ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT

PETROLEUM STORAGE UNIT

by

M/S JUNAID ENERGY TRADERS (SMC-PRIVATE) LIMITED

JUNAID
ENERGY TRADERS

Mouza Galo, Tehsil Ferozewala,
District Sheikhupura

Prepared by

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Table of Contents

LIST OF FIGURES

LIST OF TABLES

List of Abbreviation

EA	Environmental Approval
K. Oil	Kerosene Oil
LDO	Light Diesel Oil
M.T.T	Mineral Turpentine Oil
F. Oil	Furnace Oil
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMT	Environmental Management Team
EPA	Environment Protection Agency
ERP	Emergency Response Plan
ERS	Emergency Response System
ESPAK	Environmental Services Pakistan Private Limited
EMMP	Environment Management and Monitoring Plan
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IEE	Initial Environmental Examination
IFRs	Internal Floating Roofs
KL	Kilo Liters
LDS	Leak Detection System
OHS	Occupational Health and Safety
PEPA	Punjab Environmental Protection Act
PPE	Personal Protection Equipment
Punjab- EPA	Punjab- Environment Protection Agency
USEPA	United States - Environment Protection Agency
NOC	No Objection Certificate
VOCs	Volatile Organic Compounds
VRU	Vapor Recovery Unit

Glossary

Air quality	Measurement of the pollutants in the air; a description of healthiness and safety of the atmosphere.
Area	Area is the quantity that expresses the extent of a two-dimensional figure or shape, or planar lamina, in the plane.
Compensation	Includes cash payment, deferred payment, a bond, an insurance policy, stipend, payment in kind, rendition of services, grant of privileges and disturbance money, entitlement to special treatment by government and semi government entities, grant of alternative land, grant of import licenses and business, trade and commercial facilities in addition to the rehabilitation and resettlement of an affected person.
Consultation	Consultation refers to two-way transfer of information or joint discussion between project staff and the affected population. Systematic consultation implies a sustained and rigorous sharing of ideas. Bank experience shows that consultation often yields the best resettlement alternatives, fruitful procedures for continued participation, and independent information on actual conditions for implementation.
Coordinates contaminate	Each of a group of numbers used to indicate the position of a point, line, or plane to make impure, pollute
Disclosure	The action of making new or secret information known
Disruption	Disturbance or problems which interrupt an event, activity, or process.
Environmental Management System (EMS)	A set of management process and procedure that allows an organization to analyses and reduce the environmental impacts of its activities. Environmental Monitoring Systematic, geo-referenced observations of the environment essential to detecting changes in ecosystems over time. Environmental Protection Plan (EPP) a practical tool that describes the actions required to minimize environmental effects before, during and after project implementation. The plan may include details about the implementation of the mitigation measures identified in the environmental assessment, such as who is responsible for implementation, where the measures are intended to be implemented, and within what timeframe.
Evaluation	The making of a judgment about the amount, number, or value of something; assessment.
Geology	A science that studies rocks, layers of soil, etc., in order to learn about the history of the earth and its life
Ground water	Aquifers currently being used as a source of drinking water or those capable of supplying a public water system. They have a total dissolved solid content of 10,000 milligrams per liter or less, and are not "exempted aquifers.
Habitat:	Land and water used by wildlife. This may include biotic and Abiotic aspects such as vegetation, exposed bedrock, water, and topography.
Hazardous	Substance or material, which could adversely affect the safety of the public, handlers or carriers during transportation

Impact	Any aspect of a project that may cause an effect; for example, land clearing during construction is an impact, while a possible effect is loss and fragmentation of wildlife habitat. Indirect Effect: An effect in which the cause-effect relationship (e.g., between the project's impacts and the ultimate effect on a Valued Ecosystem Component) has intermediary effects. As an interaction with another effect is required to have a cumulative effect (hence, creating intermediary effects), cumulative effects may be considered as indirect. Industry Relations Corporation (IRC) The Corporation or organization that a First Nation has created to manage the First Nation's relations, including Consultation with Alberta, Canada and Industry.
Land acquisition	The process whereby a person is compelled by a public agency to cede all or part of the land a person owns or possesses, to the ownership and possession of that agency, for public purpose in return for compensation.
Mitigation:	The elimination, reduction or control of the adverse environmental effects of the project. Mitigation includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means. Non-Renewable Resource: Natural resources that are in fixed supply such as coal, oil and minerals.
Occupational health	Maintenance of the highest degree of physical, mental and social well-being of workers in all occupations by preventing departures from health, controlling risks and the adaptation of work to people, and people to their jobs
Parking	A parking garage is a building, or an area under a building, where cars can be parked.
Project area	The area specified by the funding and/or implementing agency according to the official gazette notification and includes the areas within the administrative limits of the provincial government.
Proponent	A person who advocates a theory, proposal, or course of action.
Rehabilitation	Include all compensatory measures to re-establish; at least lost incomes, livelihoods, living and social systems. It does not include the payment of compensation for required assets.
Resettlement	Means all measures taken to mitigate any and all adverse impacts, resulting due to execution of a project on the livelihood of the project affected persons, their property, and includes compensation, relocation and rehabilitation.
Residual Effect:	An effect that remains after mitigation has been applied
Scope	The extent of the area or subject matter that something deals with or to which it is relevant
Social Environment	It includes the culture that the individual was educated or lives in, and the people and institutions with whom they interact.
Stakeholders	Include affected persons and communities, proponents, private and public businesses, NGOS, host communities and EPA.

Topography	Details of the surface features of land. It includes the mountains, hills, creeks, and other bumps and lumps on a particular hunk of earth.

EXECUTIVE SUMMARY

INTRODUCTION

This executive summary presents an overview of the main findings of the Environmental Impact Assessment Report for the Construction of Petroleum Product by M/s **Junaid Energy Traders (SMC-Pvt) Ltd.** The primary objective behind the construction of Petroleum Storage is likely to meet the increasing market demand for storage and distribution facilities for petroleum products. This objective stems from the opportunity to capitalize on the growing industrial activities, urbanization, and infrastructure development in the region, thereby expanding the owners' business operations strategically while ensuring compliance with regulatory standards for safe storage and handling.

For this instance, Environmental Impact Assessment of the project has been conducted in accord with the Punjab Environmental Protection Act, 1997 and IEE/EIA Regulations 2022. The process for conducting environmental assessment and the results of EIA is described in this document.

SALIENT FEATURES OF PROJECT:

Table1: Salient Features of the Project

<table>
<tr><td>1.</td><td>Project Title</td><td>Construction of Petroleum Products Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd</td></tr>
<tr><td>2.</td><td>Project Location</td><td>Mouza Galo Tehsil Ferozewala district Sheikhupura</td></tr>
<tr><td>3.</td><td>Nos of Storage Tanks and storage capacity</td><td>Total Nos of U/G Tanks: 05
<table>
<tr><th>#</th><th>Name of Product</th><th>Type</th><th>Storage Capacity (Liters)</th></tr>
<tr><td>1.</td><td>Kerosine Oil</td><td>NDP</td><td>47538</td></tr>
<tr><td>2.</td><td>LDO</td><td>NDP</td><td>47538</td></tr>
</table></td></tr>
</table>

		3.	**M.T. T**	NDP	47538
		4.	**F. OIL**	HP	47538
		5.	**Solvent Oil (NAPHTHA)**	DP	47538
3.	**Proponent**	Muhammad Junaid Rana			
4.	**Consultant**	Environmental Services Pakistan Private Limited			
5.	**Total Area of Project**	Total area of the plot is 2 Kanal (11,000 sq. ft)			
9.	**Present status of Land Use**	Open Plot			
10.	**Cost of Project**	Approx. PKR 50 Crore			
15.	**Status of Project**	Pre-Construction Phase			

PROJECT OBJECTIVES

The Construction of Petroleum Products Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd located at Mouza Galo Tehsil Feroze Wala district Sheikhupura is driven by various objectives, including Compensate to help poverty by providing employment expanding their business operations strategically, improving logistics efficiency through dedicated storage infrastructure, ensuring compliance with regulatory requirements for safe handling and storage, enhancing competitiveness by offering superior storage solutions and mitigating risks associated with storing materials.\

NAME OF ORGANIZATION PREPARING REPORT:

Environmental Services Pakistan Pvt. Ltd (ESPAK)

Office No. 731, Block 2, Sector D1, Shahjilani Road Township Lahore

Contact: 042-35154012, 0312-0849999

SCREENING

Section 12 of Punjab environmental protection act, 1997 amended (2017) states "No proponent of project shall commence construction or operation unless he has filed with the government agency designated by Federal Environmental Protection Agency or provincial agencies, as the case may be or, where the project is likely to cause and adverse environmental effects an environmental impact assessment (EIA), and has obtained from the government agency approval in respect thereof." PEPA act provided the guidelines for categorizing the projects.

The Proposed Project; i.e., Construction of Petroleum Storage fall under Schedule-II, Category A (Energy), Clause 5 "Oil and gas extraction projects including exploration, production, gathering systems, separation and storage, under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022.

SITE ALTERNATIVES

No site alternatives were considered as the land is the property of proponent and best possible place for commercial activities. This site is chosen because site is well located in regard to the following:

- Easy access
- No settlements in close vicinity
- No ecologically sensitive or declared protected area
- No historical, educational or religious site nearby
- No vegetation at the selected site

As no important religious, archaeological, historical or recreational site, or any other ecologically sensitive, declared protected area or poor population exists within close vicinity of the selected site. In view of these facts, it can be concluded that the Selected Site is best suited for the project and will not pose any adverse impact or threat on any component of the environment and will not disturb ecology.

ECONOMIC ALTERNATIVE

The immediate economic benefits of the proposed project are a generation of employment opportunities and revenue. The direct and indirect jobs creation will occur in a broad range of industries such as construction services, repair and maintenance, electricity supply, hardware and building supplies retailing, motor

vehicle and parts retailing, water supply, sewerage and drainage services, waste collection, treatment and disposal services, gas supply, rental and hiring services, garden supplies retailing, cleaning and janitorial, pest control, printing, etc.

Direct Job Creation: The project timeline is of three years, which means that the project will create multiple jobs.

ENVIRONMENTAL ALTERNATIVE

The proposed project site is located in an Industrial area. There may be potential environmental and human health impacts of the proposed project during the construction phase of the project. However, the proposed project will have an efficient solid waste management system, and features of the eco-friendly building, such as the use of energy-efficient items, have been planned.

Considering the environmental protection measures to be taken during the construction and operational phase of the project and the sustainable features of the proposed project, it can be implied that the proposed project will enhance the environment of the project area during the operational phase of the project especially when looking at the alternatives to the project.

PROJECT OUTLINE

The proposed project is the construction of Petroleum Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd. located at Mouza Galo Tehsil Ferozewala district Sheikhupura. Total area of the plot is 2 Kanal which is 11,000 sq. ft The estimated cost of the project is Approx. PKR 50 crore. In the Proposed Project there are total 05 U/G Tanks for the petroleum products storage. The primary objective behind the construction of the Petroleum Products Storage by the owners is likely to meet the increasing market demand for storage and distribution facilities for Petroleum products. This objective stems from the opportunity to capitalize on the growing industrial activities, urbanization, and infrastructure development in the region, thereby expanding the owners' business operations strategically while ensuring compliance with regulatory standards for safe storage and handling.

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 does not have any significant adverse impacts on the nearby community and on environment. Overall, the project has 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.

Table2: Summary of Environmental impacts of the Construction Phase

Possible Impact	Impact Magnitude	Mitigation Measures
Construction Phase		
Air emissions)	Minor / Long Term	✪ Regular water sprinkling at construction site to suppress dust. ✪ Covering of construction materials and soil stockpiles ✪ Proper maintenance of machinery and vehicles to minimize exhaust emissions ✪ Use of well-maintained equipment compliant with emission standards
Noise emissions	Minor / Long Term	✪ Use of well-maintained and low-noise construction equipment ✪ Restrict construction activities to daytime hours ✪ Provision of personal protective equipment (PPE) such as ear plugs to workers ✪ Installation of noise barriers if required near sensitive receptors
Wastewater	Minor / Short Term	✪ Proper management of domestic wastewater through septic tank system ✪ Avoid discharge of untreated

Possible Impact	Impact Magnitude	Mitigation Measures
		wastewater into open land or drains ✪ Regular maintenance of sanitation facilities at the site
Greenbelt development	Positive / Long Term	✪ Plantation of suitable native tree species along the project boundary ✪ Development of greenbelt to improve aesthetics and air quality ✪ Regular maintenance and watering of planted vegetation
Safety Hazard	Minor to Moderate / Short Term	✪ Implementation of Health, Safety, and Environment (HSE) plan ✪ Provision of PPE (helmets, gloves, safety boots, reflective jackets) ✪ Proper training of workers on safety procedures ✪ Safe handling and storage of construction materials ✪ Installation of warning signs and barricades around hazardous areas ✪ Availability of first aid kits and emergency response procedures

Table3: Summary of Environmental impacts of the Operational Phase

Possible Impact	Impact Magnitude	Mitigation Measures
Operational Phase		
Air Emissions (VOCs and Fumes)	Minor / Long Term	✪ Installation of proper venting systems on storage tanks ✪ Use of floating roofs or vapor control systems where applicable ✪ Regular inspection and maintenance of tanks and fittings to prevent leakage ✪ Minimization of product handling losses during loading/unloading operations
Soil and Groundwater Contamination	Moderate / Long Term	✪ Construction of impervious and leak-proof underground storage tanks ✪ Provision of secondary containment systems where applicable. ✪ Regular inspection and maintenance of tanks and pipelines ✪ Immediate cleanup and containment of any accidental spills ✪ Proper sealing of joints and fittings to prevent leakage
Fire and Explosion	Moderate / Long	✪ Strict adherence to safety

Possible Impact	Impact Magnitude	Mitigation Measures
Risk	Term	standards for petroleum storage ✪ Installation of fire-fighting systems (fire extinguishers, hydrants, sand buckets) ✪ No smoking policy within the facility ✪ Provision of flame arrestors and grounding/earthing systems ✪ Emergency response plan and regular drills for workers
Wastewater Generation	Minor / Long Term	✪ Domestic wastewater to be treated via septic tank system ✪ Regular maintenance and desludging of septic tanks ✪ No discharge of untreated wastewater into the environment
Health and Safety Risks	Minor to Moderate / Long Term	✪ Implementation of a comprehensive HSE management system ✪ Provision of PPE to all workers (helmets, gloves, safety shoes, etc.) ✪ Training of staff in safe handling of petroleum products ✪ Installation of warning signage and restricted access to hazardous areas ✪ Availability of first aid and emergency response

Possible Impact	Impact Magnitude	Mitigation Measures
		arrangements
Traffic and Noise Due to Tanker Movement	Minor / Long Term	✪ Proper traffic management plan for tanker movement ✪ Scheduling of deliveries to avoid peak traffic hours ✪ Use of designated entry/exit routes ✪ Maintenance of vehicles to reduce noise and emissions

PROPOSED ENVIRONMENTAL MONITORING

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

- **Ambient Air**

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

- **Noise**

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

- **Water Quality**

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

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

PUBLIC ONSULTATION

Public consultation was carried out as part of the EIA process to incorporate the views and concerns of the local community and other stakeholders regarding the proposed petroleum storage facility at Mouza Galo, Tehsil Ferozewala, District Sheikhupura. Informal discussions were held with nearby residents and relevant stakeholders to brief them about the nature of the project. Overall, the community response was neutral to positive, as the project is expected to contribute to local economic activity and employment opportunities.

CONCLUSION

The proposed project, *"Construction of Petroleum Products Storage Facility by M/s Junaid Energy Traders (SMC-Pvt.) Ltd."* at Mouza Galo, Tehsil Ferozewala, District Sheikhupura, is environmentally feasible, as the identified impacts are mostly minor to moderate and can be effectively mitigated through appropriate measures and implementation of the Environmental Management Plan (EMP). With adherence to environmental regulations and safety standards, the project is not expected to cause significant adverse impacts and may be approved from an environmental perspective.

CHAPTER # 1. SCREENING

Screening is the first and most important step of the Environmental Impact Assessment (EIA) process under the Punjab Environmental Protection Act (PEPA) and the Punjab EPA Review of IEE/EIA Regulations. In this stage, the nature, scale, and potential environmental impacts of the proposed project are evaluated to determine whether it requires an Initial Environmental Examination (IEE) or a full Environmental Impact Assessment (EIA). The project is compared against the schedules provided in the Punjab regulations Schedule I (projects requiring IEE) and Schedule II (projects requiring EIA). If the project falls under Schedule II or is likely to cause significant adverse environmental effects, it must undergo a comprehensive EIA. Screening ensures that environmentally sensitive projects receive appropriate levels of assessment, helps avoid unnecessary studies for low-impact projects, and guides proponents toward compliance with regulatory requirements from the very beginning.

Based on the Punjab Environmental Protection Act 1997 and the IEE & EIA Regulations, 2022 for filing, reviewing, and approving environmental assessments, the present project is classified under **Category A (5), "Oil and Gas extraction projects including exploration, production, gathering systems, separation and storage"** i.e., the project requires an EIA study. Thus, an EIA report is being prepared and submitted accordingly for approval.

CHAPTER # 2. 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.

2.1 PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) report is being submitted to the Environmental Protection Agency (EPA), Government of the Punjab, Lahore for the compliance of Section 12 of Punjab Environment Protection Act-1997 (Amended 2012) for obtaining No Objection Certificate (NOC). 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 sectoral guidelines

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

2.2 IDENTIFICATION OF THE PROJECT AND PROPONENT

The proponent has been submitting this EIA report, the said project is proposed and the proponent wants to get Environmental approval for Petroleum Storage under the name of M/s Junaid Energy Traders (SMC-Pvt) Ltd.

2.2.1 Proponent

Name: Muhammad Junaid Rana

CNIC# 35202-6162299-9

Mailing Address: Mouza Galo Tehsil Ferozewala district Sheikhupura

2.3 DETAILS OF CONSULTANT

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

Environmental Services Pakistan Pvt. Ltd (ESPAK)

Office No. 731, Block 2, Sector D1, Shahjilani Road Township Lahore

Contact: 042-35154012, 0312-0849999

The current study was carried out by the following professionals: \

Table 2-1: Name of Team Members Preparing Report

#	Name of Team Members	Designation	Qualification
1	Ali Ramzan	Senior Environmentalist	B.S Environmental Sciences
2	Nabia Farrukh Sohail	Environmentalist	M.S Environmental Science
3	Shahzad Ahmad Khan	Project Manager	MBA Marketing

2.4 BRIEF DESCRIPTION OF NATURE, SIZE AND LOCATION OF PROJECT

Subject project for which this Environmental Impact Assessment (EIA) Study has been conducted is the Proposed Petroleum Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd. Total area of the plot is 2 Kanal. The estimated cost of the project is Approx. PKR 50 crore. In the Proposed Project there are total 05 U/G Tanks for the petroleum products storage.

2.4.1 Quantities to be Stored

Table 2-2 Quantities of the Products

#	Name of Product	Type	Storage Capacity (Liter)
1.	Kerosine Oil	NDP	45162
2.	LDO	NDP	45162

#	Name of Product	Type	Storage Capacity (Liter)
3.	M.T. T	NDP	45162
4.	F. OIL	HP	45162
5.	Solvent Oil (NAPHTHA)	DP	45162
Total Storage Capacity			225810

The core component of the project comprises the installation of eleven storage tanks. These tanks will be constructed in compliance with OGRA standards and equipped with advanced safety features, including double-walled construction, leak detection systems, and spill containment measures.

In addition to the storage tanks, the project will include the construction of executive and managerial offices to oversee the operations of the facility. These office spaces will provide administrative support and serve as hubs for managing day-to-day activities.

To ensure the safety of personnel and the surrounding environment, the project will be equipped with fire hydrant points strategically located near the underground water tanks. Additionally, comprehensive emergency response protocols will be established to address any potential incidents, including spills, leaks, or other environmental emergencies.

The project will adhere to stringent precautionary measures to mitigate the risk of environmental harm. This includes regular inspection and maintenance of storage tanks, implementation of best practices for handling and transportation of Petroleum Products, and training of personnel on emergency response procedures.

The project will adhere to all relevant environmental regulations and standards set forth by regulatory authorities. This includes obtaining necessary permits and approvals for the construction and operation of the facility, as well as ongoing compliance monitoring to ensure adherence to environmental requirements.

