said that they have no idea regarding the subject project. Most of the population was not aware about the environmental importance; they were giving their remarks according to their own knowledge.

As per survey, 83.2 % people said that the project will improve the standard of the area, 4.6% said that it will have no impact on the area while 12.2 % respondents gave no remarks.

Summary Findings of the Overall Discussion:

- After the completion of the proposed project the site will be used for industrial activities as the project is already present in the industrial area of the city.
- 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 is given preference for employment in the proposed project.
- Operational phase of the proposed project is completed in the designated timeframe to limit adverse impacts of operational phase.
- There will be no significant additional load on the existing infrastructure i.e. utilities of water, telephone, electricity etc. due to the development of the proposed project.

Majority of people favored the proposed project in a sense that the operational phase of the said project will generate employment opportunities for local people and revenue for the government, will enhance the socioeconomic conditions of the area and automatically will contribute to the national economy of the country.

SUMMARY OF ISSUES RAISED BY STAKEHOLDERS

A summary of the key issues raised by stakeholders and how these are being addressed by Project Proponent is provided in Table below.

Table 1: Summary of issues and commitments by Proponent

Issue	Aspect/Concern raised by Stakeholders	Project Proponent Commitments
Employment Opportunities	Expectations of employment are very high. Job opportunities are less for herders as they generally have less skills and training.	Employment is the main priority of the industry. Mostly locally skill and unskilled labor will be prioritized and also there will be job in executive level. Around 20-30 person will be employed by the industry.
Training Opportunities	People are keen to consult with subject industry if the Project offers training and upgrading	Development of the Training Strategy, including commitment of allocation of

	opportunities to enhance their trade or professional skills.	budget investment for training infrastructure, delivery and design. Installation of training facilities in for worker of the company and students will also be accommodating.
Health & safety	Truck traffic is a main concern because the road used by the Project passes through a number of small communities and different industries and there will be a high volume of trucks transporting concentrate.	Traffic safety training. Traffic advisory signs will be installed along project site and all nearby specific areas.
Local economy and business development	Local service providers are keen to participate in providing services to provide raw material and expect to receive in order to adjust their businesses to meet specific needs. Local businesses want to receive support in terms of finance and facilities to diversify their businesses. Local/regional companies and entrepreneurs have limited understanding about meeting the high volumes required by the Project and the quality standard, but are keen to know these requirements so they can become suppliers.	Proponent has main focus that they will all the material regarding construction and plant operation to buy from the local market. This will help the local and small business and to people who are keen interested to become suppliers.
Environmental Issues	Dust and noise impacts, particularly from the construction activities and in operation of mechanically unfit machines, are of concern to herders and other residents. Environmental degradation during road construction and use. Loss and change of vegetation due to soil degradation.	Implementation of controls under the Environmental Management Plans, including on and off-site dust and noise monitoring. A Participatory Environmental Monitoring Program will be launched to spread awareness.

	Increased waste along project boundary and around economic zone.	
Water quantity and quality	Water quality and quantity, and impacts from the wastewater disposal are all key concerns for nearby herders.	Implementation of consultation in relation to water use and development of the Participatory Environmental Monitoring Program.

CHAPTER 8:

CONCLUSION & RECOMMENDATION

CHAPTER # 8

CONCLUSION AND RECOMMENDATIONS

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

Conclusions and recommendations

- The study reveals that the project is economically viable, socially acceptable and environment friendly.
- It will generate additional jobs during operational phase.
- The proponent has committed to implement the project in the environment friendly manner.
- M/s Sapphire Textile Mills Limited . (Fabric Processing Unit) intends to register the project with local Government.
- M/s Sapphire Textile Mills Limited . (Fabric Processing Unit) will prepare very comprehensive Emergency Preparedness and Response Standard Operating Procedures.
- M/s Sapphire Textile Mills Limited . (Fabric Processing Unit) will prepare 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 is top priority for the management.
  - The management of M/s Sapphire Textile Mills Limited . (Fabric Processing Unit) will continue to assist the local communities as a corporate/social responsibility.

ANNEXURE-A

TERM OF REFERENCES (TORS)

TERM OF REFERENCES (TORS)

TO CONDUCT THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY FOR

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

LOCATED AT

WARBURTON ROAD, FEROZE WATTOAN, SHEIKHUPURA

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:

The Subject project is the proposed construction of Ceramics Unit by M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07), Located at WARBURTON ROAD, FEROZE WATTOAN, SHEIKHUPURA. The subject project is the proposed establishment of the textile processing unit (dyeing, printing, apparel cut to pack & waste water treatment plant), located at Warburton Road, Feroze Wattoan, Sheikhupura. The total Covered Area of the project site is (525618 SFT), while the total Land area is (1352768 SFT). The Cost of the project will be 752 million PKR. The production capacity of (Dying/day, printing/day, apparel cut to pack/day) will be 3 million per month, while the ETP capacity/hrs. will be 40 Cubic Meter

Name & Address of proponent

Name: Muhammad Nadeem Nasir

CNIC# 35402-1991657-9

Location: Mohallah Qasaiyan Bachyana Road, Daak Khana Khaas, Bacheki, Tehsil o Zila Nankana Sahib

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07) has appointed the Pak Green Enviro-Engineering (Pvt) Ltd as the Consultant for the subject project to conduct the EIA. M/S Pak Green Enviro-Engineering (Pvt) Ltd will be called as "Consultant" **M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)** as the "Client".

Objective of the EIA study

The Objective of study includes Compliance of section 12 of PEPA 1997 (Amended 2012) & NEQS/ 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 NIC 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

Pak Green Enviro-Engineering Pvt. Ltd.

Signatures:

Sapphire Textile Mills Ltd.
(Stitching Unit)
1.5-KM Warburton Road
Feroze Wattoan Sheikhupura
056-3731439

