GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

NOTIFICATION

Peshawar Dated the 25/07/2025

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025: In exercise of powers conferred under Clause xxii of Section 7 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014, (Khyber Pakhtunkhwa Act No. XXX of 2022), the Khyber Pakhtunkhwa Environmental Protection Council (EPC) in its 3rd Meeting held on 13.05.2025 has been pleased to approve the following guidelines for General Environmental Approval (GEA);

GUIDELINES FOR FLOUR MILLS

Contents

1. Introduction

The mills are part of a vital industrial sector that grinds wheat to produce flour in the country.

1.1 Scope of the Guidelines

These guidelines are applicable to all new flour mills to be established in Khyber Pakhtunkhwa.

1.2 How to use These Guidelines

The project proponent is obliged to use these guidelines. The project proponent has to fill in an environmental assessment checklist. The following steps are to be taken in this regard:

Step 1: Provide information on project [use **Section I**]

Step 2: Determine Applicability (*Are you sure that IEE or EIA is not required?*) [use **Section II**]

Step 3: Describe the physical, biological and social environment [use **Section III**]

Step 4: Assess potential impacts and applicable mitigation measures [use **Section IV**]

Step 5: Provide undertaking to the EPA Khyber Pakhtunkhwa on mitigation measures and compliance [use **Section V**]

Completed form is to be submitted to the Environmental Protection Agency Govt. of Khyber Pakhtunkhwa for evaluation. EPA Khyber Pakhtunkhwa may request for additional information or decide to undertake visit to the proposed project site in order to assess the environmental impacts of the proposed project.

1.3 Glossary

- **Act** means the Khyber Pakhtunkhwa Environmental Protection Act, 2014.
- **Coagulation** means the use of chemicals (the coagulants) to make suspended solids to gather or group together to form larger masses or flocs, which can settle to the bottom
- **Dust** are fine powdery material such as dry earth or pollen that can be blown about in the air
- **Environment** means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the factors in sub-clause (a) to (f).
- **Environmental Assessment** a technique and a process by which information about the environmental effects of a project is collected, both by the developer and from other

sources, and taken into account by the planning authority in forming their judgments on whether the development should go ahead.

- **Filtration** means subjecting any effluent to pass through a membrane or a layer of sand or gravel to separate the suspended particles
- **Impact on Environment** means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.
- **Liquid Effluent** is the used water coming out of the flour mill unit
- **Mitigation Measure** means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.
- **Noise** is defined as unwanted sound; sound that is loud, unpleasant or unexpected.
- **Rodents** relatively small gnawing (worrying) animals having a single pair of constantly growing incisor teeth specialized for gnawing e.g. mouse
- **Rules** mean Khyber Pakhtunkhwa Environmental Assessment Rules, 2021.
- **Sedimentation** means settling of particles by gravity.

INDUSTRY PROFILE

1.4 Description

A flour mill operation usually involves following processes:

a) Materials receiving
b) Wheat storage
c) Washing
d) Wheat milling (grinding)
e) Packaging
f) Product transportation
g) The structures that are usually put up include loading and unloading facilities for bulk or bagged wheat and flour, storage facilities in bulk bins or silos or in the form of godowns for bagged material, milling building, office, warehouse, and access roads. The milling buildings (and silos) are typically equivalent to 4-5 floor (~50ft) tall buildings.
h) Wheat from the storage area is conveyed to the cleaning operations via bucket elevators where it is separated, de-stoned, scoured and polished. It is then fed to the mills where it is milled, separated and sifted, and bagged as flour, bran and semolina. The product is warehoused and distributed.

1.5 Environmental Aspects

Materials receiving

Grain is generally received overland. Hence increase in traffic in the vicinity of the mill, and simultaneous noise is the main environmental aspects of this activity.

Wheat storage

Stored grains require proper environment to maintain quality. Preservatives may be used to extend the stored life. Similarly grain needs to be protected against insects and rodents that may render the grain unfit for human consumption. Chemicals are deployed to achieve these objectives. Thus there are two environmental aspects in the storage area. The fact that chemicals are used and therefore improper selection, use and storage of the materials could lead to an environmental impacts.
Secondly those rodents, insects and other disease promoting vectors may contaminate the grain which if not segregated and disposed off properly may lead to a health and environmental impacts.

Washing:

Wheat is washed before grinding to remove the husk and soil particles. Waste water produce in this step.