2.5 STORAGE TANKS SPECIFICATIONS

The proposed storage tanks are storage tanks with a total of five tanks, each having a capacity of 22,5810 liters and one tank having 47,538 liters. These tanks will be constructed using corrosion-resistant materials such as steel or fiberglass-reinforced plastic (FRP). They will feature double-walled construction, providing an extra layer

of protection against leaks and spills. A leak detection system will be installed between the inner and outer walls to monitor for leaks.

Installation will adhere to industry standards and regulatory requirements for USTs, ensuring proper underground placement to minimize environmental impact. The tanks will be equipped with ventilation systems to prevent pressure buildup and ensure proper vapor ventilation. Filtration systems will maintain the quality of stored petroleum products by removing contaminants.

Automated monitoring and control systems will be in place to track tank levels, temperatures, and other parameters, with remote monitoring capabilities for real-time oversight. Safety features include overfill protection devices, grounding and bonding systems to prevent static electricity buildup, and emergency shutoff valves for rapid isolation during emergencies.

Tanks will be labeled with appropriate signage indicating contents, capacity, and safety precautions, with emergency contact information displayed prominently. Regular inspection, maintenance, and testing programs will ensure the integrity and safety of the tanks, including routine testing and calibration of monitoring systems.

2.6 LOCATION

Subject unit is located at Mouza Galo Tehsil Feroze Wala district Sheikhupura.

The Location Coordinates are:

31°37'31.26"N

74° 9'3.17"E

Figure 2-1: Aerial view of the project site

CHAPTER # 3. SCOPING

3.1.1 SPATIAL AND TEMPORAL BOUNDARIES OF ENVIRONMENTAL ASSESSMENT

The spatial and temporal boundaries of the Environmental Impact Assessment (EIA) have been defined to ensure comprehensive evaluation of all potential environmental and social impacts associated with the proposed project, “Construction of Petroleum Products Storage Facility by M/s Junaid Energy Traders (SMC-Pvt.) Ltd.” located at Mouza Galo, Tehsil Ferozewala, District Sheikhupura.

3.2 Spatial Boundaries

The spatial boundary of the study encompasses:

3.2.1 Primary Impact Area (Project Footprint):

The core project area covering approximately 2 Kanal (11,000 sq. ft.), where all construction and operational activities, including installation of underground storage tanks, product handling, and associated infrastructure, will take place.

Secondary Impact Area (Zone of Influence):

This includes the surrounding area within a radius of approximately 500 meters to 1 kilometer from the project site. This zone has been considered to assess potential impacts such as:

- Air emissions (from fuel handling and transportation)
- Noise generation during construction and operation
- Traffic movement of oil tankers
- Risk of accidental spills or leakages

3.3 Temporal Boundaries

The temporal scope of the EIA covers all phases of the project lifecycle, including:

3.3.1 Pre-Construction Phase:

Includes planning, design, land preparation, and regulatory approvals. Potential impacts such as site clearance and mobilization of machinery are considered.

3.3.2 Construction Phase:

Encompasses activities such as excavation, installation of underground storage tanks, civil works, and infrastructure development. This phase is short-term but may have moderate environmental impacts including dust emissions, noise, and waste generation.

3.3.3 Operational Phase:

This is the long-term phase involving storage, handling, and transportation of petroleum products. Key environmental considerations include:

- Air emissions (volatile organic compounds)
- Risk of spills and leakages
- Wastewater generation (if any)
- Occupational health and safety

3.4 Identification of Key Environmental Issues

The identification of key environmental issues for the proposed project, “Construction of Petroleum Products Storage Facility by M/s Junaid Energy Traders (SMC-Pvt.) Ltd.”, has been carried out based on the nature, scale, and location of the project, as well as the characteristics of petroleum products handling and storage.

The major environmental concerns associated with the project have been identified for all phases, i.e., pre-construction, construction, and operational phases, and are summarized below:

3.4.1 Pre-Construction Phase

Land Use Change:

Conversion of barren land into an industrial storage facility may alter the existing land use pattern.

Site Preparation Activities:

Minor disturbances due to land leveling and mobilization of machinery.

3.4.2 Construction Phase

Air Quality Deterioration:

- Dust emissions from excavation, earthworks, and movement of construction vehicles.
- Exhaust emissions from construction machinery.

Noise Pollution:

- Noise generated from heavy equipment and construction activities, potentially affecting nearby receptors.
- Soil Contamination Risks:
- Potential spills of fuel, oil, and lubricants from machinery.

Solid Waste Generation:

- Construction debris, packaging materials, and scrap.
- Occupational Health and Safety Risks:
- Hazards to workers due to excavation, heavy machinery, and improper handling of materials.

Traffic Management Issues:

- Increased movement of construction vehicles may affect local traffic flow and road conditions.

3.4.3 Operational Phase

Air Emissions:

- Release of Volatile Organic Compounds (VOCs) during storage and handling of petroleum products such as kerosene, LDO, furnace oil, and solvent oil (naphtha).
- Risk of Soil and Groundwater Contamination:
- Leakage or spillage from underground storage tanks and pipelines may contaminate soil and groundwater.

Fire and Explosion Hazards:

- Storage of flammable products (especially naphtha and kerosene) poses significant fire and explosion risks.
- Wastewater Generation:
- Limited wastewater generation (mainly domestic), which requires proper disposal through septic tank or authorized means.

Hazardous Waste Generation:

- Waste oil, contaminated rags, and sludge from tank cleaning operations.

Noise and Traffic Impacts:

- Movement of oil tankers may generate noise and increase traffic load in the area.

Occupational Health and Safety:

- Risks to workers due to handling of hazardous and flammable substances.

CHAPTER # 4. ANALYSIS OF ALTERNATIVES

The consideration of alternatives is a crucial step in evaluating the potential environmental effects of a proposed project. The purpose of assessing alternatives is to identify and compare different options to achieve the project's objectives, taking into account environmental, social, and economic considerations.

4.1 SITE ALTERNATIVES

No site alternatives were considered as the Unit will be established on land which is owned by proponent. This site is chosen because site is well located in regard to the following:

- Easy road access
- No settlements in close vicinity
- No ecologically sensitive or declared protected area
- No historical, educational or religious site nearby
- No vegetation at the selected site

As no important religious, archaeological, historical or recreational site, or any other ecologically sensitive, declared protected area exists within close vicinity of the selected site. In view of these facts, it can be concluded that the Selected Site is best suited for the project and will not pose any adverse impact or threat on any component of the environment and will not disturb ecology.

4.2 TECHNOLOGY ALTERNATIVES

Since no technology will be used in this project and this project is a Petroleum Storage which will only be used to store petroleum products, technology alternatives have not been considered in this project. However, automatic storage and handling can be promoted to avoid storage risk.

4.3 ENVIRONMENTAL ALTERNATIVES

When considering environmental alternatives for the petroleum storage unit, several approaches can be explored to minimize the project's impact on the environment and promote sustainability. Here are some environmental alternatives to consider:

4.4 GREEN BUILDING DESIGN:

Implementing green building principles in the design and construction of the storage facility can enhance energy efficiency, reduce resource consumption, and minimize waste generation. This can include using sustainable materials, incorporating renewable energy sources like optimizing the building's orientation for natural lighting and ventilation.

4.5 CONTAINMENT AND SPILL PREVENTION:

Implementing robust containment measures and spill prevention systems can significantly reduce the risk of environmental contamination in the event of leaks or spills. This may involve installing secondary containment systems, leak detection technologies, and automated shut-off systems to minimize the spread of hazardous materials.

4.6 ADVANCED MONITORING AND REPORTING:

Utilizing advanced monitoring technologies and real-time reporting systems can enhance environmental compliance and response capabilities. Implementing air quality monitoring stations, groundwater monitoring wells, and remote sensing technologies can provide early detection of environmental risks and facilitate timely mitigation efforts.

4.7 STORMWATER MANAGEMENT:

Effective stormwater management practices will be Implemented to prevent pollution of nearby water bodies and reduce the risk of runoff contamination. This can include installing retention ponds, vegetative buffers, and permeable pavement to capture and treat stormwater runoff before it enters natural waterways.

4.8 ECONOMIC ALTERNATIVES

Economic alternatives were considered taking into consideration the capital and operation costs for the proposed unit. Land cost, infrastructure cost and machinery cost were taken into account as the deciding economic factor. Accordingly, land is selected is near to enough wide road that is Lahore- Sheikhupura Motorway. So that the infrastructure and management costs get minimized due to already developed roads.

Also state of the art machinery will be employed considering it as one-time investment and thus minimizing the maintenance cost during the operational phase. Additionally, it will contribute towards uninterrupted production during operational phase.

CHAPTER # 5. DESCRIPTION OF THE PROJECT

5.1 TYPE AND CATEGORY OF THE PROJECT:

The subject project is the proposed Construction of Petroleum Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd located at Mouza Galo Tehsil Feroze Wala district Sheikhupura. The current Environmental Impact Assessment study has been conducted for the development of the Petroleum Storage.

The Proposed Project; i.e., Construction of Petroleum Storage fall under Schedule-II, Category A (Energy), Clause 5 “Oil and gas extraction projects including exploration, production, gathering systems, separation and storage, under Punjab Environmental Protection (Review of EIA/IEE) Regulations,2022. TORs of the study under clause 5 (f) of policy and procedure for the filing, review, and approval of environmental assessment are attached as **Annexure-A** with this EIA report.

5.2 OBJECTIVES OF THE PROJECT

Objectives of the operation of the subject project is:

- To meet the increasing market demand for storage and distribution facilities for petroleum products.
- To establish the business for the proponent.
- To contribute to the national economy of the country.
- Compensate to help poverty by providing employment

5.3 LOCATION AND SITE LAYOUT OF THE PROJECT:

Project site is located at Mouza Galo Tehsil Ferozewala district Sheikhupura.

Figure 5-1 Location of the Proposed Project

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

5.4 LAND USE ON SITE

It's an open plot owned by the proponent.

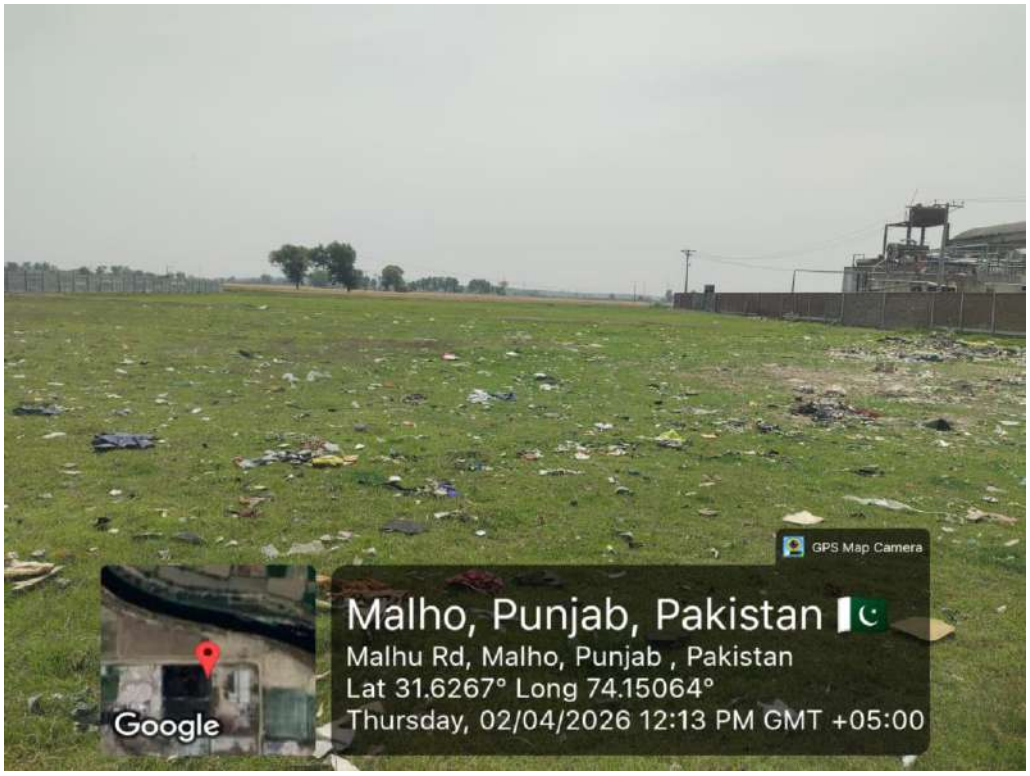


Figure 5-2Current Land Use

5.5 ROAD ACCESS

Main access road present at the front side of the project site connect it directly to Lahore- Sheikhupura Motorway.

5.6 VEGETATION FEATURES OF THE SITE

Land proposed for the subject project is clear and free of dense vegetation, only shrubs and grasses are present over there in scattered quantity. Few and scattered amount of vegetation will help to avoid land clearing at the project site.

5.7 COST AND MAGNITUDE OF THE OPERATION

Subject project is the Construction of Petroleum Storage in district Sheikhupura. Total cost of the project will be Approx. PKR 50 crore which will include the cost of machineries, its processing in unit and provision of electricity. There are no other associated activities with regard to the subject project.

5.8 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 10-12 months from the date of environmental approval. Subsequently the operational and maintenance aspects of the project will be undertaken by the proponent.

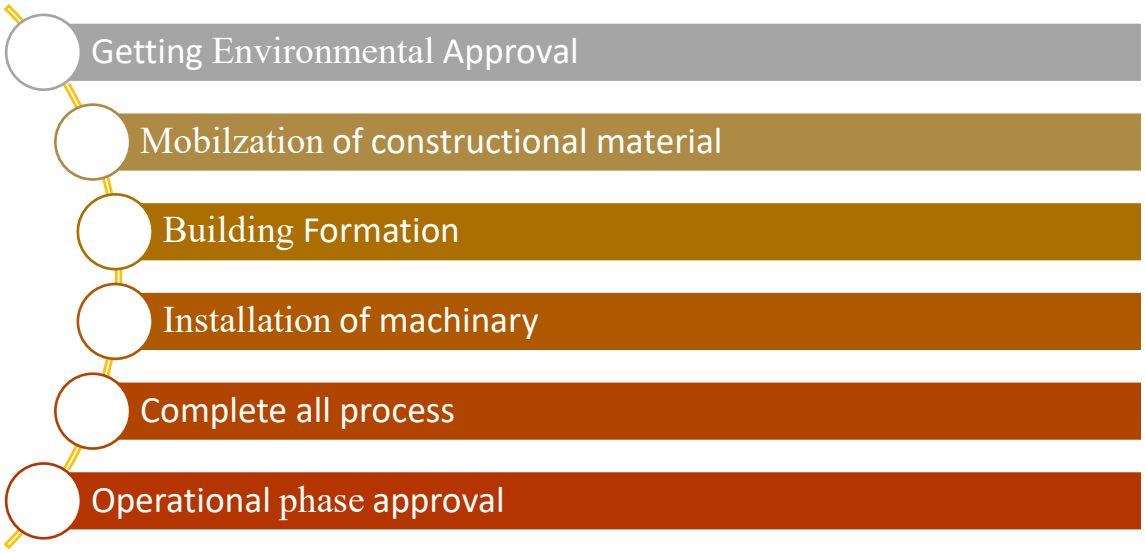


Figure 5-3Schedule of Implementation

5.9 DESCRIPTION OF THE PROJECT:

The proposed project is the Construction of Petroleum Storage by M/s Junaid Energy Traders (SMC-Pvt) Ltd located at Mouza Galo Tehsil Feroze Wala district Sheikhupura.

Total area of the plot is 02 Kanal. The estimated cost of the project is Approx. PKR 50 crore. In the Proposed Project there are total 05 U/G Tanks for the petroleum products storage. The number of total petroleum products stored and the capacity of each product is given below:

Table 5-1Quantity of Petroleum Product Storage

#	Name of Product	Type	Storage Capacity (Liters)
1.	Kerosine Oil	NDP	47538
2.	LDO	NDP	47538
3.	M.T. T	NDP	47538
4.	F. OIL	HP	47538
5.	Solvent Oil (NAPHTHA)	DP	47538
Total Storage Capacity			225810

5.10 PROJECT PROCESS FLOW CHART:

5.11 ACTIVITIES OF THE PROJECT:

5.11.1 MACHINERY

- Sami Rotary Pump
- Generator
- Fire Hydrant

5.11.2 PROCESS OF THE PROJECT

The petroleum storage and process involves specific steps to ensure the safe storage, handling, and distribution of petroleum products. Below is a high-level description of the process:

5.11.3 SITE PREPARATION AND INFRASTRUCTURE

The site includes tanks, pipelines, pumps, loading/unloading areas, fire suppression systems, and safety signage.

5.11.4 RECEIVING AND UNLOADING

Petroleum products are delivered via road tankers, rail tank cars, or pipelines.

Samples are taken to ensure product quality and conformity with specifications.

5.11.5 UNLOADING PROCESS:

- Tankers are connected to unloading pipelines.
- Pumps transfer the petroleum products into designated storage tanks.

5.11.6 STORAGE

5.11.7 STORAGE TANKS:

- Large tanks store diesel, petrol, and lubricants.
- Tanks are equipped with level gauges, temperature monitors, and pressure relief valves
- Different petroleum products are stored separately to prevent contamination.
- Tanks are surrounded by bund walls to contain leaks or spills.

5.11.8 SAFETY AND MAINTENANCE

- **FIRE PROTECTION:** Fire suppression systems, such as foam sprinklers and fire hydrants, are installed.
- **MONITORING:** Continuous monitoring of tank levels, pressure, and temperature to prevent accidents.
- **ROUTINE INSPECTIONS:** Regular checks for leaks, corrosion, and system integrity.
- **EMERGENCY PREPAREDNESS:** Emergency response plans are in place, with trained personnel and regular drills.

5.11.9 POWER REQUIREMENTS:

The process will be done with automatic running machines. And machines will be run with the electricity. Power requirements will be fulfilled by WAPDA.

5.11.10 WATER REQUIREMENTS:

During Construction: approximately 5,000 gallon per day for constructional and domestic uses.

During Operation: maximum 10,000 gallons/d for domestic. Ground water will be used as a source of water to fulfill the water requirements during the construction and operation phases of the project.

5.11.11 WASTEWATER TREATMENT:

60-70% of the used water for domestic purposes will be the wastewater which will be produced during the operation phase of the project. The generated wastewater will be treated in treatment facility (Septic Tank) of unit. Water after treatment will be disposed of in the nearby drain.

5.11.12 SOLID WASTE:

During the construction phase of the project, 75 kg/day construction and domestic waste will be produced. Constructional waste will be recycled during the constructional activities for road filling and maintenance purposes. According to an estimate, 11.000 kg/day domestic and project related solid waste will be produced during the operation phase of the project (based on solid waste generation rates of 0.45 kg/capita/day urban waste generation). In a Petroleum Storage solid waste generation is relatively low compared to other industrial facilities, but there are still some specific sources of solid waste. These wastes typically arise from maintenance activities, packaging materials, and used components. Project related waste will include Empty barrels, drums, and containers, Plastic and metal scraps. which will be handed over to the certified contractors.

5.11.13 SOLID WASTE MANAGEMENT SYSTEM/PRACTICES

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

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

5.11.14 PLANTATION

Area for plantation will be reserved within the premises of the project and plantation will be done within, outside and at the boundary wall of the unit.

5.11.15 PARKING AREA

Parking area will be provided in the subject proposed project. Unit will allocate ample area for parking purpose.

5.11.16 OCCUPATIONAL HEALTH AND SAFETY:

All the methods and procedures of health and safety will be adopted at the project site to ensure the health and safety of the workers.

5.11.17 FIRST AID FACILITY:

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

5.11.18 POWER SOURCES AND TRANSMISSION:

The power requirements will be fulfilled by WAPDA. However, a diesel fired stand by generator (if needed) will also be used for emergency situations only.

Following measures will be ensured for the operational equipment maintenance:

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

5.11.19 PERSONAL PROTECTIVE EQUIPMENT:

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

Table 5-2Personal Protective Equipment

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

5.11.20 SAFETY SIGNS/SAFETY BOARDS:

At any workplace safety signs and symbols are very important to avoid many accidents. They must be in easy and understandable language to all the workers. Workers should have the knowledge of sign wordings and they must be trained and aware about them. Safety signs, symbols and boards will be provided at the proposed project site to protect the workers and employees from the risks of hazards that has not been controlled by other means. Safety signs and boards give safety message and they must be of different colors that workers could understand their meanings easily. At the subject project, safety signs and boards will be placed to avoid the workers and staff from any risk.