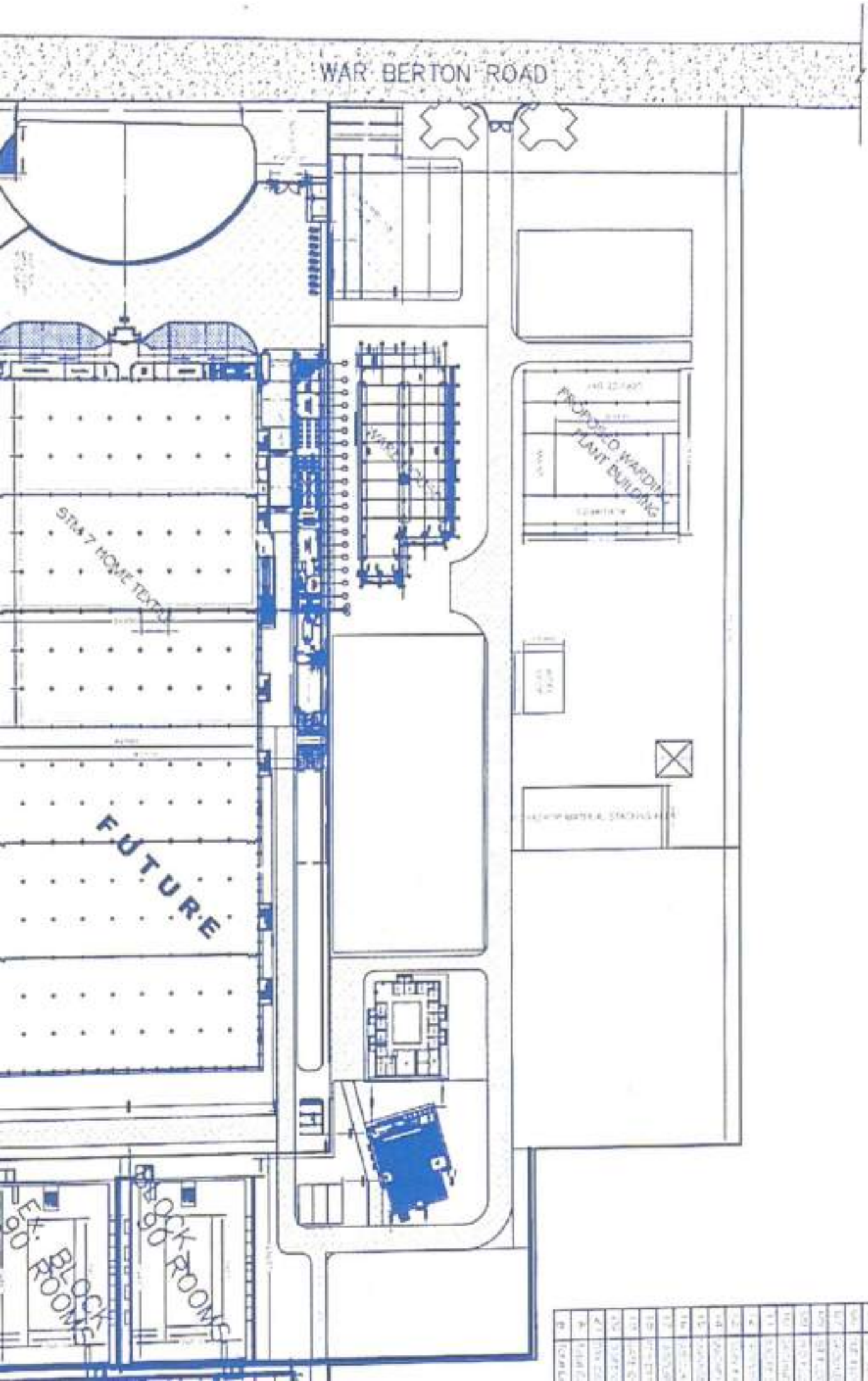
Client: Muhammad Nadeem Nasir

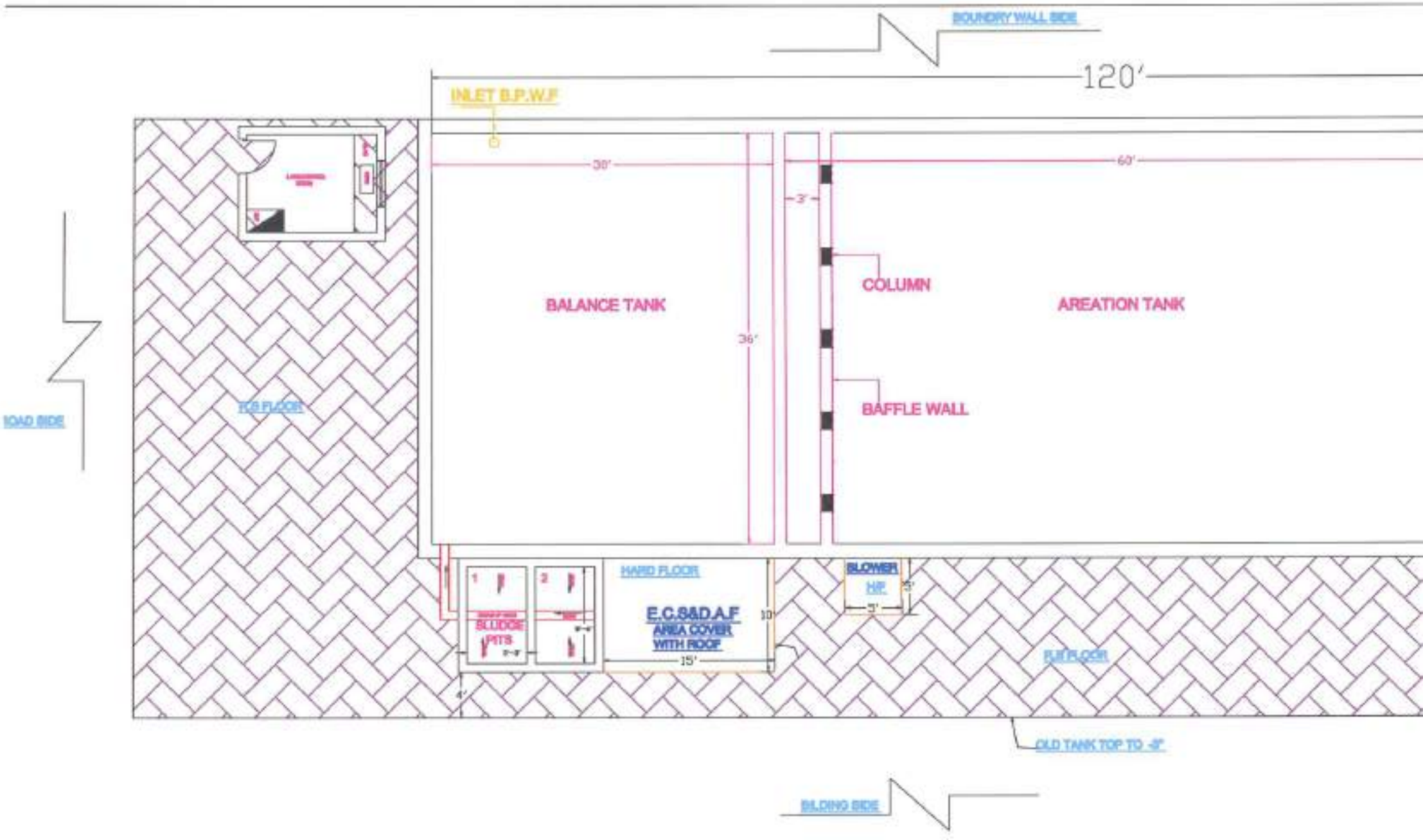
M/S Sapphire Textile Mills Limited (Stitching Unit)

ANNEXURE-B

LAYOUT & GOOGLE MAP OF PROPOSED SITE


Sapphire Textile Mills Ltd. (Stitching Unit)
31°34'38.70"N
73°48'51.83"E
JAMIA MASJID RAE
Rana Tawil Awtar Shop
Ghullah Wattwan
WATTOO AGRICULTURAL
Sapphire School of Learning (SSL)
Feroze Wattwan
Sapphire Power Generation...
Marhaba Kulfa flooda shop
Sapphire Textile Mills Ltd. (Stitching Unit)


WAR BERTON ROAD
PROPOSED WARDEN'S PLANT BUILDING
STAFF HOME TEXT
FUTURE
EX. 90 BLOCK ROOMS
90 BLOCK ROOMS


BOUNDRY WALL SIDE
120'
INLET B.P.W.F
30'
60'
3'
COLUMN
BALANCE TANK
AREATION TANK
36'
BAFFLE WALL
ROAD SIDE
FOR FLOOR
HARD FLOOR
BLOWER
H.P.
3'
3'
1
2
SLUDGE
PITS
E.C.S&D.A.F
AREA COVER
WITH ROOF
10'
15'
4'
FOR FLOOR
OLD TANK TOP TO -9"
BILDING SIDE

ANNEXURE-C

CNIC & OTHER DOCUMENTS

PAKISTAN National Identity Card

ISLAMIC REPUBLIC OF PAKISTAN

Name
Muhammad Nadeem Nasir

محمد ندیم ناصر

Father Name
Muhammad Mushtaq

محمد مشتاق

Gender	Country of Stay
M	Pakistan

Identity Number	Date of Birth
35402-1991657-9	20.01.1985

Date of Issue	Date of Expiry
05.05.2021	05.05.2031

Holder's Signature

Only For EPA NOC

35402-1991657-9

موجودہ پتہ: محلہ قصابیاں بجیانہ روڈ، ڈاک خانہ خاص، نجیکی،
تحصیل و ضلع ننکانہ صاحب

مستقل پتہ: محلہ قصابیاں بجیانہ روڈ، ڈاک خانہ خاص، نجیکی،
تحصیل و ضلع ننکانہ صاحب

Registrar General of Pakistan

108221407563
296-80-658268

Only For EPA NOC

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں

Present Address:

H.No. 8-A, Gali 1, Askari 10 Airport Road
Lahore Cantt, District Lahore Pakistan

41304-9634810-5

Only For EPA NOC

Permanent Address:

Saidu Sharif, Mingora, Babozai, District Swat
Pakistan

Usman Yousaf Mobeen

Registrar General of Pakistan

The Holder is entitled visa free entry into Pakistan

108231070277
114-85-386575

I<PAK366T22857412049634810 5<<<
8512121M2707118PAKAT4DMK<<<<<7
SHAUKAT<<ADNAN<<<<<<<<<<<<<<<

Only For EPA NOC

PAKISTAN

ISLAMIC REPUBLIC OF PAKISTAN

National Identity Card

Name

Adnan Shaukat

عدنان شوکت

Father Name

Shaukat Iqbal

شوکت اقبال

Gender	Country of Stay
M	Qatar

Identity Number	Date of Birth
41304-9634810-5	12.12.1985
Date of Issue	Date of Expiry
11.07.2017	11.07.2027

Holder's Signature

شناختی نمبر: 37201-6592170-9 خاندان نمبر: 7F6D8L

موجودہ پتہ: سید پور ڈکیانہ خاص، تحصیل و ضلع چکوال

Only For EPA NOC

مستقل پتہ: ایضاً

تاریخ اجراء: 30/05/2016 تاریخ تنسیخ: 30/05/2026

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں

Only For EPA NOC

حکومت پاکستان

قومی شناختی کارڈ

37201-6592170-9

نام: عاقب جاوید

جنس: مرد

والد کا نام: ملک فضل [illegible]