Wheat milling (grinding)

The main environmental aspects of milling are generation of dust and noise. Bucket conveyors and grinding machines can be noisy and conveying systems, hoppers and cyclones that are not well maintained can leak and cause lots of dust to spread.

Packaging

Packaging operation can also lead to dust emissions and workers in the area can be impacted.

Product transportation

Transportation activity will increase in the vicinity of the Mill for grain and product movements and can be the cause of both overcrowding and increased noise levels faced by the surrounding receptors. If trucks are allowed to queue up in the vicinity of the mills then engine exhaust fumes could also accumulate in the area and create nuisance for any local residents.

Staff Quarters

Office and mill staff and transport crews will generate sanitary wastewater in toilets, dining and washing rooms.

1.6 Mitigation Options

Materials receiving

Proper planning and scheduling of the grain transporting vehicles must be carried out so as to minimize congestion and prevent conflicts with local rush hours. Approach roads to have sufficient width to accommodate two- way traffic for the type of vehicles likely to be used for transport (farm trolleys, multiple axle trucks etc). Sufficient space needs to be allocated for the parking of the required vehicles inside the premises. Drivers to be instructed to refrain from gunning of the engines, use of pressure horns and to drive slowly when passing through residential or other sensitive areas.

Wheat storage

A plan for preserving and maintaining the quality and contaminant Free State of the grain in the storage area should be prepared and its implementation monitored. Only approved chemicals and processes should be employed for the preservation and fumigation of the stored grain. The chemicals should also be stored as per the manufacturer's instructions.

All contaminated or moldy grain unfit for consumption should be disposed off in manner such that it would not be used for food.

Washing:

Waste water is produced during the washing of wheat. The waste water may be stored in septic tanks and the sludge may be disposed of properly.

Wheat milling *(grinding)*

I. Grinding machines that meet the criterion for noise levels in the workplace should be employed. Proper maintenance procedures must be enforced to ensure noise levels do not increase over time.

II. Similarly the design of the conveying systems as well as the house keeping procedures should ensure that leakage of dust is kept under control.

Packaging

- Dust control is the major challenge in this area. Efforts to capture the dust at source will be most effective. Use of high efficiency filters is recommended.

Product transportation

Same measures as listed under material receiving above.

Staff Quarters

Sanitary waste water must be disposed off in properly designed and located septic tanks.

Safe distance criteria

Dust emissions from processing may cause an impact. Odor impacts mainly relate to

wastewater storage/irrigation, waste product produced as part of the processing, and on-site storage/composting of these wastes. Noise from exhaust fans, crushing machinery and vehicular movements have the potential to cause impacts dependent on the scale of the operations and shall have impact on the surrounding environment. The safe distance criteria for flour mill from residential area (single house) and other sensitive receptor (educational institution & Hospital) shall be at least 300 m.

Environmental Assessment Checklist

Section I: Project Description

File No_____(To be filled by EPA)

Date _____

General Information

1. Project Name or Title_____
2. Project Proponent (Department, organization, or owner) _____
3. Address_____
4. Contact No: _____
5. Representative of the Proponent_____
6. Designation _____
7. Name of the person who conducted this assessment _____
8. Designation _____
9. Qualification_____

Project Information

10. Project Location_____
11. GPS Coordinates_____
12. Cost of the Project_____
13. Area of the proposed land for the project

    Total_____m^2

    Proposed covered_____m^2

    Open space_____m^2

14. Brief Project Description _____

    _____

    _____

    _____

    _____

Please attach a plot plan of the proposed project site showing the location of the key structures, access, utilities, units, etc.

15. List key equipment of the plant _____

16. Design production capacity of the unit _____

17. Number and type of qualification of required staff to run the project? _____

18. What will be the expected water requirement for the project? _____ m^3/d

19. What is the proposed source of water? _____

20. Where the wastewater from the unit be disposed? _____

21. Describe the type of material that will be discharged with the wastewater? _____

22. Please describe any treatment system for the wastewater planned? _____

23. Please describe all main vents and stacks of the proposed plant

No	Name	Type (Vent/Stack)	Height and Diameter	Flue Gas Contents and Temperature

24. Please describe the solid waste expected during operations:

No	Waste	Expected Weekly Quantity	Proposed Disposal (Municipal Dump, Waste Contractor, Recycle, etc.)