5.11.21 SECURITY:

Security guards will present round the clock to maintain its security. Beside this security cameras at various places will be installed.

5.12 POWER SOURCES AND TRANSMISSION:

Electricity requirements at the project site will be fulfilled by WAPDA.

5.13 RESTORATION / REHABILITATION PLAN

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

5.14 RAIN WATER HARVESTING

The unpaved areas within the project site will facilitate natural groundwater recharge by allowing rainwater to infiltrate into the soil. This will help in maintaining the local hydrological balance and reducing surface runoff.

5.15 FIRE SAFETY MEASURES

Following equipment’s will be employed.

Table 5-3Fire Safety Measures

Equipment	Quantity
Fire Extinguishers (04 Kgs)	08
Sand Buckets	08
Fire Hydrants	02

5.16 EMERGENCY PREPAREDNESS PLAN

An Emergency Preparedness Plan (EPP) will be implemented to effectively manage and respond to potential emergencies such as fire, explosion, fuel spills, natural disasters, and other unforeseen incidents during the operational phase of the petroleum storage terminal. The objective of the plan is to minimize risks to human health, property, and the environment.

5.16.1 Hazard Identification and Risk Assessment

Potential hazards including fire, explosion, petroleum leaks/spills, equipment failure, and natural events (e.g., earthquakes, flooding) will be identified and assessed to determine their likelihood and impact.

5.16.2 Emergency Equipment and Facilities

The facility will be equipped with:

- Firefighting systems (fire hydrants, extinguishers, foam systems)
- Spill control kits and absorbent materials
- First aid boxes and medical supplies
- Emergency alarms and communication systems
- Personal Protective Equipment (PPE) for response teams

5.16.3 Communication and Alarm System

An effective alarm system will be installed to alert personnel in case of emergency. Emergency contact numbers (fire brigade, hospital, local authorities) will be prominently displayed at strategic locations.

5.17 GOVERNMENT APPROVALS REQUIRED BY THE PROJECT:

All the approvals had been obtained by the project proponent and their copies are attached with this EIA report.

CHAPTER # 6. DESCRIPTION OF ENVIRONMENT

This section provides the description of baseline conditions of the Project as well as the area of influence. The existing environmental conditions of the proposed area of influence will also be a benchmark to be used for a comparison of before and after installation and operation of grid station. This baseline will also provide the datum for assessing the impacts and suggesting the mitigation measures, which will be implemented effectively at various phases of the Project activities.

6.1 PHYSICAL ENVIRONMENT

6.1.1 HUMAN SETTLEMENT

The nearest settlement, **Bhattianwala**, is located approximately **600 meters** from the project site, and no significant adverse impacts are anticipated on the local community with proper mitigation and safety measures in place.

Figure 6-1Human Settlement

6.1.2 TOPOGRAPHY

Sheikhupura district is a district located in Lahore division of Punjab Province, Pakistan Sheikhupura is the headquarters of Sheikhupura district. According to the 1998 census of Pakistan, the district had a population of 3,321,029 of which 25.45% were urban. In 2005 one of its subdivisions was split off to form the new Nankana Sahib District. The predominant language of the district is Punjabi, which according to the 1998 census results for the tehsils of Sheikhupura, Ferozewala and Safdarabad, is the first language of 98% of the population, while Urdu is the first language of 1.1%. Average elevation of Sheikhupura is 206 meters.

Figure 6-2 Topography of the Project Area

According to the 2017 census of Pakistan, most populous cities of the district are Sheikhupura, Muridke, Kot Abdul Malik and Ferozewala. The topography is marked by, local depression and grounds.

6.1.3 GEOLOGY AND SOILS

The surface soil is grey to brown in color and medium textured i.e., silty clay/ clay loamy or sandy loam at the site, at all the locations and generally continues up to depth of 6-14 feet. This sub stratum contains fine sand. Topographically the area is almost plain.

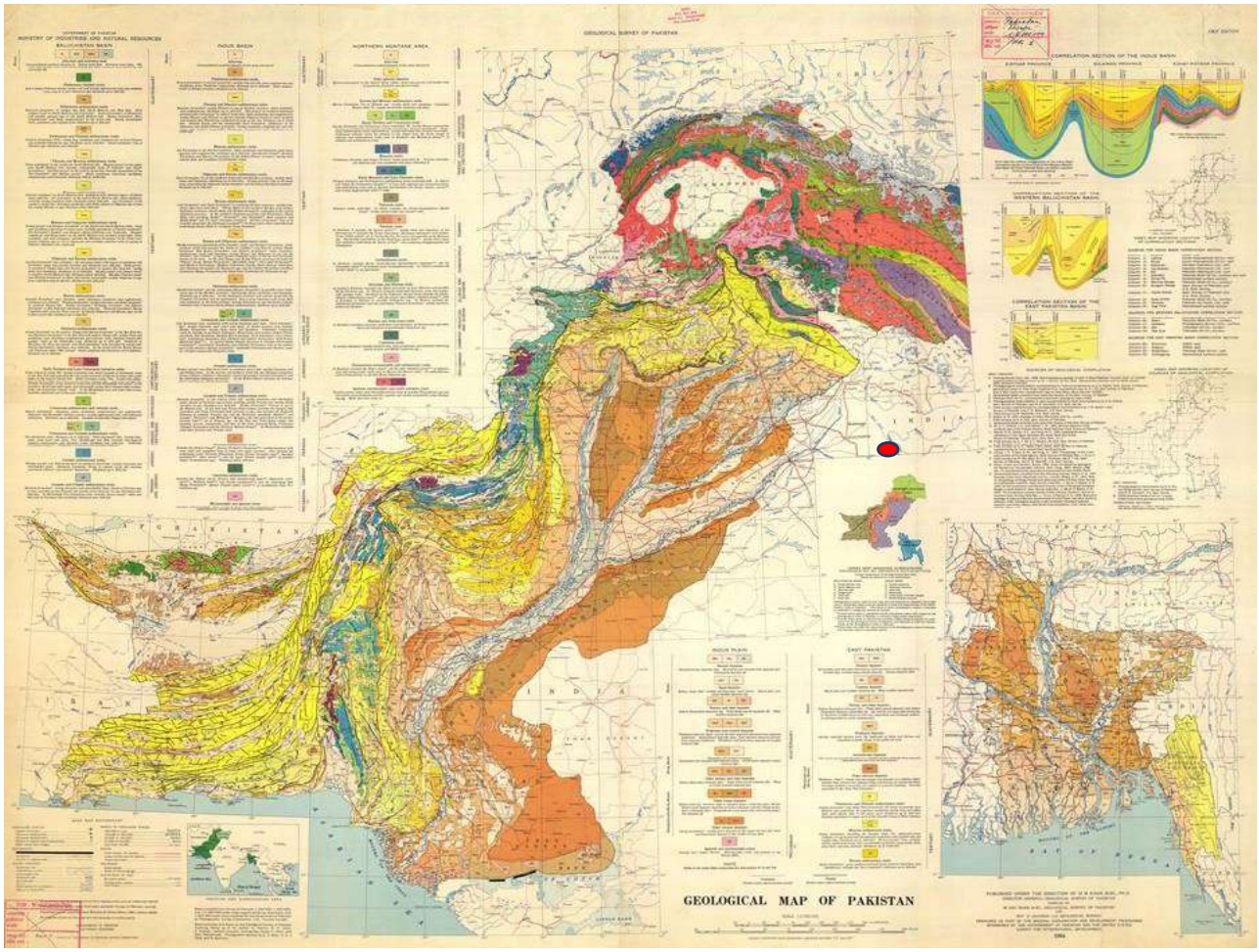


Figure 6-3Geological Map of Pakistan

6.1.4 SEISMOLOGY

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

On the basis of Peak Ground Acceleration (PGA) values obtained through Pakistan Seismic Hazard Assessment (PSHA), Pakistan is divided into 5 seismic zones in line with the Uniform Building Code (UBC) 1997 and the seismic zone of Sheikhupura is A2.

The boundaries of these zones are defined on the basis as shown in Table 6.1.

Table 6-1 Probabilistic Ground Acceleration (PGA) Values of Seismic Zones of Pakistan

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

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

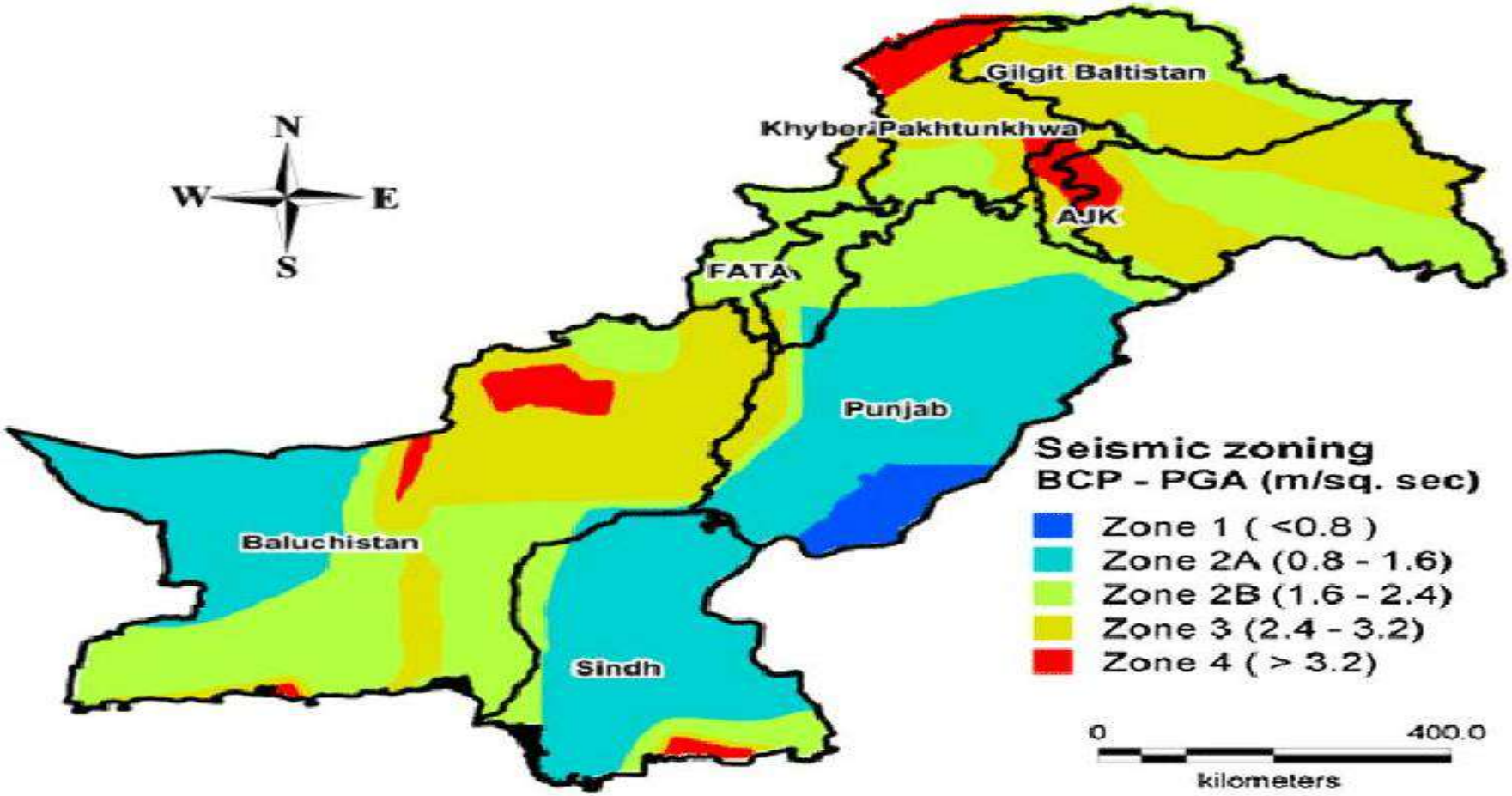


Figure 6-4: Seismic Map of Pakistan

6.1.5 CLIMATE

The climate of the district is hot and dry during summer and cold and dry in winter. The mean maximum and mean minimum temperatures during summer are about 40oC and 22oC respectively. The mean maximum and mean minimum temperatures during winters are about 28oC and 05°C respectively. The highest mean temperature (39°C) from 1961 to 1990 was recorded in the month of May. Likewise, the minimum mean temperature (8oC) was recorded in the month of January. The annual rainfall of the district is approx. 288.8 mm.

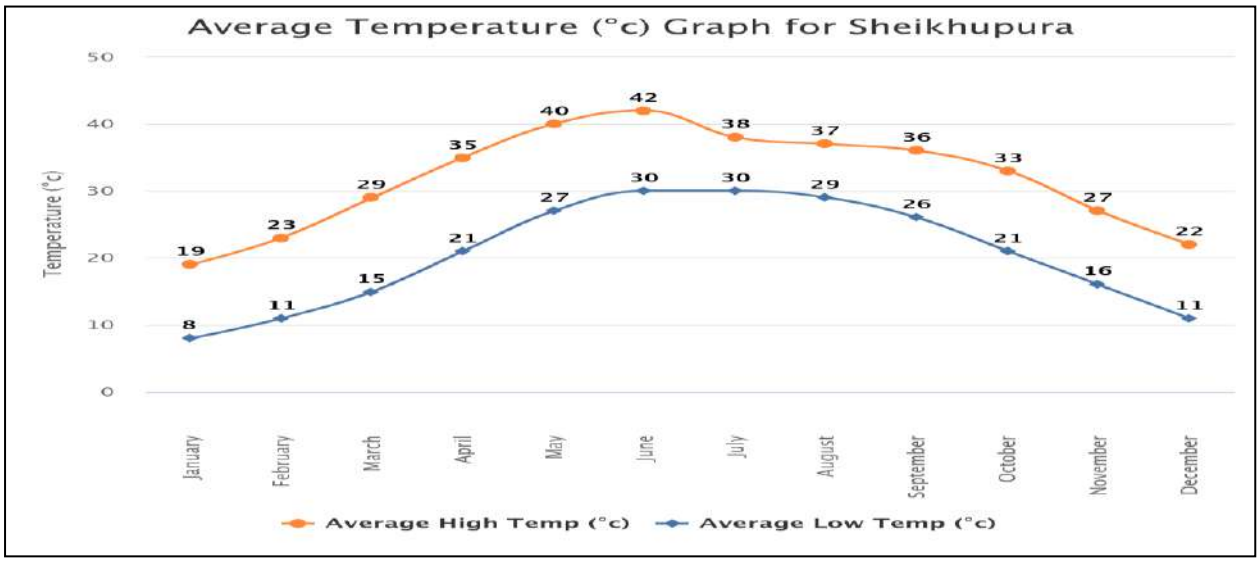


Figure 6-5 **Average Temperature of the Area**

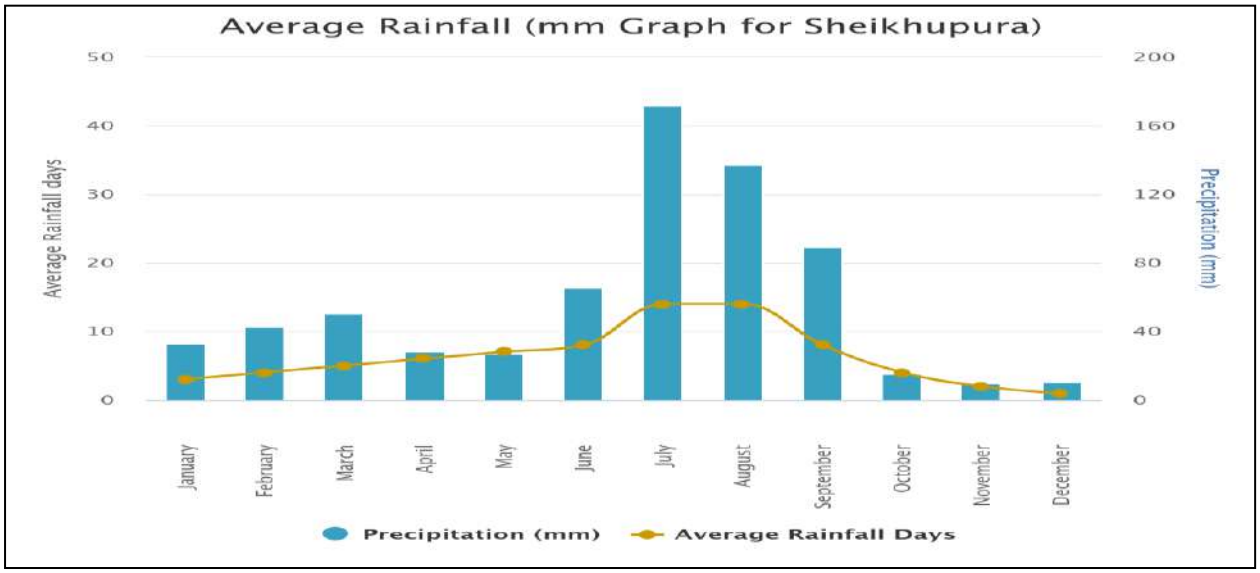


Figure 6-6**Average Rainfall of the Area**

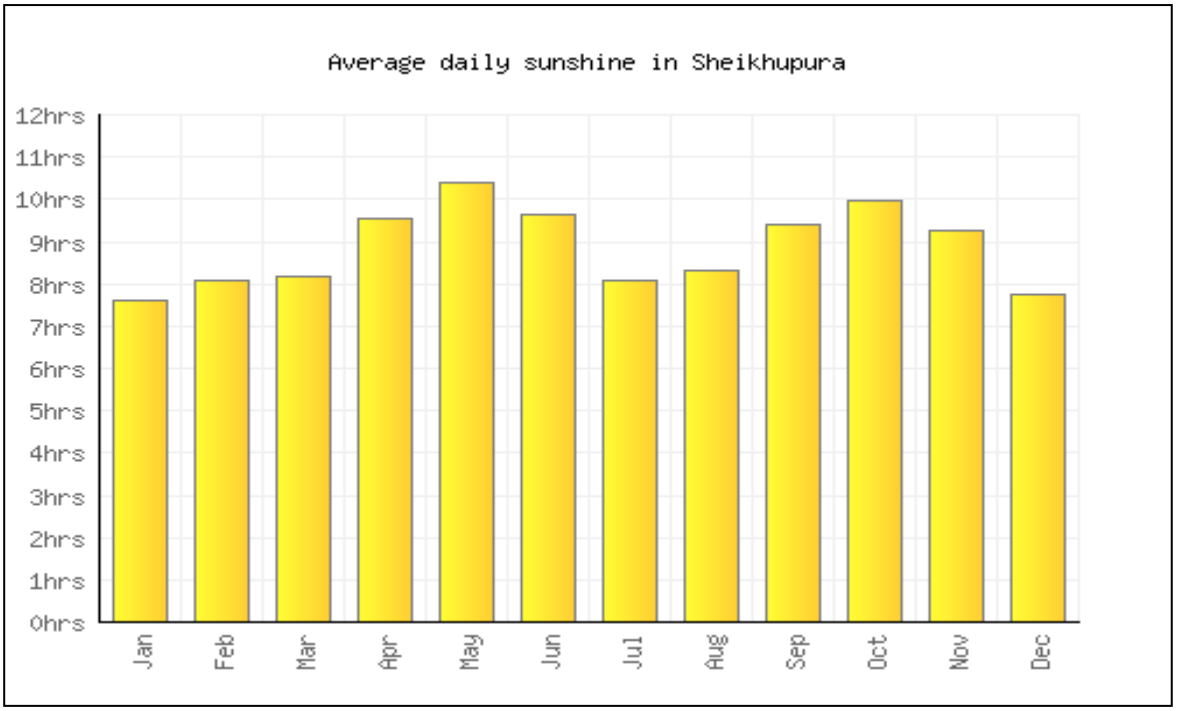


***Figure 6-7*Average Sunshine in Sheikhupura**

6.2 WATER RESOURCES

6.2.1 SURFACE WATER

River Ravi and related canals are the major surface water source of project area. It is perennial and flows throughout the year. It also causes floods in the monsoon season, when it receives excessive rainfall water from upstream.