شناختی علامت: کوئی نہیں

تاریخ پیدائش: 01/05/1998

عثمان یوسف مبین

دستخط رجسٹرار جنرل

دستخط حامل کارڈ

رجسٹر حقداران زمین (مسل میعادی)

XXXIVA

ضلع شیخوپورہ — تحصیل و — محال

نمبر شمار کھیوٹ (۱)	نمبر کھتونی (۲)	نام مالک معہ نام والد / خاوند قوم اور سکونت (۳ الف)	۳(ب)	۳(ج)	۳(د)	۳(ہ)	۳(و)	نام کاشتکار معہ احوال (۴)	نمبر خسرہ معہ نام (اگر کوئی ہو) (۵)	رقبہ (۶)	(۷)	(۸)	(۹)	کیفیت (۱۰)
1	42	محمد جمیل ولد [illegible] مالک [illegible] حقداران زمین [illegible] ۳(ب) قومی شناختی کارڈ نمبر ۳(ب) قومی شناختی کارڈ نمبر						محمد یوسف ولد [illegible] معدان بالمغان سنفا شیر شیخ [illegible] [illegible]	14/2 23 [illegible]/2	2-4 8-18 11-2				
	43	〃 ۳(ب) قومی شناختی کارڈ نمبر						محمد یوسف ولد [illegible] معدان بالمغان سنفا شیر [illegible]	14/1 18 [illegible]/2	4-9 8-18 13-7				
	55	〃 ۳(ب) قومی شناختی کارڈ نمبر						محمد یوسف ولد [illegible] سنفا شیر شیخ [illegible]	6	8-18				
	58	۳(ب) قومی شناختی کارڈ نمبر						عبدالرحمن ولد [illegible] سنفا شیر شیخ [illegible]	8 14/2 [illegible]/2	8-18 2-9 11-7				

نمبر شمار	نمبر کھیوٹ						نام مالکان	نمبر خسرہ	رقبہ			
1	60						[illegible] مالقر سفائیر کیمیشنل مذکور	390/24	8-18			
	79	۳(ب) قومی شناختی کارڈ نمبر					محمد یوسف ولد [illegible] مدن مالکان سفائیر کیمیشنل مذکور	390/5	8-8			
	81	۳(ب) قومی شناختی کارڈ نمبر					نذیر احمد ولد [illegible] مالقر سفائیر کیمیشنل ملز مذکور	390/17	8-18			
	90	۳(ب) قومی شناختی کارڈ نمبر					محمد طفیل ولد [illegible] مدن مالکان سفائیر کیمیشنل مذکور	390/4	8-18			
	91	۳(ب) قومی شناختی کارڈ نمبر					[illegible] ولد [illegible] مدن مالکان سفائیر کیمیشنل مذکور	390/7 13 2 کتہ	8-18 8-18 17-16			
5	206	محمد حسین [illegible] مالکان [illegible] ۳(ب) قومی شناختی کارڈ نمبر					احمد علی [illegible] مالقر سفائیر کیمیشنل مذکور	409/6 7 8 9 10 5 کتہ	7-11 8-18 8-18 8-18 8-18 43-3			
	206	۳(ب) قومی شناختی کارڈ نمبر					[illegible] ولد [illegible] مدن مالکان سفائیر کیمیشنل مذکور	409/1 2 2 کتہ	8-18 8-18 17-16			

تغیر [illegible] جاری شدہ

دستخط قانونگو

پٹواری فارم نمبر XXXIVA

رجسٹر حقداران زمین (مسل میعادی)

25.5 x 19

محال [illegible] طرف [illegible] تحصیل [illegible] ضلع [illegible] سال [illegible] کتاب نمبر [illegible]

DLR 25-8-2022

۱ نمبر شمار	۲ نمبر کھیوٹ	۳ (الف) نام مالک معہ نام والد / خاوند قوم اور سکونت	۳ (ب) کوائف مالک	۳ (ج) کوائف مالک	۳ (د) کوائف مالک	۳ (ہ) کوائف مالک	۳ (و) کوائف مالک	۴ نام کاشتکار معہ احوال	۵ نمبر خسرہ معہ نام (اگر کوئی ہو)	۶ رقبہ قسم زمین کھیت وار اور میزان کتونی برکاشت کارو کھیوٹ مالک	۷ وسائل آبپاشی معہ نام چاہ راجباہ وغیرہ	۸ لگان جو کاشتکار ادا کرتا ہے شرح اور مطالبہ	۹ مطالبہ معہ تفصیلات مالیہ وجبوب	۱۰ کیفیت معہ ۱۔ نام نمبردار (اگر کوئی ہو) ۲۔ شرح مالیہ زمین
5	335	[illegible] حقداران ۳ (ب) قومی شناختی کارڈ نمبر						[illegible] بی بی [illegible] سفا نمبر [illegible]	409/3 5 2/2	8-18 8-18 17-14				
	336/1	۳ (ب) قومی شناختی کارڈ نمبر						صاحب [illegible] سفا نمبر [illegible]	409/4	8-18				
	180							یوسف [illegible] سفا نمبر [illegible]	391/17	8-18				
	192	۳ (ب) قومی شناختی کارڈ نمبر						لونی [illegible] سفا نمبر [illegible]	391/6	7-11				
	191							مطیع اللہ [illegible] سفا نمبر [illegible]	391/18	8-18				
	218	۳ (ب) قومی شناختی کارڈ نمبر						[illegible] سفا نمبر [illegible]	391/8	8-18				
	230	۳ (ب) قومی شناختی کارڈ نمبر						زینب بی بی [illegible] سفا نمبر [illegible]	391/7	8-18				

5	231	[illegible]	محمد شعیب ولد [illegible] سفا نمبر [illegible] مذکور	391/16	7-11
		۳(ب) قومی شناختی کارڈ نمبر			
	287		محمد علی ولد [illegible] سفا نمبر [illegible] مذکور	قلم 6	50-13
	288				
	316	۳(ب) قومی شناختی کارڈ نمبر	اللہ دتہ ولد [illegible] سفا نمبر [illegible] مذکور	391/4	8-18
				5	7-11
				قلم 2	16-9
	324	۳(ب) قومی شناختی کارڈ نمبر	مطیع اللہ ولد [illegible] سفا نمبر [illegible] مذکور	409/11	8-18
				12	8-18
				19	8-8
				20	8-18
		۳(ب) قومی شناختی کارڈ نمبر		قلم 4	35-13
	256		محمد شعیب ولد [illegible] سفا نمبر [illegible] مذکور	409/16	7-11
		۳(ب) قومی شناختی کارڈ نمبر		17	8-18
				18	8-18
				قلم 3	25-7
	260		محمد ذکریا ولد [illegible] سفا نمبر [illegible] مذکور	409/13	8-18
		۳(ب) قومی شناختی کارڈ نمبر		14	8-18
				قلم 2	17-16
	260	۳(ب) قومی شناختی کارڈ نمبر	محمد ذکریا ولد [illegible] سفا نمبر [illegible] مذکور	409/15	7-11

مطبع پنجاب گورنمنٹ پریس لاہور۔

دستخط قانونگو

رجسٹر حقداران زمین (مسل میعادی)