25. What are the expected operating hours? _____

26. Is night shift planned? _____

27. How many vehicles carrying raw material and finished product are likely to enter or leave the unit daily? _____

Construction

28. Who owns the proposed land for the project? _____

29. What is the present use of the land? _____

30. Are there any squatter settlements on the land? _____

If yes, please specify

Number of settlements _____

Will any compensation be paid to them? _____

31. Are there any structures on the proposed site now? ☐ Yes ☐ No

If yes, will any structure be demolished? ☐ Yes ☐ No

If yes, where the demolition waste will be disposed? _____

32. Are there any trees on the proposed site? ☐ Yes ☐ No

33. Will any tree be removed? ☐ Yes ☐ No

If yes, how many? _____

34. Period of construction (start and end dates) _____

35. What major construction equipment (dozer, grader, crane, etc.) will be used?

_____

36. Is construction work during the night planned? ☐ Yes ☐ No

Section II: Screening

Is the proposed project located in an ecologically sensitive area?:

☐ Yes ☐ No

If the answer to the above questions is yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021 for appropriate category.

Section III: Environmental Profile

1. Describe the terrain of the project area: ☐ Flat or Level (Slope < 3%)

☐ Level to moderately steep (Slope 3%-30%)

☐ Moderately steep to mountainous (Slope > 30%)

2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?

☐ Yes

☐ No

If yes, please describe (where, nature) _____

_____

3. Is there any surface water body (river, canal, stream, lake, wetland) within 1,000 m of the proposed site?

☐ Yes

☐ No

If yes, describe each water body:

Name (including type, ie, river, canal or stream)	**Dimensions**	**Status and Uses** (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

☐ Yes

☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	**Location** (Village, road, mohalla, etc. and distance from the site)	**Depth and Yield**	**Uses** (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Based on the interview of the surrounding population or a wildlife expert, is any form of wildlife found on, or around the proposed site of the project?

☐ Yes
☐ No

If yes, please describe _____

_____

Are there any existing trees or vegetation on the proposed site?

☐ Yes
☐ No

If yes, how many? _____

6. Are there any reserved forest or protected area within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, please describe?_____

7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road_____Count Location _____

	6:00 am-9:00 am	9:00 am-12:00 noon	12:00 noon-3:00 pm	3:00 pm-6:00 pm	6:00 pm-9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars,					

jeeps, taxis)					
Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal-driven carts, tongas)					
Others					

(*Please add additional sheets for every road*)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

	Residential (Thick, Moderate, Sparse)	**Commercial** (Office, Shops, Fuel Stations)	**Open Land** (Parks, Farmlands, unutilized plots, barren land	**Industrial**	**Other**
Description					

(*Please attach a map of the proposed project site and indicate roughly the area that you have considered for this evaluation*)

9. For any agricultural farmland on the proposed site and a radius of 500 m around it, provide the following information:

   Main crop(s) and average yield _____

   Source of irrigation water_____

   Area affected by salinity or water logging _____

10. Please describe all the sensitive receptors within 500 m of the proposed site:

Type (schools, colleges, hospitals, and clinics)	**Name**	**Size** (Number of students or number of beds)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

11. Roughly, how many houses are within a radius of 500 m of the proposed site?

_____

12. What is the total population of the area? _____

13. What proportion of the houses in the area are *pukka, semi-pukka, and* kutcha? _____

14. How are the general hygienic conditions of the project area?

- ☐ Generally clean
- ☐ Fair
- ☐ Poor

15. Is there any bad odor in the project area?

- ☐ Yes
- ☐ No

What is the source of the odor? _____

16. What are the main sources of income of the surrounding community? _____

_____

17. Is there any site of cultural importance (graveyard, shrine, mosque, archeological site) within 1,000 m of the proposed scheme?