6.2.2 GROUND WATER

Irrigation is largely dependent on the canals, but tube wells have also been sunk in the areas where water is fit for irrigation. The chemical quality of ground water in the district varies area wise and depth wise. Irrigation supplies are perennial and tube wells have been installed to make up the deficiencies. The strata near project site are water bearing and alluvial deposits, giving groundwater

potential throughout the project area and the water table is fairly near the surface at 25-35 meter. The water table is not seasonal and dug wells do not generally run dry, because the ground water aquifer is recharged by Ravi River and canals (flowing about 91 km western side of project site). The local population is generally reliant on installed hand pumps, electric motors and supply from tube wells. Near the current project site hand pump water was tested in the laboratory, the results reveal that the water quality of the area is under permissible limits with respect to biological and chemical parameters. The Lab reports of water, ambient air and noise have attached as an **Annexure-D.**

6.3 ECOLOGICAL ENVIRONMENT

This section describes the biodiversity existing ecosystem and existing ecological conditions in the project area of influence.

6.3.1 FLORA

Flora of the Project Area

Sr. No.	Name of the Plant	Scientific Name
Tree Species		
1.	**Shisham**	*Dalbergia sissoo*
2.	**Kikar**	*Acacia nilotica*
3.	**Neem**	*Azadirachta indica*
4.	**Jamun**	*Syzygium cumini*

6.3.2 Fauna

Due to extensive human activity and the conversion of land for industrial, agricultural, and residential use, the wildlife population in the project area is limited. Most species present are adaptable to disturbed or semi-urban environments and are commonly found in agricultural landscapes. Observations indicate that mammals are mostly small, such as rodents and stray domestic animals, while birds dominate the local fauna, including both resident and migratory species. The project site has low ecological sensitivity, and no endangered or protected species were recorded during site surveys.

Table 6-2Fauna of the proposed project

Common Name	Scientific Name
House Rat	*Rattus rattus*
Palm Squirrel	*Funambulus palmarum*
Stray Dog	*Canis lupus familiaris*

House Sparrow	*Passer domesticus*
Common Myna	*Acridotheres tristis*
Rock Pigeon	*Columba livia*
Black Drongo	*Dicrurus macrocercus*
House Crow	*Corvus splendens*

1.1.1 Endangered Species

The endangered plant in Pakistan is the Elm i.e., Ulmus wallichiana which is not found here. No endangered species exist in the project area.

6.4 SOCIOECONOMIC ENVIRONMENT

6.4.1 GENERAL

Sheikhupura, located in the Punjab province of Pakistan, has a rich and diverse history dating back thousands of years. The region has been inhabited since ancient times, with archaeological evidence suggesting human settlements dating back to the Indus Valley Civilization, around 2500 BCE. Over the centuries, various empires and dynasties have ruled Sheikhupura, including the Mauryans, Kushans, Ghaznavids, and Mughals.

During the Mughal era, Sheikhupura gained prominence as a center of trade and culture. It was founded by Emperor Jehangir in 1607 and named after his beloved son, Prince Sheikhupura. The city flourished under Mughal rule, with the construction of notable landmarks such as Hiran Minar, a monumental tower built in memory of Emperor Jehangir's pet deer.

In the 18th and 19th centuries, Sheikhupura witnessed political upheavals and changing rulers, including periods of Sikh rule under Maharaja Ranjit Singh. After the British annexation of Punjab in the mid-19th century, Sheikhupura became a prominent administrative center in the British colonial administration.

Following the partition of India in 1947, Sheikhupura became part of Pakistan, and its demographics underwent significant changes due to migration and resettlement of refugees. Today, Sheikhupura is a thriving city with a diverse population, known for

its agricultural economy, industrial growth, and cultural heritage. Despite its modernization and urbanization, the city's historical legacy is preserved in its monuments, landmarks, and cultural traditions, providing a glimpse into its rich and vibrant past.

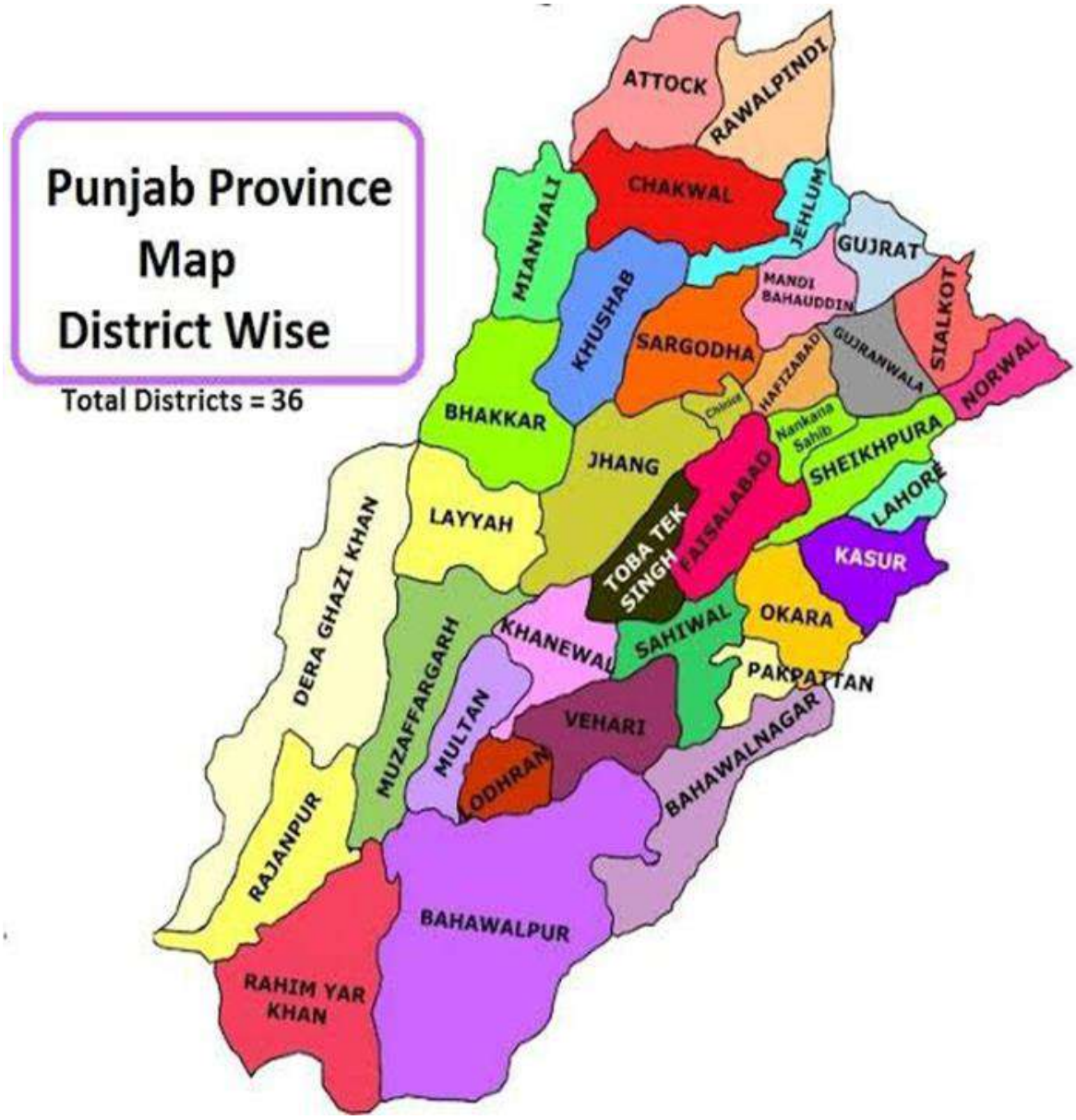


Figure 6-8District Map of Punjab

Figure 6-9District Map of Sheikhupura

6.4.2 Cultural and Social Status

The project area falls within Sheikhupura District, which reflects a mix of rural and peri-urban socio-cultural characteristics. The local population primarily follows traditional Punjabi culture, with strong social ties, extended family systems, and community-based lifestyles. Agriculture, small trade, industrial labor, and services are the main sources of livelihood. Cultural practices are influenced by local customs, religious traditions, and seasonal festivals, with mosques serving as important social and religious centers. Literacy levels are gradually improving due to better access to educational institutions, while health and social services are increasingly supported by nearby urban centers.

6.4.3 DEMOGRAPHICS

According to the 1998 census of Pakistan, the district had a population of 3,321,029 of which 25.45% were urban. In 2005 one of its subdivisions was split off to form the new Nankana Sahib District. The predominant language of the district is Punjabi, which according to the 1998 census results for the tehsils of Sheikhupura, Ferozewala and Safdarabad, is the first language of 98% of the population, while Urdu is the first language of 1.1%Religion

Islam is the common heritage in the region with a 97.22% Muslim majority according to the 1998 Pakistan census report and 2001-population data sheet. Islamic influences are evident in the fundamental values of various inhabitants including cultural traditions, marriage, education, diet; ceremonies and policies with may reflect stark differences in rural villages as compared to urban areas. People live in tight-knit joint families, although a nuclear family system is emerging due to changing socio-economic conditions. Ancient Pakistani culture prevails in most marriage practices in the region, as do certain restrictions related to ethnicity and caste. Prevalent minorities, particularly Hindu and Christian, feel a sense of vulnerability because of their religious beliefs.

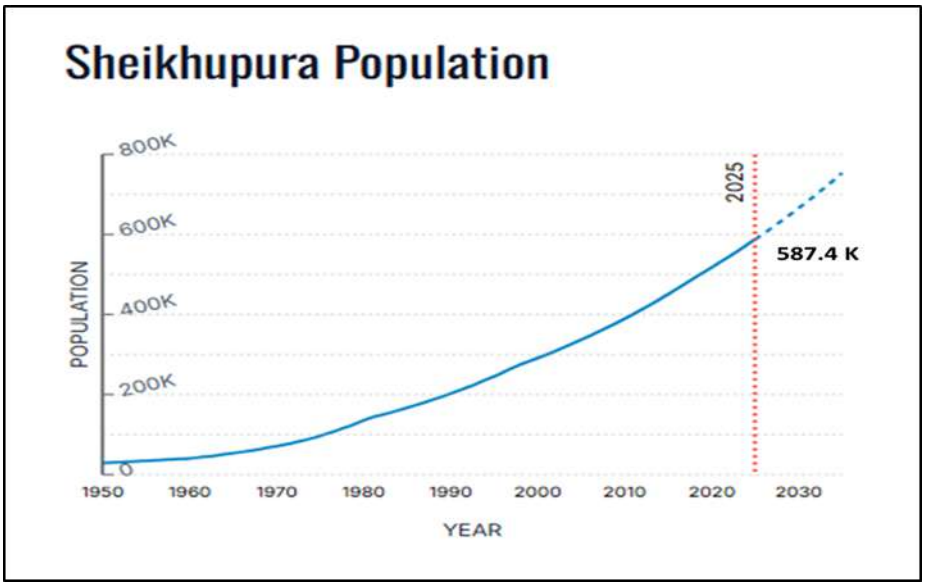


Figure 6-10Demography of Sheikhupura

6.4.4 PUBLIC TRANSPORT

Sheikhupura is well connected by rail and road. Public transportation in Sheikhupura includes auto-rickshaws, buses and railways.

6.4.5 INDUSTRIAL IMPORTANCE

A variety of important industrial units are operating in district Sheikhupura including fertilizer, chemicals, polyester fiber/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 paperboard industry is also concentrated in district Sheikhupura.

6.5 ENVIRONMENTAL PARAMETERS FOR MONITORING

The environmental monitoring of parameters like ambient air quality, noise level and groundwater help us to analyze the prevailing environment conditions in and around the study area, and to protect it from any adverse activities due to the proposed Project implementation.

6.5.1 AIR QUALITY

The environmental monitoring is conducted by EPA certified laboratory ESPAK and detailed results of ambient air quality monitoring have been also attached as **Annexure**.

6.5.2 NOISE LEVEL

The environmental monitoring is conducted by EPA certified laboratory ESPAK and detailed results of ambient air quality monitoring have been also attached as **Annexure.**

6.5.3 DRINKING / GROUND WATER QUALITY

The environmental monitoring is conducted by EPA certified laboratory ESPAK and detailed results of ambient air quality monitoring have been also attached as **Annexure.**

Figure 6-11 Pictorial Evidences of Environmental Monitoring

6.6 SITE SUITABILITY

The proposed site located at Mouza Galo, Tehsil Ferozewala, District Sheikhupura, is considered suitable for the establishment of the petroleum products storage facility. The site is adequately distanced from the nearest settlement, Bhattianwala

(approximately 600 meters away), thereby limiting potential impacts on local communities. Furthermore, the site offers sufficient area for safe installation of underground storage tanks and associated infrastructure, along with provision for safety measures and greenbelt development. Therefore, from an environmental and technical perspective, the site is deemed suitable for the proposed project, subject to implementation of recommended mitigation measures and compliance with regulatory requirements.

CHAPTER # 7. SCREENING OF POTENTIAL ENVIRONMENTAL IMPACTS & THEIR MITIGATION MEASURES

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

7.1 IDENTIFICATION OF ALL IMPACTS:

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

7.2 METHODOLOGIES FOR IMPACT IDENTIFICATION:

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

7.2.1 PROJECT IMPACT EVALUATION MATRIX

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

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

NA	Not Available
O	Insignificant (No or minimal impact)

LA	Low Adverse (Short term, reversible or less damage to environment)
MA	Medium Adverse (Long term reversible damage to environment)
HA	High Adverse (severe irreversible adverse damage to the environment)
LB	Low Beneficial (Short term benefits or less beneficial to the environment)
MB	Medium Beneficial (Long term benefits to environment)
HB	High Beneficial (Continuous benefits to environment)

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

	Physical Environment							Biological Environment		Socio-Economic Environment						
Environmental Component / **Project Activities**	Topography & Drainage	Soil Quality	Landscape	Surface water quality	Ground water quality	Air quality	Noise	Flora	Fauna	Agricultural Land	Health & Safety	Disruption of Public Utilities	Employment	Population Disturbance	Social Disorder	Cultural Values	Traffic Management
Public welfare	O	O	B	B	B	B	B	B	B	HB	HB	HB	HB	HB	HB	HB	LB
Economic activities	LB	O	B	B	B	B	B	B	B	B	HB	B	B	B	B	B	LB
Employment	O	O	O	O	O	O	O	O	O	O	B	B	HB	B	B	B	LB
Infrastructure improvement	LB	MB	HB	B	B	B	B	HB	LB	HB	HB	B	HB	B	B	B	B

7.2.2 IMPACT ANALYSIS AND PREDICTION*:*

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

7.2.3 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.

7.2.4 MEETINGS:

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

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

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

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

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

7.3 CHARACTERISTICS OF IMPACTS

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

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.

7.4 POTENTIAL POSITIVE IMPACTS

The project is envisaged to have followed major positive impacts;

7.4.1 EMPLOYMENT OPPORTUNITIES:

Construction of proposed unit by M/s Junaid Energy Traders (SMC-Pvt) Ltd. will help in generating new jobs for the local population. The requirement of Managers, Engineers, Workers, technicians, skilled and unskilled labor etc. will generate employment opportunities. It is estimated about 25-30 persons will be employed during operational phase and about 18-20 persons will work during construction phase. Hence, there is large number of employment opportunities especially for the locals of the district.

7.4.2 INCREASE IN BUSINESS:

With the influx of labourers for the proposed project, there will be more opportunities for small scale business such as small food cafes etc.

7.4.3 IMPROVED INFRASTRUCTURE:

Construction of M/s Junaid Energy Traders (SMC-Pvt) Ltd will improve the infrastructure of the area as proponent has incorporated aesthetic values and regeneration of site in its planning stage.

7.4.4 ECONOMIC BENEFITS:

Construction of M/s Junaid Energy Traders (SMC-Pvt) Ltd. is a major's working entity in the country; it is a great investment for the economy of our country. In the long run it will positively impact not only the local population but also the economy of Pakistan.

7.5 POTENTIAL NEGATIVE IMPACTS:

7.5.1 TYPES OF NEGATIVE IMPACTS MINOR IMPACTS

These are of minor intensity. For mitigation of the minor impacts routine and limited actions are required.

7.5.2 MODERATE IMPACTS

These impacts need specific and additional mitigation measures.

7.5.3 MAJOR IMPACTS

These impacts have severe adverse impact. These are intolerable. All possible preventive and multiple control measures are adopted to minimize their intensity and duration.

7.6 MITIGATION ASSESSMENT CRITERIA:

The Mitigation Hierarchy establishes a structure to guide development and application of measures to mitigate impacts on environmental values and associated components. The term "mitigation" applies to four steps, or levels, in the mitigation hierarchy:

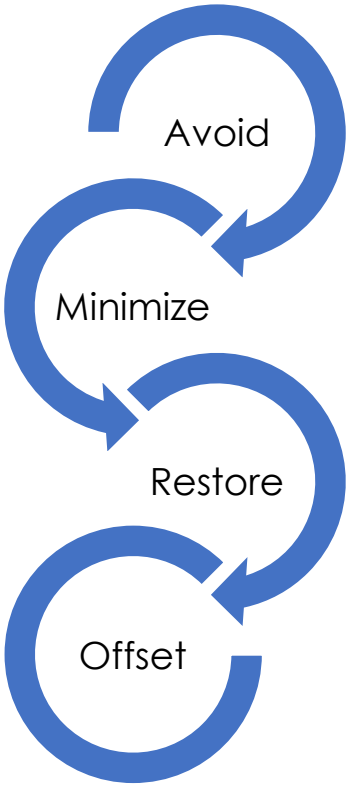


Figure 7-1 Mitigation Assessment Criteria

7.7 GENERAL PRINCIPLES

Maintaining the integrity and natural functions and processes of ecosystems, and the resilience of ecosystems, is prerequisite to sustainable use of natural resources, and essential to maintaining ecosystem goods and services over time.

Generally, the "higher" the priority of the environmental value and associated component, the more protective the mitigation measures.

For an action or measure to be considered "mitigation", a party must accept responsibility for implementation of appropriate mitigation measures, and there must be certainty that the mitigation measures will be carried out.

Implementing mitigation measures can help resolve issues that may delay or prevent a proposed project or activity.

7.8 GENERAL CONSIDERATIONS

Which environmental values and associated components will be impacted by the proposed project or activity? (This will be determined from the output of the

environmental impact assessment, i.e., the Environmental Impact Assessment and Mitigation Plan)

Have the criteria been used to determine relative priorities among environmental values and associated components?

Have mitigation measures for impacts on environmental values and associated components, at all scales, been considered?

What is the current condition of each environmental value and associated component actually present within the footprint and area of influence of the proposed project or activity?

Can impacts on one or more environmental values or associated components be more fully mitigated than impacts on other environmental values and associated components?

Are there multiple environmental values and associated components with conflicting management needs and potential conflicts that need to be considered?

Is sound guidance available and being used, e.g., are best management practices (BMPs) and guidelines available for affected environmental values and associated components?

Is there opportunity to collaborate with other proponents that may have interest in overlapping mitigation measures?

7.9 IMPACT SIGNIFICANCE

7.9.1 ECOLOGICAL IMPORTANCE NATURAL VEGETATION

Project activities do not impose any potential impact on the area's natural vegetation and plantation.

ASSESSMENT OF IMPACT: A significant impact will be interpreted if unnecessary or excessive removal and burning of plants for fuel wood is observed. In case of subject project, no tree cutting will be required for the construction of the subject project.

Nature of impact: Direct

Duration: long term

Timing: construction phase

Reversibility: irreversible

Likelihood: moderate

Consequences: Mild, as no rare plant species are not present in the project area.

Impact significance: significant

MITIGATION MEASURES:

The following mitigation measures will reduce any impact on vegetation:

Do not park vehicles on green belts/ grass
Unnecessary damage to vegetation will strictly be avoided.
Proponent will plant trees and other species after construction phase

RESIDUAL IMPACT: Given the current state of the vegetation, and proper implementation of the proposed mitigation measures, slightly significant residual impact on the natural vegetation of the area is anticipated.

7.10 FAUNA

The fauna including wildlife species do not exist at the project site**.**

Nature of impact: Direct

Duration: short term

Timing: construction phase

Reversibility: not applicable

Likelihood: low

Consequences: Nil, as no rare plant species are not present in the areas.