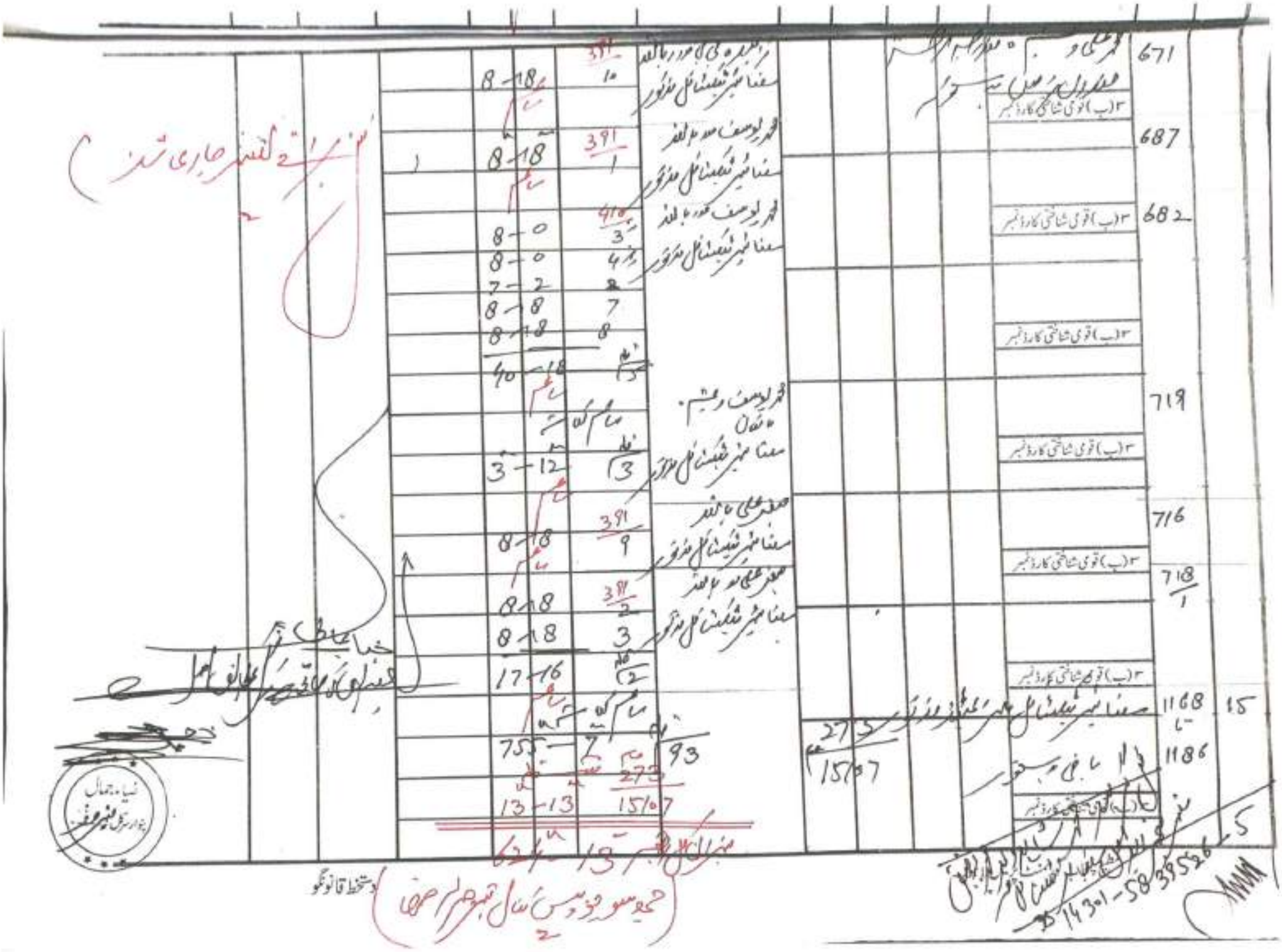
پٹواری فارم نمبر XXXIVA

عاصم سلیم
DLR 25-8-2022

محال منیروز طرف پتی تحصیل ضلع شیخوپورہ سال 2010-11 کتاب نمبر

۱ نمبر کھیوٹ	۲ نمبر کھتونی	۳ (الف) نام مالک معہ نام والد / خاوند قومیت اور سکونت	۳ (ج)	۳ (د)	۳ (ہ)	۳ (و)	۴ نام کاشتکار معہ احوال	۵ نمبر خسرہ معہ نام (اگر کوئی ہو)	۶ رقبہ و قسم زمین	۷ وسائل آبپاشی معہ نام چاہ راجباہ وغیرہ	۸ لگان جو کاشتکار ادا کرتا ہے شرح اور مطالبہ	۹ مطالبہ معہ تفصیلات مالیہ و جبوب	۱۰ کیفیت معہ ۱۔ نام نمبردار (اگر کوئی ہو) ۲۔ شرح مالیہ زمین
5	301	لوئس ولد … حقداران					عطاء اللہ معدہ مالک / سنا ئیں کمیشنل مذکور	410/15	8-18				
	311	۳(ب) قومی شناختی کارڈ نمبر					مظفر معدہ مالک / سنا ئیں کمیشنل مذکور	410/6	8-18				
	429	نورال … ۳(ب) قومی شناختی کارڈ نمبر					نورال … معداں / سنا ئیں کمیشنل مذکور	390/14	8-18				
9	597 تا 778	صفائی کمیشنل … ۳(ب) قومی شناختی کارڈ نمبر	529/1012/1				مذکور	529/1012/11	5060 / 26-9				
	664	۳(ب) قومی شناختی کارڈ نمبر					… معدہ مالک / سنا ئیں کمیشنل مذکور	391/31, 22/2	8-18, 8-8, 17-6				
	667	۳(ب) قومی شناختی کارڈ نمبر					کنیز فاطمہ … / سنا ئیں کمیشنل مذکور	1/7	62-6				

… جاری شد



DIRECTOR LABOUR WELFARE,
LAHORE (NORTH)

To,

The Occupier / Manager,

M/S. ***SAPPHIRE TEXTILE MILLS LIMITED (STITCHING UNIT),***

1.5-KM WARBURTON ROAD FEROZEWATTOAN,

SHEIKHUPURA.

Memo. No. 3574.

Dated: 29-8-23.

Subject: - **REGISTRATION UNDER THE FACTORIES ACT, 1934.**

Reference your application dated 26.08.2023 on the subject cited above.

As your premises falls within the definition of "Factory "under Section 2 (j) of the Factories Act, 1934, its name has been entered in the Register of Factories.

The Registration Certificate bearing **No. 2023013300418** dated, **29-08-2023** is enclosed.

Further particulars of above mentioned factory are as under:-

Name of Occupier	Mr. **MIAN NADEEM ABDULLAH**
Name of Manager	Mr. MUHAMMAD SHAHID
Nature of manufacturing process	**HOME TEXTILE, MADEUPS, GARMENTS, APPAREL**
Maximum No. of Workers Employed during the proceedings 12 Months.	936

Director Labour Welfare,
Lahore (North)

Endorsement No. DLW/LHR(N)/F/ Dated:

A copy is forwarded for information to: -

1. The Director General Labour Welfare, Lahore.
2. The Labour Officer (Factories) Concerned.

Director Labour Welfare,
Lahore (North)