- ☐ Yes
- ☐ No

If yes, please describe? _____

18. What other main sources of pollution exist within a radius of 500 m of the proposed site:

Name of the Source	**Type of Pollution** (Noise, air water)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

Section IV: Impact Assessment

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Siting near sensitive receptor	☐	Plant is not located within _ _____m of any educational institution or health facility	☐	
Noise	☐	Noise wall will be built	☐	
		Grinding machines that meet the criterion for noise levels in the workplace will be employed.	☐	
		Proper maintenance procedures will be enforced to ensure that noise levels do not increase over Time	☐	
Interruption to local traffic	☐	Deliveries will be scheduled at times of light traffic load to avoid congestion	☐	
		Sufficient space needs to be allocated for the parking of the required vehicles inside the Premises	☐	
		Plant is located such that ingress of heavy vehicles does not block the traffic	☐	
Dust	☐	Dust control bags will be installed	☐	
		Conveying systems will be designed to ensure that leakage of dust is kept under control	☐	
		High efficiency filters will be used	☐	

...Continues

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Chemical	☐	All chemicals will be handled and stored as per the manufacturer's instructions		
Wastewater	☐	Volume and strength reduction of the effluent is to be achieved by preventing mixing of waters from washing activities and processing activities	☐	
	☐	Liquid effluent is to be treated by sedimentation process meaning subjecting the effluent to flow through settling tanks		
	☐	Effluent is to be treated by coagulation that is adding any coagulant to the settling tanks		
	☐	Effluent is to be treated by coagulation and filtration		
Occupational safety	☐	Workers will be provided with protective equipments	☐	

Section V: Undertaking

I,_____(*full name and address*) as proponent for _____(*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for_____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____

Signature_____
Name_____
Designation _____
(with official stamp/seal)

Witnesses:

	Signature	Name	Address
1	_____	_____	_____
2	_____	_____	_____

-sd-
Secretary to Govt. of Khyber Pakhtunkhwa
Climate Change, Forestry, Environment & Wildlife Department

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025:
Copy for information to;

1. All members of Environmental Protection Council (EPC) Khyber Pakhtunkhwa
2. PS to Secretary Climate Change, Forestry, Environment & Wildlife Department, Khyber Pakhtunkhwa

20/8/25

Muhammad Ishaq
Section Officer (Environment)

GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

NOTIFICATION

Peshawar Dated the 25/07/2025

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GUIDELINES FOR PULSES MILLS

Contents

1. Introduction

The mills are part of a vital industrial sector that produce split pulses from whole pulse in the country.

1.1 Scope of the Guidelines

These guidelines are applicable to all new pulse mills to be established in Khyber Pakhtunkha.

1.2 How to use These Guidelines

The project proponent is obliged to use these guidelines. The project proponent has to fill in an environmental assessment checklist. The following steps are to be taken in this regard:

Step 1: Provide information on project [use **Section I**]

Step 2: Determine Applicability (*Are you sure that IEE or EIA is not required?*) [use **Section II**]

Step 3: Describe the physical, biological and social environment [use **Section III**]

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1.3 Glossary

- **Act** means the Pakistan Environmental Protection Act, 2014.
- **Coagulation** means the use of chemicals (the coagulants) to make suspended solids to gather or group together to form larger masses or flocs, which can settle to the bottom
- **Dust** are fine powdery material such as dry earth or pollen that can be blown about in the air
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- **Environmental Assessment** a technique and a process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account by the planning authority in forming their judgments on whether the development should go ahead.
- **Filtration** means subjecting any effluent to pass through a membrane or a layer of sand or gravel to separate the suspended particles
- **Impact on Environment** means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.
- **Liquid Effluent** is the used water coming out of the flour mill unit
- **Mitigation Measure** means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.
- **Noise** is defined as unwanted sound; sound that is loud, unpleasant or unexpected.
- **Rodents** relatively small gnawing (worrying) animals having a single pair of constantly

growing incisor teeth specialized for gnawing e.g. mouse

- **Rules means** Environmental Assessment Rules,2021.
- **Sedimentation** means settling of particles by gravity.

Industry Profile

1.4 Description

A pulse mill operation usually involves following processes:

a) Materials receiving
b) Cleaning
c) Milling
d) De-husking and cleaning and applying Oil in some Dal
e) Weighing and Packing.
f) Product transportation
g) The structures that are usually put up include loading and unloading facilities for bulk or bagged pulse and storage facilities in bulk bins or in the form of godowns for bagged material, milling building, office, warehouse, and access roads.
h) Pulse from the storage area is conveyed to the cleaning operations, where the stones and foreign matter are removed and the pulse is graded in different size grades through sieves. It is soaked in water for 60-90 minutes and heaped for uniform moisture absorption and dried in the sun for 2-3 days till fully dried. It is fed into mini dal mill and the split dal falls in the cone chamber from control plate, which is separated into whole dal, broken and husk through an aspirator. The fractions are packed separately. The Mini dal mill can mill Bengal gram, Bokla, Kesari, Pea, Soybeans pigeon pea in a single operation at 25-30 kg per hour. Lentil (masoor) is milled in 2 operations with output of 25-30 kg/hour. Black gram, green gram and moth beans are milled with double operation with output of 15-20 kg dal/hour.The product is warehoused and distributed.