Impact significance: not significant

Residual Impact: Given the current state of the fauna there is no significant residual impact on the wild life of the area.

7.11 SOCIAL IMPORTANCE

Following parameters were adapted for the assessment of the well-being of the poor people near the project site that are used to assess the social, economic, and cultural impacts of the project.

7.12 INCONVENIENCE DUE TO CONSTRUCTION VEHICLES:

During the construction period a minor impact may be the movement of vehicles from the main road to the proposed plant boundary; it may affect the traffic on other roads and may cause minor annoyances to the residents and other industrialists of the area. The transportation of heavy materials and equipment is likely to damage the existing roads if they were used for the transportation of heavy machinery.

7.12.1 MITIGATION MEASURES:

Efforts should also be made to discuss traffic conditions so that regular traffic is not disturbed. Transporters engaged for the project would be forced to adhere to the load specifications of the access road. No overloading would be allowed in any case.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: reversible

Likelihood: low

Consequences: low, as it links the main Lahore- Sheikhupura Motorway and vehicles will rarely use the sub roads.

Impact significance: slightly significant

7.13 CULTURAL ISSUES

Induction of outside workers in the Contractor's labor may cause cultural issues with the local community as the local community is very sensitive about their cultural values. Also, theft problems to the local community may arise by the labor force and vice versa.

7.13.1 MITIGATION MEASURES:

Good relations with the local communities will be promoted by encouraging contractor to provide opportunities for skilled and unskilled employment to the locals, as well as on-the-job training in construction for young people. Project manager will restrict his staff to mix with the locals to avoid any social problem. Contractor will keep the copies of Computerized National Identity Cards (CNIC) of his workers and

will warn them not to involve in any theft activities. And if anyone would involve, he will have to pay heavy penalty. Similarly, at the time of employment contractor has to take care that the workers should be of good repute. The contractor camp will be properly fenced and main gate will be locked at night with a security guard to check the theft issues. Contractor will also be the responsible for the sensitivity towards the local customs and traditions.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: reversible

Likelihood: low

Consequences: low, if project proponent implements mitigation measure, its impact will be low

Impact significance: slightly significant

7.14 ACCIDENT RISKS

Unmonitored construction activities may create an accident risk for the local residents particularly children and labor force.

7.14.1 MITIGATION MEASURES:

Contractor must have first aid kits along with the medical officer in the field if a minor injury takes place, but for an unfortunate accident service of nearby hospitals will be availed. Routine medical check-ups of all the field staff including unskilled labor need to be conducted by a qualified doctor. Training of the workers should be arranged regarding safety procedures, environmental awareness, equipping all construction workers with PPEs, safety boots, safety helmets, ear plugs, gloves and protective masks. Monitoring must be carried out to check for the sustainable use of PPEs.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: not applicable

Likelihood: moderate

Consequences: moderate, as complete trainings and mitigation measure have been planned.

Impact significance: significant

7.15 SHARING OF RESOURCES:

During the construction and operational phase of the project, workers will share the common resources like potable water, fuel, wood. It may create conflicts between work force and local population.

7.15.1 MITIGATION MEASURES:

The contractor will be required to maintain a close friendly relationship with the local communities to ensure that there may not be any conflict related to common resources utilization. He must get permission of the local population before using their common sources of water and other resources.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: reversible

Likelihood: low

Consequences: low, it the terms & conditions will be followed and mitigation measures have been employed

Impact significance: significant

7.16 NOISE PROBLEMS

Residents of the area and neighbours may face the problems of noise during the construction and operations phase

MITIGATION MEASURES: Large noise generating activities should be carried out in fixed hours. The timing will be known to all the people in 500 m radius of the site.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: reversible

Likelihood: Moderate

Consequences: Moderate, project contractor will follow the safety guidelines & NEQS

Impact significance: significant

7.17 MOBILIZATION ISSUES

During the construction phase, the general mobility of the local residents and their livestock in and around the study area is likely to be hindered.

MITIGATION MEASURES: It will be the responsibility of project contractor and drivers to follow the speed limits in the area.

Nature of impact: Direct

Duration: Short term

Timing: construction phase

Reversibility: reversible

Likelihood: low

Consequences: low, as it links the main Lahore- Sheikhupura Motorway and vehicles will rarely use the sub roads

Impact significance: slightly significant

7.18 SOLID WASTE/ SLUDGE MANAGEMENT:

Proper solid waste management system is necessary for the prompt, timely and efficient disposal of solid waste & sludge for the reduction of its impacts. Impacts due to solid waste & sludge are expected to be temporary and minor in nature.

Nature of impact: Direct

Duration: Short term

Timing: operation/ construction

Reversibility: Not applicable

Likelihood: Low (unlikely) as mitigation measures will ensure that Solid waste management will be efficient

Consequences: Mild, as it will be removed from site within few hours

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

7.18.1 MITIGATION MEASURES:

Planning of solid waste disposal sites with reasonable distance from the human settlements

A minimum distance of 1 km should be maintained between the solid waste disposal site and nearest human settlement

Devise plan & develop guidelines for the safe handling, storage & disposal of Sludge must not be placed at the site after cleaning of wastewater treatment tank

PPEs are strongly recommended for workers for the handling of sludge

Residual Impact: After implementing the mitigation measures listed above, the residual impact of the solid waste/ sludge is expected to be insignificant.

7.19 AIR QUALITY POTENTIAL IMPACT:

Air emissions from project-related activities are likely to include:

Dust raised on dirt tracks by project-related vehicles.
Combustion products (nitrogen oxides, sulfur dioxide, particulate matter, carbon monoxide, and volatile organic compounds) from vehicles used for project-related activities

7.19.1 ASSESSMENT OF IMPACT

DUST EMISSIONS:

Dust emissions caused by vehicular traffic on dirt track are an important concern, primarily when such traffic passes near community settlements. Dust emissions cause the amount of particulate matter in the air to increase, and thus become a health concern. Dust clouds also reduce road visibility, creating a traffic hazard.

GASEOUS EMISSIONS

Emissions produced by vehicles and equipment will be similar to those produced by generators in terms of the resulting pollutants (SO_2, NO_X, PM, etc.). However, the extent to which they are produced will be kept considerably lower, since much smaller engines are used in vehicles and construction machinery.

Nature of impact: Direct

Duration: long term

Timing: operation/ construction

Reversibility: irreversible

Likelihood: moderate as mitigation measures will ensure that air pollution remains within acceptable limits.

Consequences: moderate, as pollutant levels in the ambient air will be well within acceptable limits.

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

MITIGATION MEASURES

None of the potential effects discussed above are expected to exceed acceptable limits.

The mitigation measures given below will further reduce their impact, and ensure that they remain within acceptable limits.

All equipment and vehicles used during the project will be properly tuned and maintained in good working condition in order to minimize exhaust emissions.

Vehicle speed will be reduced on track passing through or close to shops

Imposing speed limits and encouraging more efficient journey management will reduce the dust emissions produced by vehicular traffic.

Water will be sprinkled where necessary to contain dust emissions.

Management will make sure process is environmentally friendly

Residual Impact: After implementing the mitigation measures listed above, the residual impact of the proposed activities on ambient air quality is expected to be low.

7.20 NOISE LEVEL

Noise may be a major concern during the construction/ operation phase. It can be generated from the machinery used for construction and operations. Generators are another source of noise pollution.

Nature of impact: Direct

Duration: long term

Timing: operation/ construction

Reversibility: Not applicable

Likelihood: moderate

Consequences: slightly significant, if above mentioned mitigation measure will be strictly followed

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

MITIGATION MEASURES:

Keep the traffic load aligned and minimum during working hours of project
Machinery and vehicles must be well tuned and maintained o Impose the limits on unnecessary use of horns
Safety signs must be displayed and public & drivers must be well aware of them o Do not work in night time

Residual Impact: After implementing the mitigation measures listed above, the residual impact of the noise level will be slightly significant.

7.21 CONCLUSION

Management of M/s Junaid Energy Traders (SMC-Pvt) Ltd has to achieve the following goals.

Identification of regulatory requirements that apply to the project activities in the context of environmental protection.
Identification of the environmental features of the project area and the likely impact of the project on the environment,

Recommendation of appropriate mitigation measures that management will incorporate into the project implementation to minimize all adverse environmental impacts.

Baseline environmental and socioeconomic information collection from a variety of sources, including field surveys.

The impacts of project in area will be insignificant, provided the generic mitigation measures proposed in this report are implemented. After assessing the project activities and investigating the project area, it is concluded that, if the activities are undertaken in this report, and the recommended mitigation and environmental management measures are adopted, the project will not result in any long-term or significant impacts on the local community or the environment.

CHAPTER # 8. ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

8.1 PURPOSE AND OBJECTIVES OF THE EMP:

The primary objectives of the EMP are to:

Facilitate the implementation of the mitigation measures identified in the EIA.

Define the responsibilities of the project proponent.

Define a monitoring mechanism and identify monitoring parameters in order to:

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

8.2 MANAGEMENT APPROACH:

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

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

8.3 INSTITUTIONAL CAPACITY

Following functionaries will be involved in the implementation of EMP:

Project Proponent
HSE/Project Manager
In-Charge Administration
Supervisor of project

8.4 SCHEDULE OF IMPLEMENTATION

Training for the management and workers on environmental aspects of the project will be arranged on biannually basis during the operational phase of the project. It will be imparted by a team of experienced trainers.

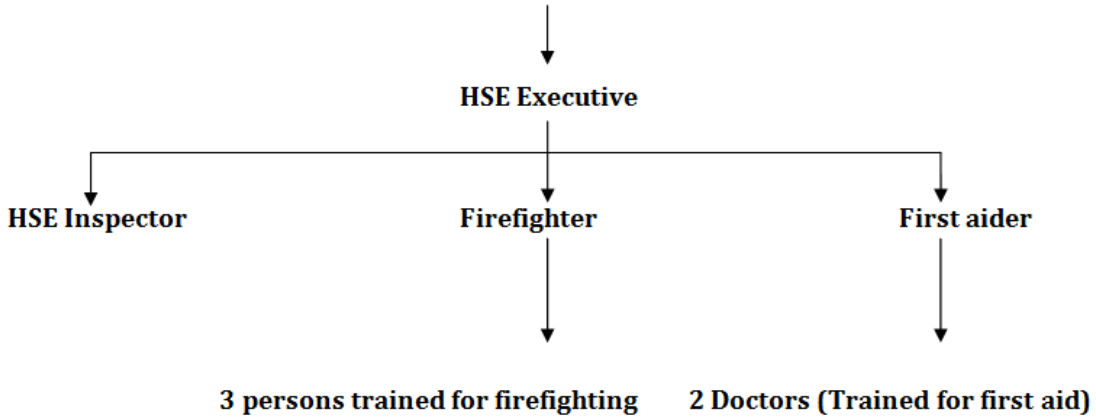


Figure 8-1 Institutional Capacity for the implementation of EMP

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

Following schedules of training will be implemented:

Table 8-1Training Program

Sr. No.	Description of program	Personnel involved	Time/ duration
1.	General HSE Training	Trainers and whole production facility staff	Regularly as planned by HSE Manager
2.	Instrument use/ workplace specific items	Trainers and whole production facility staff	Regularly as planned by HSE Manager
3.	PPEs use and safe work practices at work site.	Trainers and whole production facility staff	Regularly as planned by HSE Manager
4.	Reporting and investigating accidents/ incidents	Trainers and whole production facility staff	Regularly as planned by HSE Manager
5.	Emergency procedures	Trainers and whole production facility staff	Regularly as planned by HSE Manager
6.	Medical and first aid	Trainers and whole production facility staff	Regularly as planned by HSE Manager
7.	Health and safety promotion	Trainers and whole production facility staff	Regularly as planned by HSE Manager

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

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

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

8.5 TRAINING OF BUILDING CONTRACTOR

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

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

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

Training regarding all other aspects of HSE will be ensured by the contractor during the construction phase.

8.6 PROPOSED ENVIRONMENTAL MONITORING

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

- **AMBIENT AIR**

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

- **NOISE**

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

- **WATER QUALITY**

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

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

8.7 RESPONSIBILITY OF EMP

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

8.7.1 EQUIPMENT MAINTENANCE DETAIL

The subject project is the proposed construction of Petroleum Storage by M/S Junaid Energy Traders (SMC-Pvt) Ltd. The company will maintain the records for Health Safety & Environment and will hire HSE manager to check and deal with the HSE issues. The company shall maintain PPEs, medical facilities, firefighting Equipment's as fire buckets, fire hydrants and fire extinguishers and records for their periodic filings or replacement.

8.8 ENVIRONMENTAL BUDGET

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

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

Table 8-2Environmental Budget

Sr. No.	Project Components	Cost (PKR)/year
1.	Environmental Monitoring Cost	700,000
2.	Fire Safety Arrangements/Maintenance	400,000
3.	Personal Protective Equipment	450,000
4.	Tree Plantation	450,000
Total Cost		20,00,000

Table 8-3 Environmental Management Plan of M/s Junaid Energy Traders (SMC-Pvt) Ltd

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

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
		any)	Sound proof room should be built for generator (if any) to control the noise.		
HEALTH AND SAFETY					
3.	Health and safety	Health & safety issues of workers and nearby community	Trainings of the workers is recommended for health & safety, first aid and firefighting. Proponent must provide First aid facilities to workers in case of any injury or accident. Safe drinking water must be provided to workers, staff, and poor people of the area. Water consumption records should be maintained. Provision of Proper PPEs must be ensured at workplace. Assembly point and exit points must be available at workplace. Electric wires, D. Bs must be kept covered &	HSE Department	Environmental Consultant/ EPA

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
			closed to avoid any electric hazards. Smoking or any drugs should be prohibited during working hours or performing work. Safety signs & boards will be placed at the time of construction activity. Security guards will be appointed at the construction site.		
WASTEWATER					
4.	Wastewater	Domestic wastewater. Minor wastewater from production activities. Spread of diseases, underground water contamination.	Domestic wastewater is being drained out in nearby drain after treated in septic tank. Ensure the tank is situated at a distance that prevents any accidental runoff or overflow from contaminating the petroleum products storage area.	HSE department	Environmental Consultant
SOLID WASTE GENERATION					

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
5.	Solid Waste Generation	Aesthetic degradation, foul smell etc. Solid waste generation from the machinery installation and production activities, domestic and process sources	A solid waste management plan should be formulated to deal with the proper disposal of solid waste, supervised by HSE Manager. Waste segregation is recommended at the source. Industrial ecology practices will be adopted wherever possible. 7 R's of sustainability is recommended Hazardous waste should be disposed in separate bins and handed over to EPA approved contractors. Waste produced from building alteration/renovation should be sold to local market.	HSE Department	Environmental Consultant/ EPA PUNJAB
ODOR					
6.	Odor	Odor may produce from raw material and during product	Raw material should be covered to reduce odor	HSE Department	Environmental Consultant/ EPA

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
		manufacturing	Face masks must be provided to the workers and employees on production floor		PUNJAB
ENERGY REQUIREMENT					
7.	Energy requirement	Resource depletion	Do not waste the energy/electricity when there is no need of it. Use energy efficient and ecofriendly equipment Use energy saving appliances Conduct and maintain records for energy audits Do not leave the appliances in running when there is no need It is recommended to save and conserve the energy and adopt energy efficient technologies in the factory.	HSE Department	Environmental Consultant/ EPA PUNJAB

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
SOCIO ECONOMIC IMPACTS					
8.	Language	Change in cultural language	Maximum employment of Local people is recommended to preserve the local cultural language. It will help in communication with the local people to resolve any emerging issue near the project area	Proponent	NA
9.	Education	Change in social behavior and economic gains	School and colleges exist in the area. The project proponent will initiate an educational awareness program with the coordination of the local people.	Proponent	NGO survey
10	Health	Social performance of the individuals in the area	The project proponent will assist the local impacted community for the improvement of health services Health clinic must be established for the project workers.	Proponent	Proponent

Sr. #	Aspects	Impact & Mitigations to be taken			
		Impacts	**Mitigation measures Construction/Operation**	**Responsibility**	**Monitoring**
11	Culture and norms of the area	Change in culture by the influx of nomadic people	Maximum local employment should be ensured to preserve the culture of the area	Proponent	NGO survey/Environmental Consultant
12	Sewage and waste disposal	Diseases caused by improper sanitation	Subject project will uplift the economic status of the nearest human settlements. Awareness program will be initiated regarding the disposal of waste.	Proponent/ local NGO	NGO survey/ Environmental Consultant

CHAPTER # 9. OCCUPATIONAL HEALTH AND SAFETY PLAN

9.1 BACKGROUND

The Occupational Health and Safety (OHS) Plan for the petroleum storage plant has been developed to ensure the safety, health, and well-being of all personnel, contractors, and visitors associated with the plant's operations. The plant handles flammable petroleum products, and involves activities such as tank storage, pipeline operations, loading/unloading, and routine maintenance, all of which present potential occupational hazards.

9.2 OBJECTIVES

- To ensure the health, safety, and welfare of all employees, contractors, and visitors at the plant.
- To identify, assess, and control occupational hazards associated with storage, handling, and transfer of petroleum products (Kerosene oil, LDO, M.T.T, Furnace oil, and Solvent oil).
- To ensure compliance with national laws, industry standards, and international best practices related to occupational health, safety, and environmental protection.
- To establish proactive emergency preparedness measures, including fire prevention, spill response, and accident management.
- To implement continuous monitoring, reporting, and corrective actions for all safety and environmental aspects of plant operations.
- To foster a safety culture, ensuring all personnel are aware of potential risks and adhere to safe work practices and procedures.
- To minimize the risk of accidents, injuries, or environmental incidents, thereby protecting human life, property, and the surrounding people.
- To promote training and capacity building for all staff on occupational health, safety, and environmental protection.

REGULATORY REQUIREMENTS

The OHS Plan at plant is developed in compliance with relevant national legislation, standards, and industry best practices to ensure the protection of personnel, contractors, and the environment.

Table 9-1Rules and Regulations

Laws, Regulations, and Polices	Detail Description
Pakistan Factories Act, 1934	Ensures worker safety, health, and welfare in industrial establishments. Requires provision of safe working conditions, first aid facilities, and safety measures for machinery and hazardous processes.
Pakistan OHS Act 2018	Provides guidelines for risk assessment, safety management systems, and occupational hazard controls. Establishes employer responsibilities for employee safety training and protective equipment.
Environmental Protection Act, 1997 (PEPA)	Ensures environmental compliance related to hazardous substance handling, waste management, and emissions, indirectly supporting OHS through safe operations.
National Fire Protection Association (NFPA) and Oil & Gas Safety Guidelines	Provides standards for storage, handling, and transportation of flammable and combustible products. Requires fire suppression systems, emergency response planning, and safe tank operations.
ISO 45001 -Occupational Health and Safety Management System	Framework for systematic identification, assessment, and management of workplace hazards. Encourages continual improvement in safety

Laws, Regulations, and Polices	Detail Description
	performance and risk reduction.

9.3 ENVIRONMENTAL, HEALTH, AND SAFETY MONITORING & RECORD KEEPING

Table 9-2Monitoring & Record Keeping

Monitoring / Record Type	Purpose	Key Fields / Contents	Frequency / Responsibility
Damage & Corrective Measures Register	Track any damage to vegetation, water resources, or community assets and ensure corrective actions	Date & Time, Location, Description of Damage, Cause, Corrective Measures, Responsible Person, Verification	Monthly / EHS Officer
Monitoring Records	Track environmental compliance	Ambient air, water and noise monitoring reports and submissions	Environmental Monitoring Team/ EHS Officer
Waste Tracking Register	Record waste generated, recycled, reused, or disposed	Date, Type of Waste, Quantity, Disposal / Reuse / Recycling Method, Vendor / Disposal Site, Responsible Person	Monthly / EHS Officer

Monitoring / Record Type	Purpose	Key Fields / Contents	Frequency / Responsibility
Public Infrastructure / Vendor Impact Register	Record damages to public infrastructure and compensation	Date & Location, Type of Infrastructure, Description of Damage, Responsible Vendor, Corrective Action / Compensation, Verification by Authority	As Occurred / Project Manager & EHS Officer
Employment Record	Track workforce and local employment benefits	Date / Project Phase, Job Type (Skilled / Semi-skilled / Unskilled), Employee Name, Domicile, Duration, Department / Work Are	Monthly / HR Department
Environmental & Social Training Records	Track staff training on EHS and environmental compliance	Training Date, Topic, Trainer	Monthly
Complaints Register	Record complaints and community engagement	Date, Complainant Name & Contact,	As Occurred / GRM Officer & EHS Officer

Monitoring / Record Type	Purpose	Key Fields / Contents	Frequency / Responsibility
		Nature of Complaint, Action Taken, Responsible Officer, Status (Open / Closed)	

9.4 POTENTIAL IMPACTS AND MITIGATION MEASURES

Table 9-3Potential Impacts and Mitigations for OHS and ERP

Hazard	Potential Impacts	Mitigation Measures
Chemical Exposure		
VOCs released from storage tanks, pipelines, and product handling.	Respiratory irritation, long-term health risks for plant staff, environmental pollution.	IFR installed on the tanks to minimize evaporative emissions. Vapor Recovery Systems deployed at loading/unloading points to capture fugitive emissions. Mandatory use of PPE, including respirators, gloves, and protective clothing, for personnel working in high-exposure areas. Regular ambient air monitoring to ensure compliance with PEQS standards.