DIRECTORATE OF LABOUR WELFARE
GOVERNMENT OF THE PUNJAB,
SHEIKHUPURA

Reg No: 2023013300418

Issuance Dated: 29-08-2023

Old Reg No: DLW(N)/SKP/F/532

Old Reg Dated: 30-07-2019

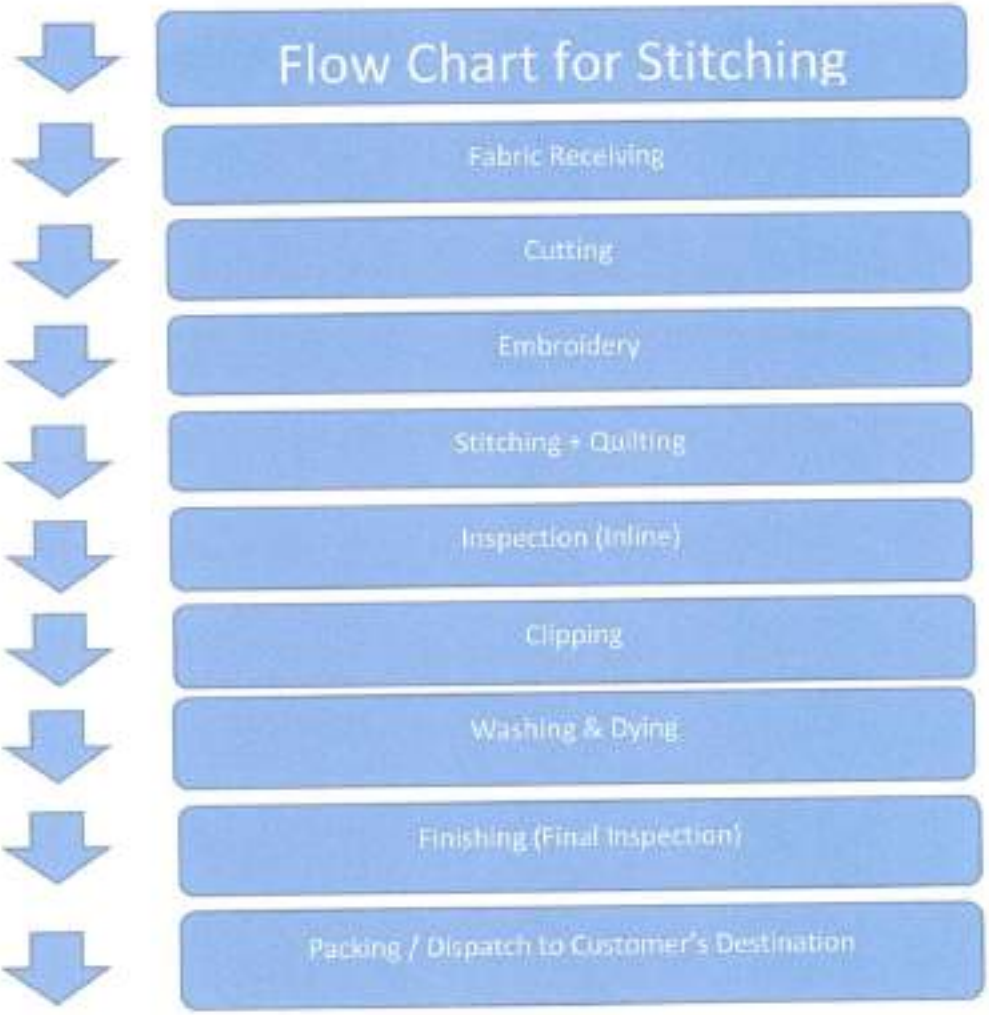
Factory Registration Certificate

*This is to certify that the premises known as M/S SAPPHIRE TEXTILE MILLS LIMITED (STITCHING UNIT), 1.5-KM WARBURTON ROAD FEROZEWATTUAN, SHEIKHUPURA, TEHSIL SHEIKHUPURA DISTRICT SHEIKHUPURA is hereby registered as it falls within the definition of "**factory**" under Section 2(J) of the Factories Act, 1934.*

Chief Inspector of Factories,
Punjab

This is a system generated certificate and does not require signature.

	Sapphire Textile Mills Limited (Stitching Unit) Flow Chart	Document No	STM/4.5/01
		Revision No	00
		Issue Date	01-08-2019



Approved By: Management Representative

Sapphire Textile Mills Limited (Stitching Unit)

List Of Equipments

Fire Extinguishers & Trolleys Details									
CO2	DCP	Halotron	Water Type	DCP (T)	CO2 (T)	Water Type (T)	AFFF (T)	AFFF	335
92	103	26	88	12	4	8	1	1	

Fire Hydrants detail
64

Fire Buckets	
Stands	Buckets
8	40

Fire Alarms Detail	
Electrical	Manual
35	5

Exit box Detail	
Normal	Emergency
28	33

Emergency Lights Detail	
Multi	Single
65	45
First Aid Box Detail	Fire Blanket
30	35

Fire Beaters
18

Emergency call Points
36

Safety Helmats
55

Smoke Detectors					
Production	486	Hostel	135	Total	621

Hose Reel					
Production	71	Hostel	12	Total	83

No Of Emergency Doors
35

Humidity Temprature Meter
13

No Of Complain Boxes
26

AM HSE & Compliance

Snr, Manager CSR,Compliance & Systerms

A.T WASTE MANAGEMENT

We Manage

AGREEMENT

For

Provision of Hazardous/Bio-Infectious Waste Disposal Services

By "**A.T Waste Management**" having its office at Office No. 731, Block-2, Sector D-1, Shah Jilani Road, Township, Lahore, **NTN# 7383959-8**, (here in after called **ATWM**), to the **Sapphire Textile Mills Ltd (Spinning, Weaving, Processing, Home Textiles)** having its office at **1.5 Km Warburton Road Ferozwattoan, Sheikhupura** (here in after called **RECEIVER**)

THIS HAZARDOUS/BIO-INFECTIOUS WASTE DISPOSAL "AGREEMENT" made and entered into this 01st day of December, 2023 (the "Effective Date"), and is made by and between the **RECEIVER** and the **ATWM**.

WHEREAS the **RECEIVER** desires to obtain the services of **ATWM**, for the disposal of HAZARDOUS/BIO-INFECTIOUS WASTE and **ATWM** desires to render such services on the terms and conditions set forth.

IN CONSIDERATION of the promises and other good and valuable consideration (the sufficiency and receipt of which are hereby acknowledged) the parties agree as follows:

1. **Specification of Waste;**
   a) Acceptable Waste - The following types of waste are acceptable for disposal under this AGREEMENT:
      - Hazardous/Bio-Infectious Waste.
   b) Unacceptable Waste: The following types of waste are unacceptable for disposal under this AGREEMENT
      - General Waste i.e. floor cleaning etc. (except agreed specifically)

2. **Operational Schedule.** The parties agree to develop and implement an operational schedule that will allow collection of Acceptable Waste from the vicinity of **RECEIVER** consistent with Operations Plan, Monday through Saturday, public holidays excepted.

3. **Force Majeure.** No party shall be liable for any failure to perform its obligations under this AGREEMENT where such failure is as a result of Acts of God (including fire, flood, earthquake, storm, typhoon or other natural disaster), war, invasion, act of foreign enemies, hostilities (whether war is declared or not), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, labor dispute, strike, lockout or interruption or failure of electricity, and no party will have a right to terminate this AGREEMENT in such circumstances.

4. **Severability.** The parties hereto agree that in the event any article or part thereof of this agreement is held to be unenforceable or invalid then said article or part shall be struck and all remaining provision shall remain in full force and effect.

A.T Waste Management

Receiver

ATWM

5. **Compliance.** In performing this Agreement, each party shall ensure compliance with all applicable laws, rules and regulations. Both parties shall not be required to perform or omit to perform any act under this agreement if such performance or omission would violate the provisions of its code of conduct, applicable law, rules and regulations, applicable for the time being.
6. **Charges.**

ATWM shall provide the Services of hazardous/Bio-Infectious waste disposal at the prices stated below;

Sr. #	Description	Charges
01	WWTP Sludge	28/- Per Kg
02	Used Batteries	23/- Per Kg
03	Tube Rods / Energy Savers	25/- Per Kg
04	Used Oil Filters	23/- Per Kg
05	First Aid Waste	35/- Per Kg
06	Chemical Contaminated Fabric	25/- Per Kg
07	Used Oil	21/- Per Kg/ Ltr
08	Used COD Vials	30/- Per Kg
09	Municipal Waste	30/- Per Kg
10	Domestic Waste Sludge	40/- Per Kg
11	Chemical Waste	40/- Per Kg

- **Transportation Charges Rs 10,000/- Per Trip**
- **Renewal Fee (Non-refundable) Rs 25,000/-**

- These rates are (Exclusive) of all applicable taxes.
- Payment terms within 15 days after completion of job.
- The services will be discontinued immediately, without any prior notice, due to non-payment of continuous two months. And no deduction will be allowed, against the days when the service was discontinued due to nonpayment.

7. **General Conditions.**
   a) This agreement is valid from **01-12-2023** to **30-11-2024.**
   b) Loading at the **RECEIVER**'s place will be the responsibility of **RECEIVER.** And Off-Loading at the plant will be ATWM's responsibility.
   c) **ATWM** will furnish the safe disposal certificate to the **RECEIVER** per consignment after receiving of payment.
   d) If certification status of **ATWM** from EPA is changed at any instant, **ATWM** will be responsible to intimate the **RECEIVER** immediately.
   e) The **RECEIVER** shall depute an individual (bio data will be provided to **ATWM**) who at all times supervise and inspect the concerned staff to promptly resolve safe management of said wastes. The **RECEIVER** will do the needful to ensure that no legal implications proceeding if any shall lie against the **ATWM.**
   f) At the renewal of the contract **ATWM** reserves the right to alter the charges taking into consideration the increase in Taxation, volume of waste and all other expenditures.
   g) In case the **RECEIVER** faces any problem, regarding collection of waste by ATWM's labor etc. it should be immediately communicated to the Waste Manager/Project Manager of **ATWM,** so that the problem can be resolved on priority basis.

Received

8. Termination of Agreement.
   - This agreement will be terminated after the valid date mentioned in clause 7(a) except specifically extended.
   - In case the **RECEIVER** wants to terminate the agreement/services, **RECEIVER** will have to give **ATWM** a one-month prior notice and will return the agreement of **ATWM** back to **ATWM**.
   - Agreement will be terminated if waste transaction is not made within three consecutive months.
   - Both parties are liable to follow EPA's rules and regulations. Any kind of violation will cause termination of the contract.

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT by their duly authorized representatives, as of the day and year first above written.

Signature:	
Name:	Muhammad Chaaib
For:	SAPPHIRE TEXTILE MILLS LTD (Spinning, Weaving, Processing, Home Textiles)
Address:	1.5 Km Warburton Road, Ferozwattoan, Sheikhupura
Tel:	0333-8970262
Date:	02nd December, 2023
Witness # 1:	Kashmala Sabeen

Signature:	
Name:	MR. TAHIR MAHMOOD
For:	A. T WASTE MANAGEMENT
Address:	Office # 731, Block-2, Sector D-1 Shaha Jilani Road, Township Lahore.
Tel:	042-35154012-16/0300-5431903
Date:	02nd December, 2023
Witness # 1:	Ayesha Akbar

Sapphire Textile Mills Limited (Stitching Unit)

Chemicals	
Sr.	Description
1	Liquid Enzyme (Bio Polosh Netural)
2	Powder Enzyme (Stone Less)
3	Silicone (Hydro phobic)
4	Silicone (Hydro philic)
5	Bleach
6	Sodium Meta By Salphat
7	Acitic Acid
8	Glabour Salt
9	Common Salt
10	Soda Ash
11	Ph Stripes
12	Axoilc Acid
15	All types of Softeners
16	Imrol X
17	Wash of Detergent
18	Castic Soda
19	Anti Creasers
20	Levelers
21	Squesters
22	Buffer Acid

Sapphire Textile Mills Limited (Stitching Unit)

Dyes

REACTIVE DYES (Synazol Kisko)	
Sr.	Description
1	Yellow 4GL
2	Yellow KNP
3	Yellow k3RS
4	Red K 3BS
5	Navy KBF
6	Blue KBR
7	ultra black DR
8	Turquoise G165%
9	Brilliant Blue R
10	Olive KHL
11	Grey KHL
12	Yellow KHL
13	Blue KHL
14	Red KHL
15	Black G
16	Red GD

ASSUDIL DYES (KARAM KIMIYA)	
Sr.	Description
1	Yellow GL
2	Yellow 3NL
3	Red MGR
4	Blue MSB
5	Black MSD
6	Turquoise GL
7	Olive GWL
8	Green GG
9	Bordex
10	Base Mordent M New
11	Fixer ESO

AR C
Sr.
1
2
3
4
5
6
7
8

hroma (Indisol)
Description
Yellow R
Red BA
Blue R
Orange RSN
Orange 2GL
Navy 2282
Black NF
Turquoise FBL

DISTRICT CIVIL DEFENCE
HEADQUARTER SHEIKHUPURA
PHONE NO. 9200049/ 9200048
civildefenceskp188@gmail-com

To,

The Muhammad Shahid Khan *Manager (Admin & HR),*
Sapphire Textile Mills Ltd. *(Home Textiles)*
1.5 KM Warburton Road Ferozewattowan,
District Sheikhupura.

No. CDS-F.F.-2023/1161
Dated: 13-06-2023

Subject:- **FIRE FIGHTING CERTIFICATE.**

Reference your application dated 12-06-2023 on the subject cited above.

It is certified that the inspection of Sapphire Textile Mills Ltd (Home Textiles) situated at 1.5 KM Warburton Road Ferozewattowan District Sheikhupura has been visited by the undersigned on 13-06-2023. During inspection, the said equipment installed in the above said premises i.e. Water Type, CO2, DCP Fire Extinguishers and fire Hydrant system were found satisfactory & in working condition at the time of inspection. This Certificate is valid up to 30-06-2024

However, the management is bound to maintain the equipment in working condition all the time and they will be responsible for any mishap that takes place due to incompetence / negligence.

CIVIL DEFENCE OFFICER
SHEIKHUPURA

OFFICE OF THE EXECUTIVE ENGINEER,
FAISALABAD DRAINAGE DIVISION, FAISALABAD.
Ph: # 041-9200971, E-mail. xen_drainagefaisalabad
@irrigation.punjab.gov.pk

No. _____/ Dated ___/ /2023

To

The Manager,
Sapphier Textile Mills Ltd.(Weaving & Processing & Home Textgile),
1.5 KM Warburton Road Feroze Wattoan,
Shaikhupura.

Subject:- ***PERMISSION FOR DEPOSITING THE EFFLUENT WATER INTO MACHRALA DAIN.***

Reference. Your application No.Nil dated.26.06.2023.

With reference to your request received through letter quoted under reference, the Agreement Forms on Judicial Stamp Paper of your Mill/ Factory/ Unit, renewal for the year 2023-24 for depositing the effluent water into drain has been examined thoroughly & accepted with the following terms/ conditions:-

1. Rs.35,000/ per cusec per year be deposited with the Government for depositing the effluent water charges.
2. Your Mill/ Factory is also bound to fulfill all codal and legal formalities according to terms and conditions mentioned in the agreement as well as instructions made by the Government from time to time.

You are further directed to provide the Water Analysis Report (from approved Government organization) within 7-days to proceed further.

Executive Engineer,
Faisalabad Drainage Division,
Faisalabad.

C.C.

Sub Divisional Officer, Jaranwala Drainage Sub Division, Jaranwala with direction to follow the contents of agreement in letter & sprit accordingly.s

E-STAMP

ID : PB-SKP-60C9FC202F0EB3B9
Type : Low Denomination
Amount : Rs 300/-

Scan for online verification

Description : AFFIDAVIT - 4
Applicant : Muhammad Ibrar Ahmad [35501-0146902-7]
S/O : Muhammad Irshad
Agent : Self
Address : po same chak no 28-rb longowal teh sangla hill distt nankana sahib
Issue Date : 7-Jul-2023 4:40:24 PM
Delisted On/Validity : 14-Jul-2023
Amount in Words : Three Hundred Rupees Only
Reason : AFFIDAVIT DRAIN AGREEMENT
Vendor Information : Raheel Riaz | PB-SKP-159 | Ferozwattwan

[illegible]

Type "eStamp <16 digit eStamp Number>" send to 8100

RENEWAL OF AGREEMENT

This agreement is made on this 1st day of July, 2023 between the Government of the Punjab acting through Executive Engineer, Faisalabad Drainage Division, Faisalabad, Government of Punjab, Irrigation Department (hereinafter referred to as the "Government" which Expression shall include its successors-in office and assigns).

And

M/s Saphire Textile Weaving & Processing & Home Textile Limited Feroze Watton Sheikhupura (having its projects) acting through its Director (hereinafter referred to as the "Management" which expression shall include its successors-in-office/interest and assigns).

Whereas the "Government" is owner and exclusively responsible for maintaining Machrala Branch Drain of the drain indicating sub / tributary branch of main drain (hereinafter referred to as the "Drain" near its RD.131+000/L).

Whereas the "Management" has established its projects Saphire Group of Industries Limited (hereinafter referred to as the "Industry" which is located close to the "Drain" near its RD.131+000/L)

Whereas the "Management" to dispose of effluent of the "Industries" through "Drain" has applied to the "Government" for the discharge of its industrial effluent into the "Drain" indicating the minimum and maximum quantity of discharge i.e 2.0 cusec as also the broad quality of effluent as may, from time to time, be discharged by the "Management" into the "Drain".

Whereas "Management is prepared to treat the effluent prior to its discharge into the "Drain" on the terms and conditions hereinafter mentioned.

And whereas the "Government" has accepted the application of the "Management" on the terms and conditions hereinafter set forth.

NOW THEREFORE THIS AGREEMENT WITNESSED AS FOLLOWS:

1. The "Management" will get the effluent chemically treated through a treatment plant in order to eliminate passing of injurious substances into the "Drain". The treatment plant will be so designed, constructed and operated by the "Management" at its own expense, that the treated effluent eliminated injurious substances and that the resultant quantity of the effluent, at anytime, remains within the acceptable limits as defined in Revised National Environmental Quality Standards (NEQs) (appended herewith), in accordance with Section 31 of the Punjab Irrigation, Drainage and River Act 2023and is not injurious to human / animal life, and not disturbs the quality of ground water.
2. The "Management" will design, construct and maintain, at its own expense and to the satisfaction of the "Government" such works, outfall structure, silting tanks or any other appurtenant works as may be necessary properly to treat and safely discharge the effluent into the "Drain" without causing any obstruction to the flow in the "Drain".
3. The "Government" can take the surprise sample of effluent being discharged into the "Drain" at any time and will get chemical analysis of effluent from a Laboratory accredited with "Environmental Protection Agency" at the expense of "Management". If the result of analysis report does not meet the permissible limits defined by National Environmental Quality Standards, Government may close the inlet or higher rates may be levied in accordance with section 138(2)(c) of the Punjab Irrigation and River Act 2023 (Act. XV of 2023).