Hazard	Potential Impacts	Mitigation Measures
Fire and Explosion		
Storage and handling of flammable products (MS, HSD, HOBC).	Major fire or explosion resulting in injuries, fatalities, property damage, and environmental contamination.	Firewater tanks and foam-based firefighting systems with hydrants and sprinklers. Flame arrestors, pressure/vacuum relief valves, and emergency shutdown systems (ESD) installed on tanks and pipelines. Emergency Response Plan (ERP) will be implemented and periodically rehearsed. Periodic fire drills and safety training for staff.
Mechanical Hazards		
Operation of pumps, pipelines, valves, and associated machinery.	Injuries due to malfunction, or accidental release of products.	Strict adherence to SOPs during operation and maintenance. Routine inspection and preventive maintenance of all mechanical equipment. Training personnel on safe operating procedures and hazard awareness.
Noise		

Hazard	Potential Impacts	Mitigation Measures
High noise levels from generators, pumps, compressors, and tanker operations.	Hearing loss, discomfort, and stress among plant personnel.	Soundproof enclosures and acoustic barriers where necessary. Mandatory hearing protection (earplugs or earmuffs) for staff in high-noise areas. Regular noise level monitoring to ensure compliance with regulatory limits.
Traffic Hazards		
Movement of fuel trucks, within and around the plant.	Road accidents, injuries, and damage to equipment or property.	Trained and licensed drivers for all tanker operations. Defined routes and speed limits for internal and external transportation. Signage, barriers, and designated lanes to separate vehicle and pedestrian traffic.

9.5 KEY PERFORMACE INDICATORS

Following are the KPI's of OHS Plan Implementation;

- Number of lost-time incidents
- Spill incidents
- PPE compliance
- Fire drill participation
- Safety audit score
- Waste disposal compliance

9.6 FIRE FIGHTING ARRANGEMENTS

The project site will be provided with adequate and well-distributed firefighting equipment to ensure effective emergency response. Fire hydrants, water monitors, foam systems, and hose cabinets will be installed at critical operational areas such as the tank farm, loading gantry, pump house, and administrative facilities. Portable fire extinguishers of appropriate types will be placed in offices, workshops, electrical rooms, and high-risk locations. Mobile foam trolleys, sand buckets, and fire blankets will further support rapid control of fuel-related fire incidents. All firefighting equipment will be regularly inspected and maintained to ensure readiness at all times.

Table 9-4Fire Safety Arrangements

Equipment	Quantity
Fire Extinguishers (04 Kgs)	08
Sand Buckets	08
Fire Hydrants	02

9.7 First Aid Kit

First aid facilities will be available at the project site to ensure prompt medical response in case of minor injuries or emergencies. Well-equipped first aid kits will be placed at strategic locations. The kits will contain essential medical supplies including bandages, antiseptics, gloves, and basic medicines. Designated staff members will be trained in first aid and emergency response procedures. The first aid kits will be regularly inspected and replenished to ensure their availability and effectiveness at all times.

Figure 9-1 First Aid Kit

CHAPTER # 10. TREE PLANTATION PLAN

In an era marked by growing environmental consciousness and pressing need to address climate change, the act of tree planting stands as an indispensable and powerful tool for the protection of the planet's future. With a firm commitment to biodiversity, sustainability, and ecological restoration, this plan tells us the systematic approach to select plant and sustain trees at the project site. Through tree plantation plan, we can circumvent the impacts of deforestation, improve air and water quality, enhance local ecosystems, and contribute to the global struggles to reduce climate change. Tree plantation plan is a testament to our dedication to a healthier and greener future, where trees are serving as a beacon of hope, life, and resilience.

10.1 OBJECTIVES OF TREE PLANTATION

The following objectives of tree plantation helps to clarify its basic purpose.

- Trees in urban areas provide shade and heat reduce heat, mitigation the urban heat island heat.
- Trees store carbon in their biomass, helping and reduce the atmospheric carbon dioxide levels.
- Trees contribute to visual appeal of urban and rural landscapes, making areas more attractive.
- Trees yield valuable resource such as timber, fruits, nuts, and medicinal plants.
- Trees plantations create employment opportunities for the people living near the project area.
- Trees act as a natural air filters by trapping airborne pollutants and particulate matter.
- Trees release oxygen during photosynthesis, improving air quality.
- Trees help maintain healthy watersheds, reducing the risk of floods and ensuring a consistent water supply.
- Trees help prevent soil erosion by anchoring soil with roots.
- Trees planted strategically can safeguard against landslides and protect roads and buildings.

- Trees absorb carbon dioxide and release oxygen, helping reduce greenhouse gas level and circumvent climate change.
- Trees can efficiently serve as windbreaks.

10.2 BENEFITS OF TREE PLANTATION

- A well-executed tree plantation plan offers numerous advantages, covering all the environmental, economic and soil aspects. Some of the key benefits of tree plantation are enlisted below;
- Plants absorb carbon dioxide (CO_2) from the atmosphere and store this carbon in the biomass helping to circumvent climate change by reducing greenhouse gas emissions.
- Roots of the trees help to stabilize soil and prevent soil erosion.
- Trees act as a natural air filter, by trapping particulate matter, which leads to healthier living environments.
- Trees can provide habitat and food residues to chicks contributing to local biodiversity.
- Trees act as a natural buffer that helps to control and purify water entering into the streams and rivers reducing the risks for the contamination of water.
- Well-maintained tree plantation enhances the visual appeal of the landscapes, making area more attractive.
- Tree roots can improve soil quality by increasing its organic matter content and nutrient availability.
- Tree plantation contributes to climate resilience by moderating temperature extremes, reducing the risk of heatwaves, and providing shelter from extreme weather events.
- Trees can help to enhance the mental and physical well-being of the people living around the project area.

- A well-designed tree plantation plan serves as a long-term investment in the environment and the future, as they continue to provide benefits for generations to come.

10.3 TREE CUTTING

The project is designed without any tree cutting, thereby emphasizing a commitment to preserving existing green spaces and natural habitats. Instead, a proactive approach centered on environmental enhancement and sustainability is proposed through a tree plantation initiative. This initiative aims to further enrich the local environment by introducing new trees in designated areas. The tree plantation is a proactive step towards nurturing and expanding greenery, bolstering ecological balance, and contributing positively to local ecosystem.

The proposed tree plantation initiative forms an integral part of the project's green strategy, seeking to mitigate environmental impact and foster sustainability. By adding new trees, it not only compensates for any potential loss of greenery but also serves as a deliberate action to amplify the overall environmental quality of the project area. The selection of tree species and their placement is carefully considered to ensure alignment with the local ecosystem and promote biodiversity.

10.4 AREA ENHANCEMENT PLAN

Tree plantation plan of the area has been prepared keeping in view the project area and length. The plan is based on best possible estimations and can be modified accordingly at the execution stage.

10.5 TREES RECOMMENDED

Tree species are recommended for the plantation are the indigenous species of Sheikhupura.

***Table 10-1*Trees to be planted**

Sr. No.	Local Name	Scientific Name	Picture
1.	Kikar	*Acacia nilotica*	
2.	Mesquite	*Prosopis juliflora*	

CHAPTER # 11. 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 initial environmental examination was conducted. Informal group discussions were also held as an additional tool for obtaining feedback from the stakeholders that are being discussed in the following pages.

11.1 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 construction 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;

11.1.1 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 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.

11.1.2 PROPONENT

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 environment friendly.

11.1.3 RESPONSIBLE AUTHORITY

Management of M/s Junaid Energy Traders (SMC-Pvt) Ltd is the responsible authority to take all measures prior to start the activity.

11.1.4 ENVIRONMENTAL PRACTITIONERS AND EXPERTS

Team of M/s Environmental Services of Pakistan (ESPAK) visited the project site, had discussions with stakeholders and consulted with the local people of nearby and other villages to evaluate the project socio-economic impacts. People provide the massive information about the project and have positive remarks regarding the project development.

11.1.5 OTHER DEPARTMENTS AND AGENCIES

For the impact analysis detailed meetings were held with the management of M/s Junaid Energy Traders (SMC-Pvt) Ltd, local community, education institutes, health institutes and hospitals. 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.

11.1.6 AFFECTED & WIDER COMMUNITY

There is no affected community present in the radius of our study area. ESPAK team has consulted with the inhabitants of the different villages. They provided positive remarks regarding the subject project and in the favor of the subject activity for the proposed plant. Stakeholder's 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-H** with the report.

Table 11-1: Categories of stakeholders interviewed in the project area:

Sr. No.	Stakeholder Category
1.	Neighboring factory workers.
2.	Nearby residents
3.	Shopkeepers.
4.	Drivers.

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.

11.2 ISSUES DISCUSSED:

Following issues were discussed during the stakeholder consultation:

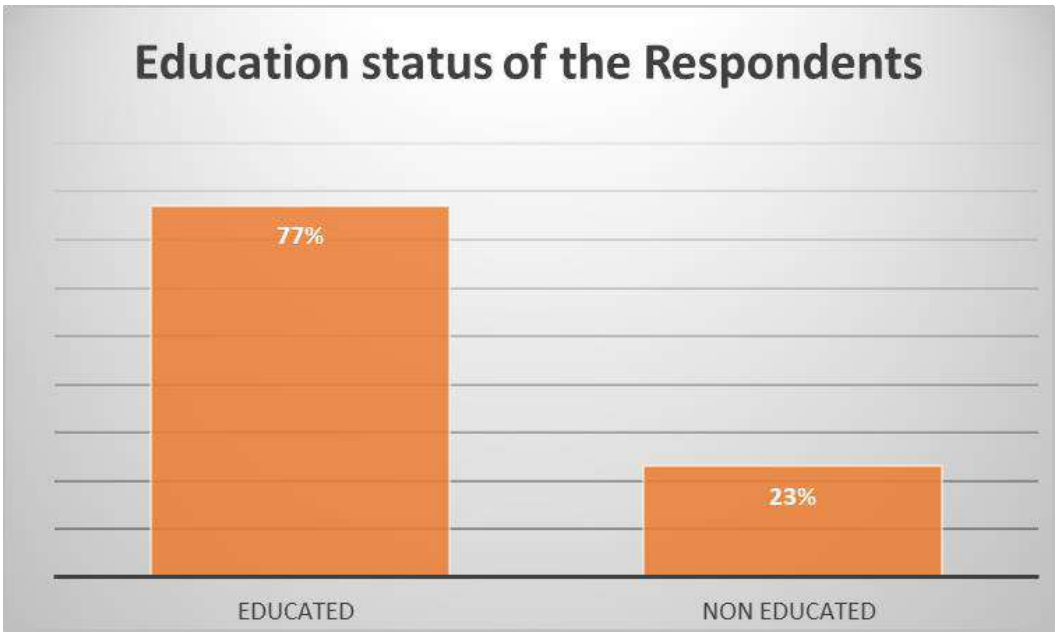
Overall activities of the project;
Possible impacts on natural vegetation, air, land and properties;
Possible mitigation measures;
Benefits of the project specifically for the local people.

11.2.1 SAMPLE SIZE

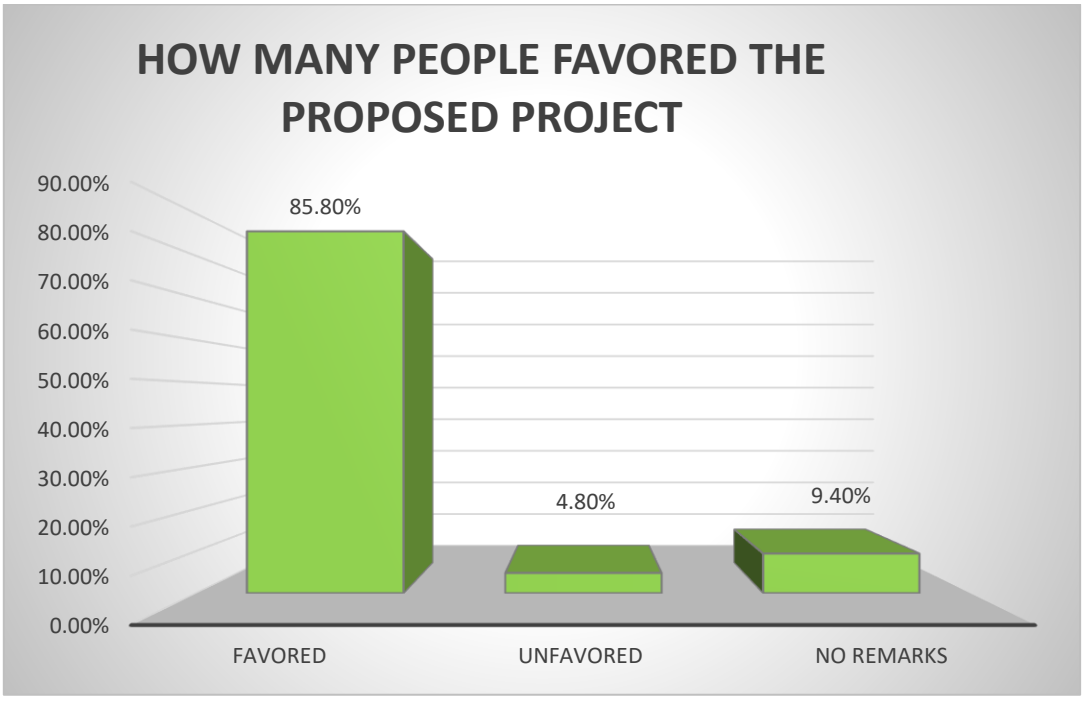
Sample size of 30 respondents was selected by the Team of consultants for conducting the socioeconomic survey. Women were also consulted for the said survey; some of their names are mentioned in the above list of respondents while most of them were not willing to give personal information.

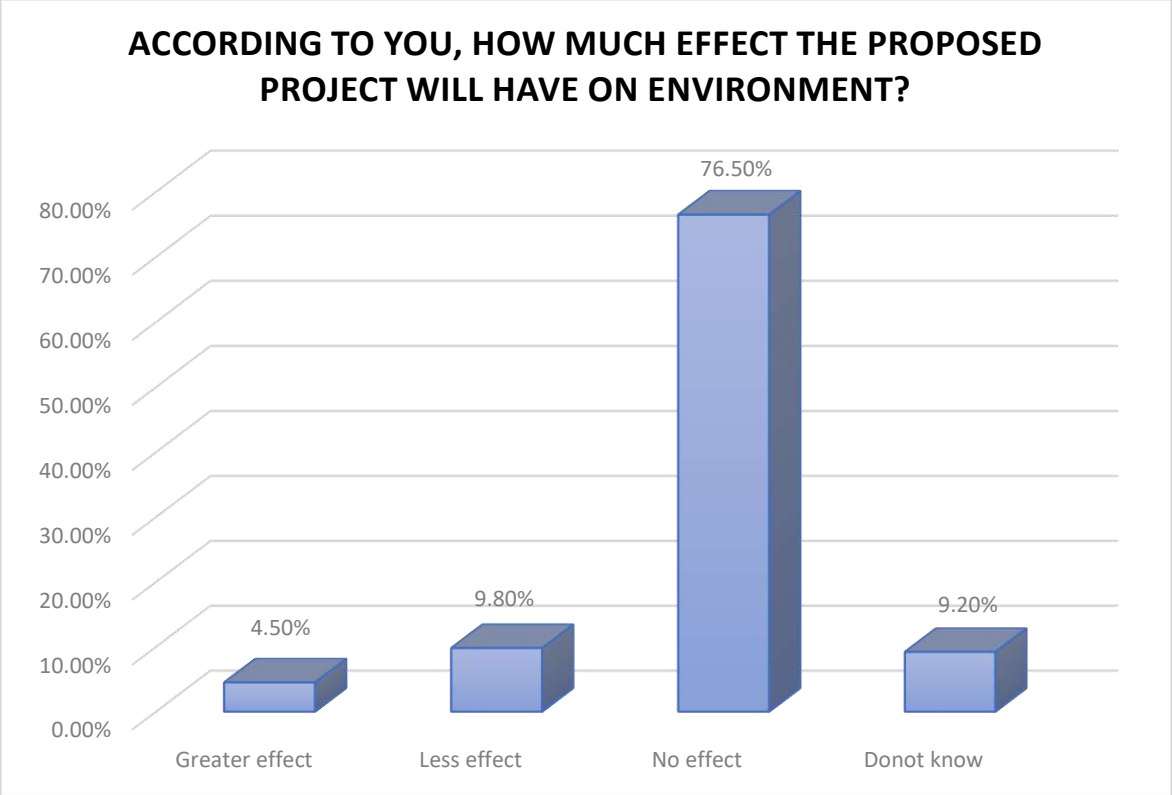
11.2.2 STATISTICAL ANALYSIS

SPSS 19.0 has been used for the statistical analysis of the data collected during the visit of study site area through questionnaires, List of questionnaires is attached herewith as **Annexure-H.**



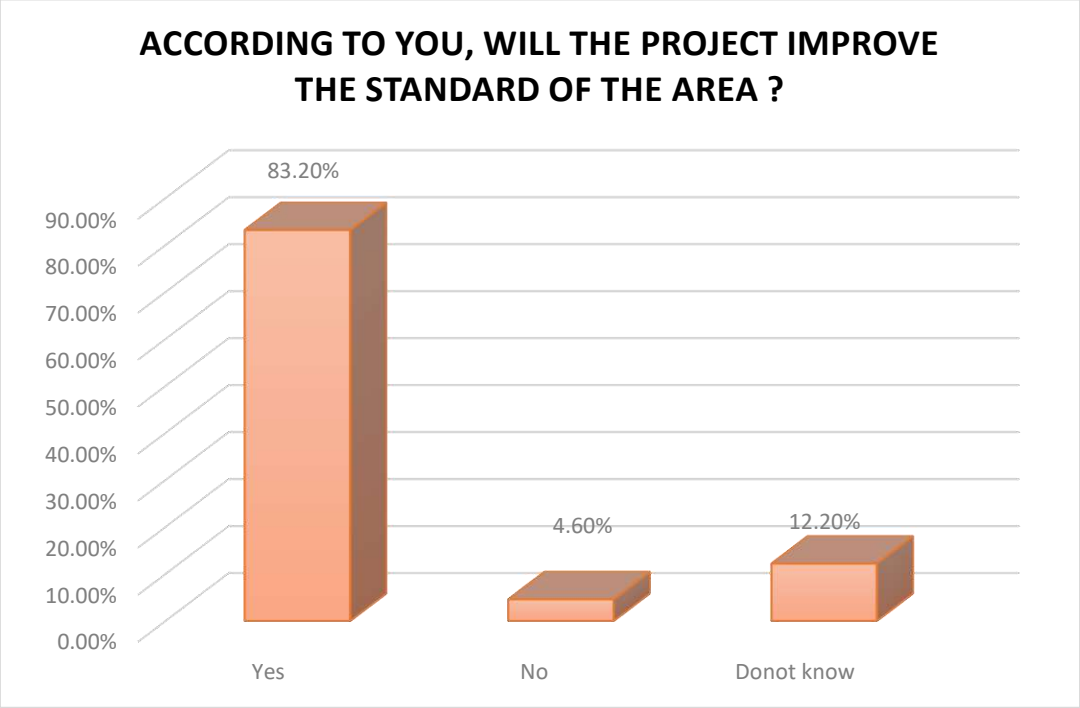
In the sampled population, 77% respondents were educated while 23% were uneducated. Overall education status of the area is good.