ATTESTED
Oath Commissioner
Sheikhupura

E-STAMP

ID : PB-SKP-176288C438704O2E

Type : Low Denomination

Amount : Rs 300/-

Scan for online verification

Description : AFFIDAVIT - 4

Applicant : Muhammad Ibrar Ahmad [35501-0146902-7]

S/O : Muhammad Irshad

Agent : Self

Address : po same chak no 28-rb lamgowal teh sangla hill distt nankana sahib

Issue Date : 7-Jul-2023 4:47:07 PM

Delisted On/Validity : 14-Jul-2023

Amount in Words : Three Hundred Rupees Only

Reason : AFFIDAVIT DRAIN AGREEMENT

Vendor Information : Raheel Riaz | PB-SKP-159 | Ferozewattwan

4. The "Management" will pay to "Government" in advance an amount of PKR.70,000/- (Rupees Seventy Thousand only), each year in month of July on account of discharge of industrial effluent into drain, in accordance with section 138 (2) (b) of Punjab Irrigation, Drainage and River Act (PIDRA) 2023. The amount has been assessed vide Notification No.SO(REV)IRR/7-1997 dated 12.10.2014@PKR 10,000/- per cusec per annum. If "Government" increases these charges "Management" will be bound to pay balance payment as per rates if any.

5. The "Management" will get the bed clearance of Macharala Drain done from RD.125+000 to 131+000 in accordance with design parameter of drain under the supervision of Sub Divisional Officer Jaranwala Drainage Sub Division once a year. Time for this bed clearance will be intimated to "Management" by Sub Divisional Officer Jaranwala Drainage Sub Division Jaranwala through a notice in writing and abed clearance should commence within 07 days of notice. In case of failure "Government" will be authorized to close the inlet.

6. No solid material will be discharged into the drain. If concerned Sub Divisional Officer, report about disposal of solid waste by "Management" into the drain, "Government" through Executive Engineer Faisalabad Drainage Division Faisalabad is authorized to levy additional charges in accordance with section 138 (2) (a) of Punjab Irrigation, Drainage and River Act (PIDRA) 2023, on account of "usual cost of maintenance and operation of Drain".

7. The "Management" will not change the maximum discharge of the effluent and its quantity without prior approval of the "Government" and after making adjustments in the treatment and disposal arrangements as may be deemed necessary by the "Government" so as to control safe disposal and bring quality of the effluent within acceptable limits.

8. This agreement shall remain in force a period of 01.07.2023 to 30.06.2024. The agreement may also be renewed every year before the 30th June on such terms and conditions, as may be mutually agreed upon between the parties.

9. The "Management" shall be responsible to abide by all the laws / rules of the "Government" for the time being in force for the purpose of controlling pollution of water of natural / artificial streams, Nallahs, Drains etc.

10. In case the "Management" fails to comply with any term and conditions of this agreement, the agreement shall stand terminated after expiry of 30 days' notice given by the "Government". After such failure and in such event the "Management" will not be entitled to any compensation or claim damages whatsoever from the "Government".

11. This agreement may also be terminated by any party by giving 30 days' prior notice in writing to the other.

12. In case of any dispute or difference of opinion, in respect of this agreement or any matter it shall be referred to the relating thereto, arises between the parties. It shall be referred to the SUPERINTENDENT ENGINEER DRAINAGE CIRCLE FAISALABAD of the "Government" whose decision thereon shall be binding and final on the parties.

IN WITNESS THEREOF the parties hereto have put their respective hands and seals on this agreement on the day, month and the year hereinabove mentioned.

Executive Engineer
Faisalabad Drainage Division
Faisalabad.

For and on behalf of "Government"

7/23

For and on behalf of "Management"

Senior Manager Admin & HR

Shahid Khan Admin Manager

0300-4806906, 03[illegible]-4806883

Witness

Muhammad Idrees
35302-3500559-9

Shahbaz Ali
35404-1565672-1

ATTESTED
Oath Commissioner
Shaikhupura

Sapphire	Sapphire Textile Mills Ltd. (Stitching Unit)		
	Document Title: Occupational Health & Safety Policy		
	Doc#: IMS/OHS/POL/001	**Doc. Rev:** # 00	**Doc. Issue Date:** 05-July-2023

OCCUPATIONAL HEALTH & SAFETY (OH&S) POLICY

The management of Sapphire Textile Mills Ltd. (Stitching Unit) is committed to provide and maintain a Safe & Healthy working environment to the workers. We believe that effective implementation of Occupational Health and Safety measures is intergral part of production process and quality of products. We aim at risks and eliminating accidents by keeping in view all applicable national, international laws and customer standards.

Occupational accidents and illness can not only lower the moral of employees but also the chart of productivity and profitability, therefore, we strive to provide safe machines, safe procedures, safe and secure workplace, condulve enviornment and appropriate training to employees.

We also consider that all stakeholders of our supply chain take all possible steps to ensure Occupational Health and Safety of all employees. Our Approach is participatory for continual improvement of our OHS systems and of all parties working with the organization in any capacity, therefore, we stand ready to take consultation from our stakeholders and third parties. We are committed to involve workers in participation and consultation in all OHS decisions.

This policy will be communicated to all staff, contractors, suppliers, and stakeholders and available for the public.

پیشہ وارانہ صحت وحفاظت کی پالیسی

سفائر ٹیکسٹائل ملز لمیٹڈ (سٹچنگ یونٹ) کی انتظامیہ کی اولین ترجیح ملازمین کو کام کی جگہ محفوظ اور صحت مندانہ ماحول کی فراہمی ہے۔ ہم سمجھتے ہیں کہ پیداواری صلاحیت، مصنوعات کے معیار اور صحت وحفاظت کے اصولوں کے مابین گہرا تعلق ہے لہٰذا ہمارا ہدف ہے کہ تمام قابل اطلاق قومی اور بین الاقوامی قوانین اور کسٹمر کی طرف سے مقرر کردہ معیارات کو بروئے کار لاتے ہوئے خطرات اور حادثات کے امکانات کو ختم کریں۔

کام کی وجہ سے بیماری یا کسی حادثے کے وقوع پزیر ہونے سے جہاں ایک طرف ملازمین کی حوصلہ شکنی ہوتی ہے وہاں پیداوار اور معاشی فوائد پر بھی منفی اثر پڑتا ہے۔ اس لیے کمپنی انتظامیہ محفوظ مشینری اور جائے کار، محفوظ طریقہ کار، سازگار ماحول اور کام کے لیے مناسب تربیت مہیا کرنے کے لیے کوشاں ہے۔

ہماری یہ بھی کوشش ہے کہ ہماری سپلائی چین کے تمام شراکت دار اپنے ملازمین کی صحت وحفاظت یقینی بنائیں۔ اپنے اور شراکت داروں کے او ایچ ایس سسٹم میں مسلسل بہتری لانے کے لیے سفائر ٹیکسٹائل ملز لمیٹڈ (سٹچنگ یونٹ) کی انتظامیہ مشاورت اور تجاویز کا خیر مقدم کرتی ہے۔

یہ پالیسی تمام ملازمین، کنٹریکٹرز، سپلائرز، وزٹرز، شراکت داروں اور عوام الناس کے لیے بوقت ضرورت میسر ہوگی۔

Signature: _____

Head of CSR, Compliance and systems

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 No 716 - B Dated 12-02-2024

Validation for Stack & Ambient Monitoring / Sampling

Emission Monitoring under CTM-34 or OTM-39			
Facility Name & Address	Sapphire Textile Mills Limited (Unit-7) AA-01 NL-01		
Phone	At. Warburton Road, Feroze Walloan, Sheikhupura.		
Industry Category	Textile Mills (Baseline Study)		
Analyzer Model & Make : Testo 350			
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 8 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):- PAK Green Lab

Signature
Name of EPA Officer with office Address
RAs / ROs /DD(Labs)

Dated: 02-02-24

Signature
Name of Assistant / Deputy Analyst, Analyst with Name of Private Lab along with Address
Adil Javed D. Analyst

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

Validation No. 716 - A - Dated 12-02-2024

Validation for Wastewater & Drinking Water

Facility /Project Name & Address Phone	Sapphire Textile Mills Limited (Unit-I) At Warburton Road, Feroze Watwan - Sheikhupura	Sampling Point	GW-01

Waste Water (WW) Treatment facility — Primary / Secondary / Tertiary / NA

Drinking Water (W) Treatment Facility

Total WW collected Sample N/A

Total Collected Drinking water samples 01

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
	N/A	N/A	Yes / No	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		AS 218	APHA 4500-G	Yes ✓ NO	
Temp					
Cl					

* Field testing parameters only be validated by RAs, ROs, DD (Labs)

PAK Green Lab

Remarks for Sample Quality (if Any):-

Adil Javed - D. Analyst

Signature

Name of EPA Officer with office Address

Inspectors /RAs / ROs or ADs /DDs

Dated: 02-02-2024

Signature

Name of Assistant / Deputy Analyst, Analyst with Name of Private Lab along with Address