As per survey, 85.80 % people favored the project and they gave positive remarks regarding the subject project. While 9.40% respondents had no opinion regarding the project and 4.80% respondents were not satisfied with the project because they think that development will affect the natural aesthetics of the area.

As per survey, 4.50% respondents said that subject project will affect the environment of the area, 9.8% said that there will be less effect on the environment, 76.50% respondents said that the project will not affect the environment and 9.20% 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, 4.60% said that it will have no impact on the area while 12.20 % respondents gave no remarks.

11.2.3 FINDINGS OF THE OVERALL DISCUSSION:

It will enhance the socio-economic conditions/values of the area.

Project will increase revenue generation for the Government.

It will create employment opportunities.

Local people will be given preference for employment in the proposed project.

Construction of the project will be completed in the designated timeframe to limit adverse impacts of construction.

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.

Figure 11-1Pictorial Evidence of Public Consultation

CHAPTER # 12. CONCLUSION AND RECOMMENDATIONS

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

12.1 CONCLUSIONS

The EIA study reveals that the project is economically viable, socially acceptable and environment friendly.

It will generate additional jobs during construction and operation phases.

The proponent has committed to implement the project in the environment friendly manner.

M/s Junaid Energy Traders (SMC-Pvt) Ltd intends to register the project with local Government.

M/s Junaid Energy Traders (SMC-Pvt) Ltd has prepared and implemented very comprehensive Emergency Preparedness and Response Standard Operating Procedures.

M/s Junaid Energy Traders (SMC-Pvt) Ltd has prepared and implemented very comprehensive Security and Fire Fighting Standards Operating Procedures.

12.2 RECOMMENDATIONS

In view of the comprehensive screening process and findings of the present study there is no need of conducting further investigations.

Tree plantation inside the unit and near the unit is recommended.

The untreated wastewater will not be reused for irrigating the vegetation and lawns.

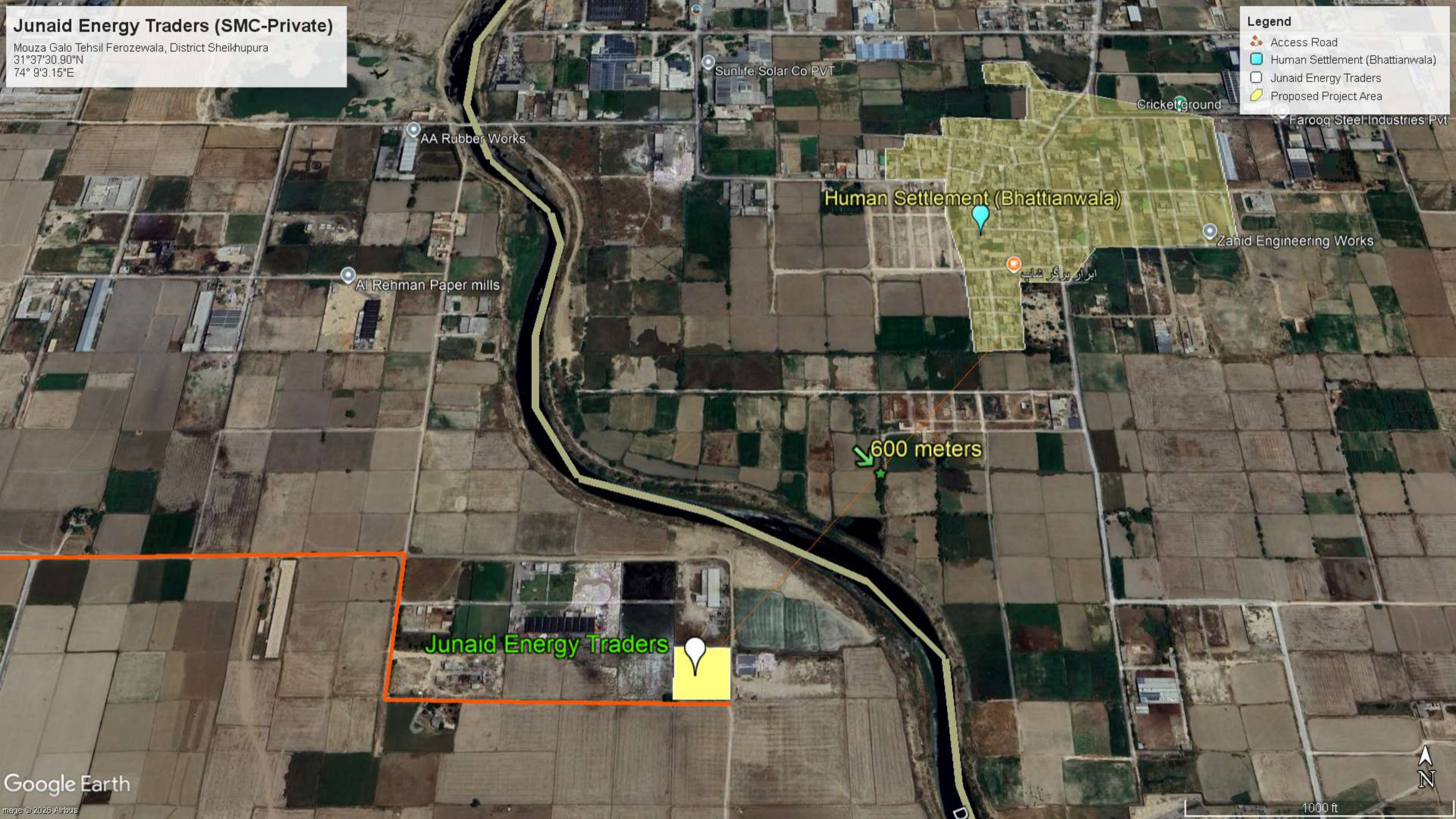
High standards of bio-security and safety will be enforced during operation stage. Safety of the workers will be top priority for the management.

The management of M/s Junaid Energy Traders (SMC-Pvt) Ltd will continue to assist the local communities as a corporate/social responsibility.

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

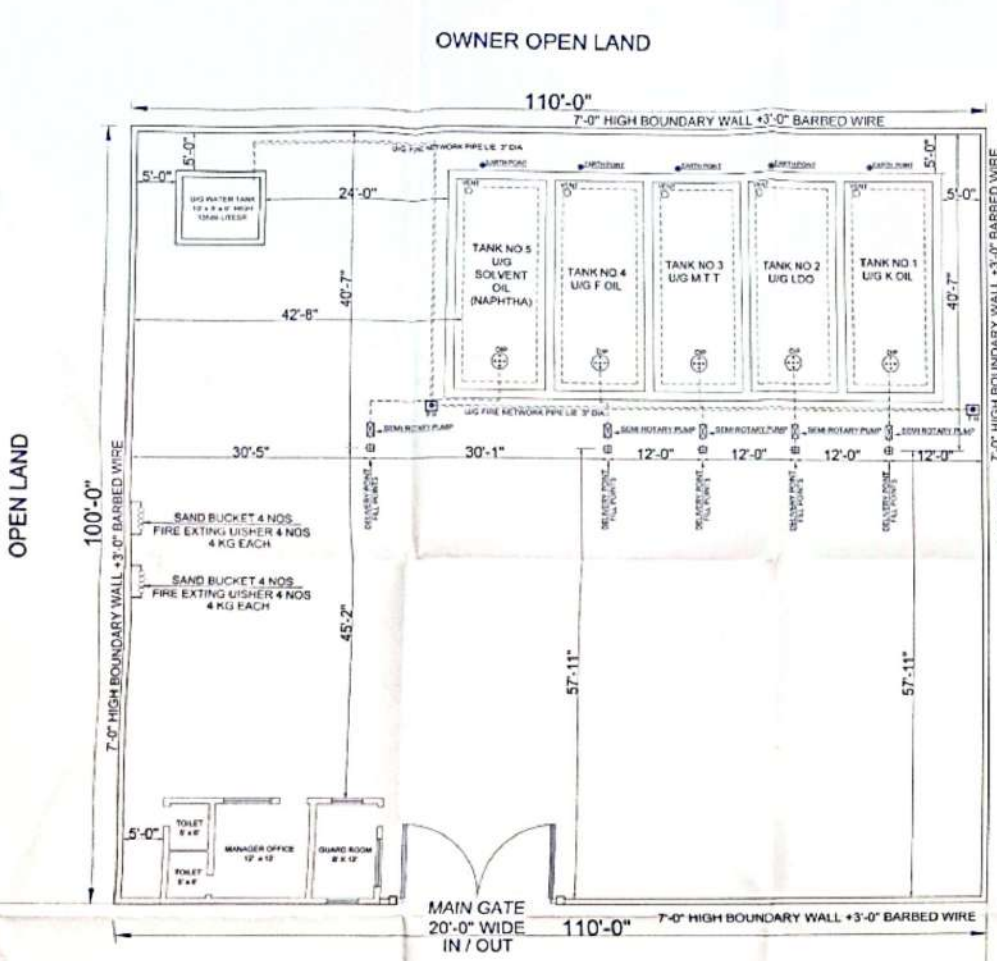
ANNEXURE-A

Google Map

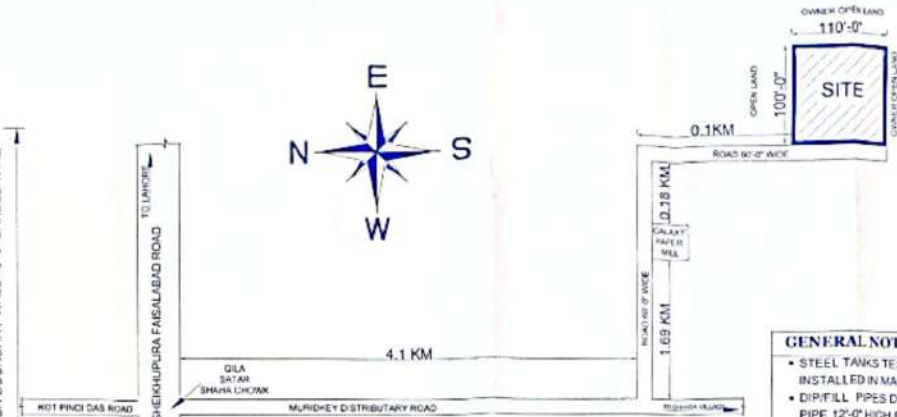

Junaid Energy Traders (SMC-Private)
Mouza Galo Tehsil Ferozewala, District Sheikhupura
31°37'30.90"N
74° 9'3.15"E
Legend
Access Road
Human Settlement (Bhattianwala)
Junaid Energy Traders
Proposed Project Area
Sunlife Solar Co PVT
Cricket ground
Farooq Steel Industries Pvt
AA Rubber Works
Human Settlement (Bhattianwala)
Zahid Engineering Works
Al Rehman Paper mills
600 meters
Junaid Energy Traders
Google Earth
N
1000 ft

ANNEXURE-B

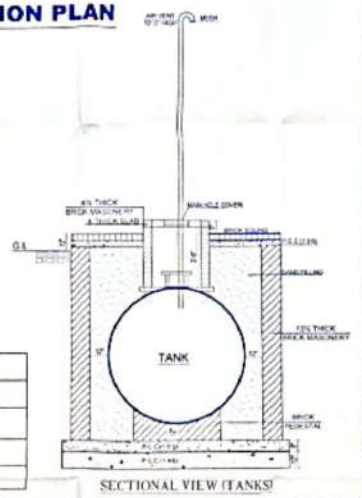
Layout Map



LAYOUT PLAN



SITE & LOCATION PLAN



SECTIONAL VIEW (TANKS)

LEGENDS

SR NO	DESCRIPTION	TYPE	QTY.
1	FIRE EXTINGUISHER 4 KG EACH		8 NOS
2	SAND BUCKETS		8 NOS
3	FIRE HYDRENT		2 NOS

GENERAL NOTES FOR OIL STORAGE TANKS.

- STEEL TANKS TESTED TO A PRESSURE 3 LBS.PER TANKS INSTALLED IN MASONARY PITS.
- DIP/FILL PIPES DOWN TO THE BOTTOM OF THE TANKS VENT PIPE 12'-0" HIGH FITTED WITH HOOD & 28" MESH WIRE GAUZE.
- THE TANKS SHALL BE SUPPORTED ON AN APPROVED FOUNDATION AND SHALL BE SURROUNDED BY A WALL OR EMBANKMENT SUBSTANTIAL CONSTRUCTION. OR SHALL BE PARTIALLY SUNK IN AN EXCAVATION. THE ENCLOSURE THUS FORMED SHALL CONTAIN ONLY ONE OF FOLLOWING CLASS OF PETROLEUM, SHALL BE OF DIMENSIONS SUFFICIENT TO CONTAIN THE QUANTITY OF PETROLEUM SPECIFIED UNDER THE CLASS BE STORED AND SHALL BE SO CONSTRUCTED AND MENTIONED AS TO PREVENT THE ESCAPE THERE FROM OF ANY PETROLEUM IN THE FORM OF LIQUID WHETHER UNDER THE ACTION OF FIRE OR OTHERWISE-
  - (a) DANGEROUS PETROLEUM 10% MORE PETROLEUM THEN THE TANK OR TANKS ARE CAPABLE OF CONTAINING.
  - (b) NON- DANGEROUS PETROLEUM OTHER THAN HEAVY PETROLEUM - THE AMOUNT OF PETROLEUM THE TANK OR TANKS ARE CAPABLE OF CONTAINING -
  - (c) HEAVY PETROLEUM - THE AMOUNT OF PETROLEUM THE LARGEST TANK IN THE ENCLOSURE IS CAPABLE OF CONTAINING; PROVIDED THAT HEAVY PETROLEUM MAY BE STORED IN THE SAME ENCLOSURE AS NON- DANGEROUS PETROLEUM OTHER THAN THE HEAVY PETROLEUM IF THE DIMENSION UNDER (b) ABOVE IS OBSERVED.
- CERTIFIED THAT THERE IS NO S.N.G.P LINE EXIST WITH IN A RADIOS OF 50' OF THE SITE.
- CERTIFIED THAT ADEQUATE ARRANGEMENT AGAINST FIRE ACCIDENT SHALL BE MADE ON THE PERMISSES.
- NO BASEMENT / FIRST FLOOR WILL BE CONSTRUCTED AT THE SITE.

STORAGE TANK CAPACITY SCHEDULE

SR NO	TANK SIZE	PRODUCT	TYPE	CAPYCITY LITERS	5% LESS CAPYCITY	FLASH POINT	NET CAPYCITY
1	9'-3" DIA X 25'-0" LONG	K OIL	NDP	47538 LTRS	2377 LTRS	100 °F	45162 LTRS
2	9'-3" DIA X 25'-0" LONG	LDO	NDP	47538 LTRS	2377 LTRS	77 °F	45162 LTRS
3	9'-3" DIA X 25'-0" LONG	M T T	NDP	47538 LTRS	2377 LTRS	104 °F	45162 LTRS
4	9'-3" DIA X 25'-0" LONG	F OIL	HP	47538 LTRS	2377 LTRS	15 °F	45162 LTRS
5	9'-3" DIA X 25'-0" LONG	SOLVENT OIL (NAPHTHA)	DP	47538 LTRS	2377 LTRS	-4°F	45162 LTRS
					TOTAL CAPACITY		225810 LTRS

SCHEDULE OF AREA

TOTAL AREA OF PLOT = 2 KANAL

M/S JUNAID ENERGY TRADERS (SMC- PRIVATE) LIMITED

OWNER SIGN:

ADDRESS:

PROPOSED LAYOUT PLAN OF PETROLEUM STORAGE AT KHEWAT NO. 25/ 10, KHATOONI NO. 25, MURABA NO. 47, KILLA / KHASRA NO. 16, AT MOUZA GALO, TEHSIL FEROAZWALA DISTRICT SHEIKHUPURA.

DRAWN BY.	DRAWING NO.
CHECKED BY.	DATED. 16-01-2026

EXP/318

ANNEXURE-C

Lab Reports

CHEMICAL ANALYSIS TEST REPORT (AMBIENT AIR)

Reference Number: ESPAK/00266P/26/AA/02766/00166 **Date:** 03/04/2026

Name of Industry/Client: Junaid Energy Traders (SMC Pvt) Ltd.

Address: Mouza Galo Tehsil Ferozewala, District Sheikhupura

Telephone No: ----

Nature of Sample: Ambient Air **Monitoring Location:** Near by Agricultural Area (GPS: 31.625127°N, 74.151425°E)

Date of Sample Collection: 27/03/2026

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

Date of Completion of Analysis: 28/03/2026

S. No	Parameters	Limit Values (PEQS-24 Hours)	Concentration	Method / Equipment Used	Remarks
1	Carbon Monoxide (CO)	5 mg/m³ (8 Hours)	0.5 mg/m³	Non Dispersive Infrared Absorption (NDIR)	Within Prescribed Limits
2	Sulfur Dioxide (SO_2)	120 µg/m³	11.1 µg/m³	UV Fluorescence (UVF)	Within Prescribed Limits
3	Ozone (O_3)	130 µg/m³ (1 Hour)	35.4 µg/m³	Non Dispersive UV Absorption	Within Prescribed Limits
4	Oxides of Nitrogen as NO	40 µg/m³	12.2 µg/m³	Chemiluminescence Detection	Within Prescribed Limits
5	Oxides of Nitrogen as NO_2	80 µg/m³	22.8 µg/m³	Chemiluminescence Detection	Within Prescribed Limits
6	Particulate Matter $PM_{2.5}$	35 µg/m³	30.0 µg/m³	Particulate Sensor	Within Prescribed Limits
7	Particulate Matter PM_{10}	150 µg/m³	139 µg/m³	Particulate Sensor	Within Prescribed Limits
8	Suspended Particulate Matter (SPM)	500 µg/m³	348 µg/m³	Hi-Volume Sampler	Within Prescribed Limits

PEQS: Punjab Environmental Quality Standards for Ambient Air, 2016

Note:

- **The report should be reproduced as a whole and not in parts.**
- **Report Limitation: This report is not valid for court cases.**

1. **Sample Analyzed By:** Ashfaq Ameen, Analyst (Field)
2. **Name of Chief Analyst with Seal:** Muhammad Arfan
3. **Signature of Incharge of the Environmental Laboratory:**
   Name: Imran Malik
   General Manager
   Date: 03/04/2026

Environmental Services Pakistan ESPAK Tel: +92(42)35154012-17

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

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

NOISE MONITORING REPORT

Reference Number: ESPAK/00266P/26/N/02767/00161 **Date:** 03/04/2026

Name of Industry/Client: Junaid Energy Traders (SMC Pvt) Ltd.

Address: Mouza Galo Tehsil Ferozewala, District Sheikhupura

Validation Officer: ----

Nature of Sample: Noise

Date of Sample Collection: 27/03/2026 **Grab / Composite:** Continuous 24-Hours

Sample Collected/Sent By: Ashfaq Ameen, Analyst (Field), ESPAK

Date of Completion of Analysis: 28/03/2026

Method/Equipment Used: Sound Level Meter

S. No	Measurement Point	Limit Values (PEQS)	Noise Level in dB(A) Leq	Remarks
1	Near by Agricultural Area (GPS: 31.625127°N, 74.151425°E)	75 dB(A)	62 dB(A)	Within Prescribed Limits
2	Near by Agricultural Area (GPS:331.625127°N, 74.151425°E)	65 dB(A)	57 dB(A)	Within Prescribed Limits

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

Note:

- **The report should be reproduced as a whole and not in parts.**
- **Report Limitation: This report is not valid for court cases.**

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

Name: Imran Malik
General Manager
Date: 03/04/2026

Environmental Services Pakistan ★ Tel: +924235 54012-17 ★

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

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

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

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

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ENVIRONMENTAL SERVICES PAKISTAN (PVT) LIMITED

PAK EPA & PUNJAB EPD CERTIFIED

ESPAK

CHEMICAL ANALYSIS TEST REPORT (GROUND WATER)

Reference Number: ESPAK/00266P/26/GW/02768/00351 **Date:** 03/04/2026

Name of Industry / Client: Junaid Energy Traders (SMC Pvt) Ltd.