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

PGG/IMS/FF/063	Rev.#02	Rev date: 04-09-23

EPA Certified

TEST REPORT

Ref #: PGG/LAB/2024-2122/AA

Issue date: 13-Feb-24

Name of Industry/Client:	Sapphire Textile Mills Limited (Stitching Unit)
Address of Industry:	1.5-km Warburton Road Ferozewattoan Sheikhupura
Nature of Monitoring:	Ambient Air
Monitoring Instrument:	AQMS
Monitoring Date:	02-Feb-24
Date of completion of sampling:	03-Feb-24
Validated by EPA Representative:	Muhammad Nadeem RO, EPA (Lab), Lahore

Results:

Parameters	CO	NO	NO_2	SO_2	PM_{10}	$PM_{2.5}$
	mg/m³	µg/m³	µg/m³	µg/m³	ug/m³	ug/m³
Methodology	Non-Dispersive Infrared Absorption (NDIR)	Reduced Pressure Chemiluminescence (CLD)	Reduced Pressure Chemiluminescence (CLD)	UV fluorescence (UVF)	Integrated Sampling Technique	Integrated Sampling Technique
Results	2.63	20.15	39.02	12.03	163.2*	57.5*
PEQS for Ambient Air	05 (8 hour)	40 (24 hour)	80 (24 hour)	120 (24 hour)	150 (24 hour)	35 (24 hour)

End of Report

PEQS: Punjab Environmental Quality Standards

Remarks: PM_{10} or $PM_{2.5}$ exceeding the PEQS Limit.

Terms & Conditions:

- Analysis was conducted on the request of project proponent for IEE/EIA Baseline study.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
- This report should be reproduced pas a whole and not in parts.
- The responsibility of the ethical use of the results reported in this report lies with the client. Consequently, the laboratory is absolved of its responsibility for any claim that may result through the use by the client or others of the results appearing in this report.
- The left-over sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.
- The report is not valid for any negotiations

Field. Analyst	Chief Analyst	Laboratory Incharge

Pak Green Enviro-Engineering (Pvt) Ltd. 46-M, Gulberg III, Lahore Pakistan

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

PGG/IMS/FF/159	Rev.#00	Rev date: 04-09-23

EPA Certified

TEST REPORT

Ref #: PGG/LAB/2024-2124/GW

Issue date: 13-Feb-24

Name of Industry/Client:	Sapphire Textile Mills Limited (Stitching Unit)
Address of Industry:	1.5-km Warburton Road Ferozewattoan Sheikhupura
Nature of sample:	Ground water
Sampling By:	Pak Green Laboratories
Sample Source:	Tab Water
Date of sampling:	02-Feb-24
Sample Receiving Date:	02-Feb-24
Testing Facility:	Pak Green Laboratories
Testing Date:	02-Feb-24 to 12-Feb-24
Validated by EPA Representative:	Muhammad Nadeem RO, EPA (Lab), Lahore

Results:

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
1.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
2.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
3.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
4.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.25
5.	Total Hardness^	mg/L	-	<500	APHA-2340 C	220
6.	Total Dissolved Solids^	mg/L	< 1000	< 1000	APHA-2540 C	5673
7.	pH^	-	6.5-8.5	6.5-8.5	APHA-4500-H+ B	7.023 at 23.3°C
8.	Chloride (Cl^-) ^	mg/L	250	< 250	APHA-4500-Cl-B	67
9.	Electric Conductivity (EC)^	µS/cm	-	-	APHA-2510-B	756
10.	Sodium (Na)^	mg/L	-	-	APHA-3111 B	35.1937

End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization ^ PNAC Accredited

Remarks: All Parameters are in compliance with the PEQS Limit.

Terms & Conditions:

- Analysis was conducted on the request of the project proponent for his own use/PEQS Compliance.
- Report cannot be used to comply with any complaint, EPO, or other court case.
- This report should be reproduced as a whole and not in parts.
- The values represent the sample conditions when sampling/ monitoring was carried out.
- The Environmental Conditions while performing testing activities are (Temp=22.0-23.8°C) and (RH=52.9-56.9%)
- The Sampling was done as per the sampling and preservation protocol method APHA 1060-B&C
- The responsibility of the ethical use of the results reported in this report lies with the client.
- The leftover sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.
- The report is not valid for any negotiations.
- Dually calibrated instruments were used during monitoring and testing activities.

Lab. Analyst	Chief Analyst	Laboratory Incharge

Pak Green Enviro-Engineering 46-M, Gulberg-III, Lahore Pakistan (Pvt.) Ltd.

PNAC LAB 180 17025

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

PGG/IMS/FF/063	Rev.#02	Rev date: 04-09-23

TEST REPORT

Ref #: PGG/LAB/2024-2123/NL **Issue date:** 13-Feb-24

Name of Industry/Client:	Sapphire Textile Mills Limited (Stitching Unit)
Address of Industry:	1.5-km Warburton Road Ferozewattoan Sheikhupura
Nature of Monitoring:	Noise Level
Monitoring Time:	Real Time
Monitoring Instrument:	Land TEK SL 5868-P
Monitoring Date:	02-Feb-24
Validated by EPA Representative:	Muhammad Nadeem RO, EPA (Lab), Lahore

Results:

Sr. No.	Locations	Equivalent Noise Level dB (A)
1	Point-01: East Side	69.0
2	Point-02: West Side	63.3
3	Point-03: North Side	57.5
4	Point-04: South Side	62.7
PEQS (Day Time Industrial Area)		**75 dB(A)**

End of Report

PEQS: Punjab Environmental Quality Standards
Remarks: Noise level at all points are in compliance with PEQs Limit.
Terms & Conditions:

- Analysis was conducted on the request of project proponent for IEE/EIA Baseline study.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
- This report should be reproduced pas a whole and not in parts.
- The responsibility of the ethical use of the results reported in this report lies with the client. Consequently, the laboratory is absolved of its responsibility for any claim that may result through the use by the client or others of the results appearing in this report.
- The left-over sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.
- The report is not valid for any negotiations.

Field. Analyst	Chief Analyst	Laboratory Incharge

info@pakgreen.pk | pakgreen@hotmail.com | www.pakgreen.pk

ANNEXURE-E

WRITTEN FEEDBACK OF SCIOECONOMIC SURVEY

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Kamal

Residence: Sheikhupura

Gender: ~~M~~ F

Qualification: F.A

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
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?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Nasir

Residence: Sheikhupura

Gender: ☒ M ☐ F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☒	☐	☐	☐
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?	☒	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Hayat Bibi

Residence: Sheikhupura

Gender: [M] [☑ F]

Qualification: B.com

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: M. Sajid

Residence: Sheikhupura

Gender: [x] M [ ] F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Akmal

Residence: Sheikhupura

Gender: [M] [F]

Qualification: B.A

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
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?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Luqman

Residence: Sheikhupura

Gender: [M] [F]

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Sajjid

Residence: Sheikhupura

Gender: [M] [F]

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Ibrar

Residence: Sheikhupura

Gender: [✓] M [ ] F

Qualification: M-Phil

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Ali Asad

Residence: Sheikhupura

Gender: [M] [F]

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

M/S SAPPHIRE TEXTILE MILLS LIMITED (UNIT: 07)

Name: Asghar Ali

Residence: Sheikhupura

Gender: [M] [F]

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
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?	☑	☐	☐	☐	☐

Signature of Interviewer

ANNEXURE-F

GLOSSARY

GLOSSARY

Words	Dictionary
Discrepancies	A difference between conflicting facts, claims or opinions
Mitigation	The action of lessening in severity or intensity
Evaluated	Estimate or determine the nature, value, quality, ability, extent, or significance
Legislation	law enacted by a legislative body
Aspects	A distinct feature or element in a problem
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
Annunciation	A formal public statement
Rehabilitation	The conversion of wasteland into land suitable for use of habitation or cultivation

ANNEXURE-G

REFERENCES

REFERENCES

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ANNEXURE-H

EIA STUDY TEAM

EIA STUDY TEAM

Sr. No.	Designation	Name/Qualification	Experience
1.	Chief Environmentalist/ Lead Environmental Professional	Abdul Hafeez Nasir PhD Scholar Environmental Management	Ten Years' Experience as Environmentalist
2.	Senior Environmentalist/ Environmental Professional	Iftikhar Ahmed M. Phil Environmental Sciences	Seven Years' Experience as Environmentalist
3.	Associate Environmental Professional	Sabeera Tauheed M.Phil Environmental Science, PU	4 Year experience
4.	Environmental Engineer	Muhammad Imran BS Environmental Engineering	2 Years' Experience
5.	Associate Environmental Professional	Nageen Qayyum BS Hons. Environmental Sciences	2 Year Experience

ANNEXURE-I

LIST OF ABBREVIATIONS

LIST OF ABBREVIATIONS

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