Address: Mouza Galo Tehsil Ferozewala, District Sheikhupura

Telephone NO.: -----

Nature of Sample: Ground Water from Bore

Date Sample Received: 28/03/2026 **Grab / Composite:** Grab

Date of Sample Collection: 27/03/2026

Sample Collected / Sent By: Ashfaq Ameen, Analyst (Field), ESPAK

Date of Completion of Analysis: 03/04/2026

S. No	Parameters	Limit Values (DW-PEQS)	Concentration	Method / Equipment Used	Remarks
1	Total Coliforms	----	ND	SMWW 9222 B	-----
2	Fecal Coliform Bacteria	Must not be detectable in any 100mL sample	ND	SMWW 9222 H	Within Limits
3	E. Coli	Must not be detectable in any 100mL Sample	ND	SMWW 9222 H	Within Limits
4	Taste	Non-Objectionable / Acceptable	Acceptable	Organoleptic	Within Limits
5	Odor	Non-Objectionable / Acceptable	Acceptable	Organoleptic	Within Limits
6	pH*	6.5-8.5	7.6	SMWW 4500H$^+$B	Within Limits
7	Turbidity	<5 NTU	0.3	SMWW 2130B	Within Limits
8	Color	≤15 TCU	ND	SMWW 2120 C	Within Limits
9	Total Dissolved Solids (TDS)*	<1000 mg/L	299 mg/L	SMWW 2540C	Within Limits
10	Total Hardness as $CaCO_3$*	<500 mg/L	164 mg/L	SMWW 2340C	Within Limits
11	Residual Chlorine	0.2-0.5 mg/L	ND	SMWW 4500-Cl B	----
12	Chloride (as Cl^-)*	<250 mg/L	16 mg/L	SMWW 4500Cl^-B	Within Limits
13	Fluoride (F^-)*	≤1.5 mg/L	ND	U.S. EPA 9214	Within Limits
14	Cyanide (CN^-)	≤0.05 mg/L	ND	SMWW 4500 CN^- F	Within Limits
15	Nitrate (NO_3^-)	≤50 mg/L	1.5 mg/L	SMWW 4500NO_3^-B	Within Limits
16	Nitrite (NO_2^-)	≤3 mg/L	ND	SMWW 4500NO_2^-B	Within Limits
17	Phenolic Compounds (as Phenols)	NGVS	ND	SMWW 5530 C	----
18	Aluminum (Al)	≤0.2 mg/L	ND	SMWW 3111	Within Limits
19	Antimony (Sb)	≤0.005 mg/L	ND	SMWW 3111	Within Limits
20	Arsenic (As)	≤0.05 mg/L	ND	SMWW 3114 B	Within Limits
21	Barium (Ba)	0.7 mg/L	ND	SMWW 3111	Within Limits
22	Boron (B)	0.3 mg/L	ND	SMWW 4500-B B	Within Limits

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Peshawar, Pakistan.
Tel: +92 312 0849999

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CHEMICAL ANALYSIS TEST REPORT (GROUND WATER)

Reference Number: ESPAK/00266P/26/GW/02768/00351 **Date:** 03/04/2026

Name of Industry / Client: Junaid Energy Traders (SMC Pvt) Ltd.

S. No	Parameters	Limit Values (DW-PEQS)	Concentration	Method / Equipment Used	Remarks
23	Cadmium (Cd)	0.01 mg/L	ND	SMWW 3111	Within Limits
24	Chromium (Cr)	≤0.05 mg/L	ND	SMWW 3111	Within Limits
25	Copper (Cu)	2.0 mg/L	ND	SMWW 3111	Within Limits
26	Lead (Pb)	≤0.05 mg/L	ND	SMWW 3111	Within Limits
27	Manganese (Mn)	≤0.5 mg/L	ND	SMWW 3111	Within Limits
28	Mercury (Hg)	≤0.001 mg/L	ND	SMWW 3112	Within Limits
29	Nickel (Ni)	≤0.02 mg/L	ND	SMWW 3111	Within Limits
30	Selenium (Se)	0.01 mg/L	ND	SMWW 3114 B	Within Limits
31	Zinc (Zn)	5.0 mg/L	ND	SMWW 3111	Within Limits

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

- Laboratory tests and measurements were carried out at 25 ± 5 °C and ≤75 % Relative Humidity conditions unless required otherwise.
- Uncertainty of Measurement (UoM) data will be provided on request, where available. The statement of conformity, if provided in the report, is based on the decision rule of simple acceptance or rejection with equal shared risk due to measurement uncertainty.

Note:

- **The report should be reproduced as a whole and not in parts.**
- **Only parameters marked with asterisk (*) are ISO 17025:2017 accredited.**
- **Report Limitation: This report is not valid for court orders.**

1. **Sample Analyzed By:** M. Shahid (Analyst (Chemical)); Nageen Arshad (Analyst (Chemical)); Sumra Manzoor (Analyst (Chemical)); Zirwa-tuz-Zahra (Analyst (Chemical)); Khizra Bano (Analyst (Microbiology))

2. **Name of Chief Analyst with Seal:** Muhammad Arfan

3. **Signature of Incharge of the Environmental Laboratory:**
   Name: Imran Malik
   General Manager
   Date: 03/04/2026

Environmental Services Pakistan ESPAK Tel: +9242 35154016-17

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

Lahore Office
Office No. 731,
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ANNEXURE-D

Form-L

JUNAID ENERGY TRADERS (SMC- PRIVATE) LIMITED

Galo, Tehsil Feroazwala District Sheikhupura.PH: - 0322 0553555

502
22/01/2026

To:
The Deputy Commissioner,
Sheikhupura.

Date: 21-01-2026

Subject: APPLICATION FOR GRANT OF NOC FOR THE CONSTRUCTION / INSTALLATION OF PETROLEUM STORAGE (FORM L) OF M/S JUNAID ENERGY TRADERS (SMC- PRIVATE) LIMITED, AT KHEWAT NO. 25/ 10, KHATOONI NO. 26, MURABA NO. 47, KILLA / KHASRA NO. 16, AT MOUZA GALO, TEHSIL FEROAZWALA DISTRICT SHEIKHUPURA.

Respected Sir,

We respectfully submit that we intend to construct/install a petroleum storage facility under the name and style of **M/S JUNAID ENERGY TRADERS (SMC- PRIVATE) LIMITED,** At Khewat No. 25/ 10, Khatooni No. 26, Muraba No. 47, Killa / Khasra No. 16, At Mouza Galo, Tehsil Feroazwala District Sheikhupura.

STORAGE TANK SCHEDULE:

Product	Capacity (Liters)
Kerosene Oil	45,162
Light Diesel Oil (LDO)	45,162
Mineral Turpentine (MTT)	45,162
Furnace Oil (F.Oil)	45,162
Solvent Oil	45,162

23 JAN 2026
PAHC

We therefore kindly request that your good office grant us the **No Objection Certificate (NOC)** for the construction and installation of the above-mentioned petroleum storage facility. This NOC is required for obtaining the license in **Form "L"** from the Department of Explosives, as per Rule 115(3) of the Petroleum Rules, 1937.We shall remain grateful for your kind cooperation and consideration in this regard.

Thanking you,
Sincerely,

443 ADC(G) 23-01-2026

22 JAN 2026

For. Nadeem

M/S JUNAID ENERGY TRADERS (SMC- PRIVATE) LIMITED

ANNEXURE-E

Land Ownership

فرد کی تصدیق کے لیے اپنے موبائل فون سے (QR) کوڈ سکین کریں!

نقل رجسٹر حقداران زمین (مسل میعادی)

محال گالو | طرف/پتی ندارد | تحصیل فیروزوالہ | ضلع شیخوپورہ | سال 2019-20 کتاب نمبر | ورق نمبر 2 / 1

۱	۲	۳ (الف)	۳ (ج)	۳ (د)	۳ (ہ)	۳ (و)	۴	۵	۶	۷	۸	۹	۱۰
نمبر کھیوٹ مالک	نمبر کھتونی کاشتکار	کوائف مالک: نام مالک معہ نام والد/خاوند قوم اور سکونت	نوعیت حقوق مالک راہن مرتہن	مشترکہ کھاتہ میں مخصوص حصہ	مخصوص رقبہ مطابق حصہ	زرعی پاس بک نمبر	نام کاشتکار معہ احوال	نمبر خسرہ معہ نام اگر کوئی ہو	رقبہ وقسم زمین کھیت وار اور میزان کھتونی کاشتکار و کھیوٹ مالک	وسائل آبپاشی معہ نام چاہ اور اجناس وغیرہ	لگان جو کاشتکار ادا کرتا ہے شرح اور مطالبہ	مطالبہ معہ تفصیلات مالیہ وحبوب	کیفیت معہ 1۔ نام نمبردار (اگر کوئی ہو) 2۔ شرح مالیہ زمین
25/10	26	رانا بختیار ولد برکت علی گورنمنٹ ایمپلیو ...۔ قوم راجپوت 9 کوآپریٹو ہاؤسنگ سوسائٹی، ماڈل ٹاؤن لاہور (ب) قومی شناختی کارڈ نمبر 35202-6287295-9	مالک	661776/821440 حصہ منتقلہ 2/151	121-13-0 رقبہ منتقلہ 2-0-0		باقی بدستور	قطعات 21	سالم کھاتہ 151-0-0 ایک سو اکاون کنال				فرد بدر نمبر 7 تاریخ فیصلہ 1/1/2014 PM 7:12:14 فرد بدر نمبر 7 تاریخ فیصلہ 1/1/2014 PM 7:12:14
		باقی بدستور میزان		587/3020 2/151	2-0-0								
							میزان کھیوٹ	قطعات 21	151-0-0 ایک سو اکاون کنال	قسم زمین کل نہری 151-0-0			٥

نقل مطابق اصل ہے | نام درخواست کنندہ: راشد علی ولد عبدالغفور
فرد برائے ذاتی ریکارڈ | قوم: مغل
شناختی کارڈ نمبر: 3540119913731

[redacted]

نام اجراء کنندہ: دانش سہیل ولد محمد نذیر
تاریخ فرد پرنٹنگ: 14/01/2026 18:51:53
تاریخ فرد اجراء: 14/01/2026 18:48:35

کمپیوٹرائزڈ نقل۔ دستخط کی ضرورت نہ ہے۔
اراضی ریکارڈ سنٹر فیروزوالہ-DMM
فرد فیس
ٹوکن نمبر 1024

فرد آئی ڈی 0-00-00-084-00-00-00-0027830698

14/01/2026 18:48:11

فرد کی تصدیق کے لیے اپنے موبائل فون سے (QR) کوڈ سکین کریں۔

نقل رجسٹر حقداران زمین (مسل میعادی)

محال گجانو　طرف/پتی ندارد　تحصیل فیروزوالہ　ضلع شیخوپورہ　سال 2019-20　کتاب نمبر　ورق نمبر 2 / 2

۱	۲	۳ (الف)	۳ (ج)	۳ (د)	۳ (ہ)	۳ (و)	۴	۵	۶	۷	۸	۹	۱۰
نمبر کھیوٹ مالک	نمبر کھتونی کاشتکار	کوائف مالک: نام مالک معہ نام والد/خاوند قوم اور سکونت	نوعیت حقوق مالک راہن مرتہن	مشترکہ کھاتہ میں مخصوص حصہ	مخصوص رقبہ مطابق حصہ	زرعی پاس بک نمبر	نام کاشتکار معہ احوال	نمبر خسرہ معہ نام اگر کوئی ہو	رقبہ و قسم زمین کیفیت وار اور میزان کھتونی کاشتکار و کھیوٹ مالک	وسائل آبپاشی معہ نام چاہ و اجباہ وغیرہ	نکان جو کاشتکار دوا کرتا ہے شرح دور مطالبہ	مطالبہ معہ تفصیلات مالیہ و جیوب	کیفیت معہ 1 -نام نمبردار (اگر کوئی ہو) 2 -شرح مالیہ زمین

نمبر کھیوٹ	مرلع نمبر	خسرہ نمبران	خسرہ ویلیویشن	پیمائش	جگہ
25	46	11, 19, 20, 21, 22	0		
25	47	16, 17, 18, 19, 20, 21, 22, 23, 24, 25	0		
25	48	15, 16	0		
25	68	1, 2/1	0		
25	69	1, 2/1	0		

میزان کل رقبہ منتقلہ　2-0-0　دو کنال

کل کھیوٹ خسرہ ویلیویشن　0.00

نقل مطابق اصل ہے　نام درخواست کنندہ　راشد علی ولد عبدالغفور

فرد برائے ذاتی ریکارڈ　قوم مغل

شناختی کارڈ نمبر　3540119913731

نام اجراء کنندہ　دانش سہیل ولد محمد نذیر

تاریخ فرد پرنٹنگ　14/01/2026 18:51:53

تاریخ فرد اجراء　14/01/2026 18:48:35

کمپیوٹرائزڈ نقل۔ دستخط کی ضرورت نہ ہے۔

اراضی ریکارڈ سنٹر فیروزوالہ-DMM

فرد فیس

ٹوکن نمبر　1024

تاریخ ٹوکن اجراء　14/01/2026 18:48:11

فرد آئی ڈی　0-00-00-084-00-00-00-0027830698

ANNEXURE-F

Land Clearance

Office of the
Deputy Commissioner
Sheikhupura

No. ADC(G)/DC/SKP/246
Dated: 26/01/2026.

Office of the Deputy Director Environment
No: 49
Date: 26/2/26
S K P

To,

1. The Assistant Commissioner, Ferozewala.
2. The Executive Engineer, Highway Division Sheikhupura.
3. The Divisional Forest Officer, Sheikhupura/Nankana Sahib.
4. The District Traffic Officer, Sheikhupura.
5. The General Manager, Sui Northern Gas Pipelines Sheikhupura.
6. The XEN / Dy. Manager Operations, LESCO Concerned.
7. The Senior Divisional Officer, PTCL, Qila Sheikhupura.
8. The Civil Defence Officer Sheikhupura.
9. The Deputy Director (Environment), Sheikhupura.
10. The Chief Officer, District Council / Concerned Municipal Committee.

Subject: **APPLICATION FOR GRANT OF NOC FOR THE CONSTRUCTION / INSTALLATION OF PETROLEUM STORAGE (FROM L) OF M/S JUNAID ENERGY TRADERS (SMC-PRIVATE) LIMITED, AT KHEWAT NO.25/ 10, KHATOONI NO.26, MURABA NO.47, KILLA / KHASRA NO.16, AT MOUZA GALO, TEHSIL FEROZEWALA DISTRICT SHEIKHUPURA**

Please find enclosed herewith a copy received from Mr. Muhammad Junaid Rana, Proprietor M/s Junaid Energy Traders (SMC-Private) Limited , Mouza Galo Tehsil Ferozewala District Sheikhupura alongwith layout plan / map and other necessary documents on the subject cited above.

2. You are therefore, directed to submit report / departmental NOCs regading feasibility / suitability of proposed site **within 15 days** to proceed further as per law /rules.

Addl: Deputy Commissioner (Gen),
Sheikhupura
24-1-2026.

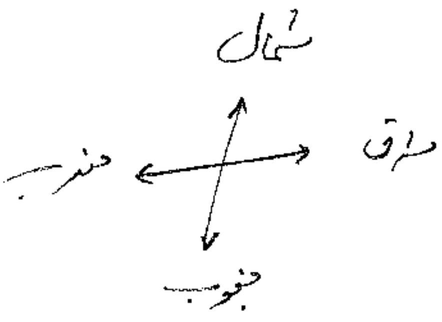
CC:-

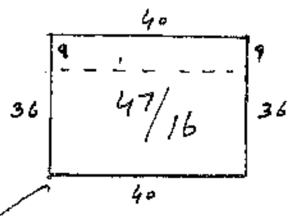
1. The Deputy Commissioner, Sheikhupura.
2. Mr. Muhammad Junaid Rana, Proprietor M/s Junaid Energy Traders (SMC-Private) Limited , Mouza Galo Tehsil Ferozewala District Sheikhupura.

ANNEXURE-G

Aks Shajra

نقشہ ملکی شجرہ بابت [illegible] موضع گالو تحصیل فیروزوالہ ضلع شیخوپورہ





نقشہ مطابق ریکارڈ ہے

14/01/2026

دانش اسماعیل پٹواری
پٹوار سرکل
تاریخ
تحصیل فیروزوالہ ضلع شیخوپورہ

ANNEXURE-H

Wastewater and Tree Cutting Undertaking

E-STAMP

E-Stamp ID: **PB-LHR-8762CE81CE74A454**
PSID: **App-40172603075513437**

Stamp Type: **Low Denomination**
Amount: **Rs 100/-**

Description	: APPOINTMENT IN EXECUTION OF A POWER - 7(b)
Applicant	: MUHAMMAD JUNAID RANA [35202-6162299-9]
S/O	: RANA BAKHTIAR
Agent	: MUHAMMAD JUNAID RANA [35202-6162299-9]
Address	: 9-B RANA HOUSE G E C H S MODEL TWOND LINK RD LHR
Issue Date	: 09-Mar-2026, 02:16:39 PM
Delisted On/Validity	: 16-Mar-2026
Paid Through Challan	: 2026120D32DB44A3
Amount in Words	: One Hundred Rupees Only
Reason	: AFFIDAVIT

نوٹ: یہ ٹرانزیکشن تاریخ اجراسے سات دنوں تک کے لیے قابلِ استعمال ہے۔ ای اسٹامپ کی تصدیق بذریعہ ویب سائیٹ، کیو آر کوڈ سے کی جا سکتی ہے۔

UNDERTAKING

I, **Muhammad Junaid Rana** CNIC **35202-6162299-9** R/o **9-B GECHS Model Town Link Road Phase 3 Lahore, Lahore City, District Lahore Pakistan,** as proponent of "Establishment of Petroleum Products Storage Unit by M/s **Junaid Energy Traders (SMC-Private) Limited** at Mouza Galo Tehsil Ferozewala, District Sheikhupura", do hereby solemnly declare that;

1. I fully accept and undertake to comply with the directions of the Honorable Lahore High Court, Lahore, in W.P. No. 227807/2018 dated 22-02-2023, which imposes a complete ban on the cutting or removal of green trees. No tree shall be cut or removed within the project area under any circumstance.
2. The facility will not generate any industrial wastewater.
3. The wastewater generated from the facility will be treated through septic tank.

Dated: 02/04/2026

M. Junaid,
Muhammad Junaid Rana
CNIC 35202-6162299-9

ANNEXURE-I

Public Consultation

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Hamid Sohail
Residence:	Bhattian wala Sheikhupura.
Gender:	☑Male ☐Female
Qualification:	F.Sc
Profession:	Factory Worker.

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

Signature of Interviewed _____

Signature of Interviewer _____

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Gulam Nabi
Residence:	Galo Road.
Gender:	☑Male ☐Female
Qualification:	Matric
Profession:	Factory worker.

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

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Ch. Zubair
Residence:	Dila Gatlar Shah.
Gender:	☑Male ☐Female
Qualification:	Inter
Profession:	Businessman.

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

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Huzaifa Sandhu
Residence:	Matho
Gender:	☑Male ☐Female
Qualification:	BS
Profession:	Businessman

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

Signature of Interviewed Huzaifa

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Zaid Hassan.
Residence:	Malho.
Gender:	☑Male ☐Female
Qualification:	B.S
Profession:	Student

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

Signature of Interviewed Zaid Hassan

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Shawal Asif
Residence:	Lahore
Gender:	☑ Male ☐ Female
Qualification:	Inter
Profession:	Student

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

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Asim Hussain
Residence:	Lahore
Gender:	☑Male ☐Female
Qualification:	M.bb.s
Profession:	Doctor.

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

Signature of Interviewed

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Kashif Imran .
Residence:	Sheikhupura
Gender:	☑Male ☐Female
Qualification:	B.S
Profession:	Govt. Employ

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

Signature of Interviewed Kashif

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Hidayatullah.
Residence:	Bhatliamala.
Gender:	☑Male ☐Female
Qualification:	Matric
Profession:	Job Doing

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

Signature of Interviewed Hidayat

Signature of Interviewer

PUBLIC CONSULTATION / STAKEHOLDER PARTICIPATION REGARDING EIA OF "M/S JUNAID ENERGY TRADERS (SMC-PRIVATE)"

Name:	Hamdan Asif
Residence:	Gala
Gender:	☑Male ☐Female
Qualification:	B.Sc
Profession:	Factory Worker.

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

Signature of Interviewed Hamdan

Signature of Interviewer Alx