1.5 Environmental Aspects

Materials receiving

Pulse is generally received over land. Hence increase in traffic in the vicinity of the mill, and simultaneous noise is the main environmental aspects of this activity.

Pulse storage

Stored grains require proper environment to maintain quality. Preservatives may be used to extend the stored life. Similarly grain/pulse needs to be protected against insects and rodents that may render the grain unfit for human consumption. Chemicals are deployed to achieve these objectives. Thus there are two environmental aspects in the storage area. The fact that chemicals are used and therefore improper selection, use and storage of the materials could lead to an environmental impact.
Secondly that rodents, insects and other disease promoting vectors may contaminate the grain which if not segregated and disposed off properly may lead to a health and environmental impact.

Pulse milling (grinding)

The main environmental aspects of milling are generation of dust and noise. Conveyors and

grinding/sp;iting machines can be noisy and conveying systems, hoppers and splitting machine that are not well maintained can leak and cause lots of dust to spread.

Packaging

Packaging operation can also lead to dust emissions and workers in the area can be impacted.

Product transportation

Transportation activity will increase in the vicinity of the Mill for Pulse grain and product movements and can be the cause of both overcrowding and increased noise levels faced by the surrounding receptors. If trucks are allowed to queue up in the vicinity of the mills then engine exhaust fumes could also accumulate in the area and create nuisance for any local residents.

Staff Quarters

Office and mill staff and transport crews will generate sanitary wastewater in toilets, dining and washing rooms.

1.6 Mitigation Options

Materials receiving

Proper planning and scheduling of the grain transporting vehicles must be carried out so as to minimize congestion and prevent conflicts with local rush hours. Approach roads to have sufficient width to accommodate two- way traffic for the type of vehicles likely to be used for transport (farm trolleys, multiple axle trucks etc). Sufficient space needs to be allocated for the parking of the required vehicles inside the premises. Drivers to be instructed to refrain from gunning of the engines, use of pressure horns and to drive slowly when passing through residential or other sensitive areas.

Pulse storage

A plan for preserving and maintaining the quality and contaminant Free State of the grain in the storage area should be prepared and its implementation monitored. Only approved chemicals and processes should be employed for the preservation and fumigation of the stored grain. The chemicals should also be stored as per the manufacturer's instructions.

All contaminated or moldy grain unfit for consumption should be disposed off in manner such that it would not be used for food.

Pulse milling *(grinding)*

I. Grinding/splitting machines that meet the criterion for noise levels in the workplace should be employed. Proper maintenance procedures must be enforced to ensure noise levels do not increase over time.

II. Similarly, the design of the conveying systems as well as the house keeping procedures should ensure that leakage of dust is kept under control.

Packaging

- Dust control is the major challenge in this area. Efforts to capture the dust at source will be most effective. Use of high efficiency filters is recommended.

Product transportation

Same measures as listed under Material receiving above.

Staff Quarters

Sanitary waste water must be disposed off in properly designed and located septic tanks.

Safe distance criteria

Dust emissions from processing may cause an impact. Odor impacts mainly relate to wastewater storage/irrigation, waste product produced as part of the processing, and on-site storage/composting of these wastes. Noise from exhaust fans, crushing machinery and vehicular movements have the potential to cause impacts dependent on the scale of the operations and shall have impact on the surrounding environment. The safe distance criteria for flour mill from residential area (single house) and other sensitive receptor (educational institution & Hospital) shall be at least 300 m.

Environmental Assessment Checklist

Section I: Project Description

File No_____(To be filled by EPA)

Date _____

General Information

1. Project Name or Title_____
2. Project Proponent (Department, organization, or owner) _____
3. Address _____
4. Contact No: _____
5. Representative of the Proponent_____
6. Designation _____
7. Name of the person who conducted this assessment _____
8. Designation _____
9. Qualification_____

Project Information

10. Project Location_____
11. GPS Coordinates_____
12. Cost of the Project_____
13. Area of the proposed land for the project

    Total_____m^2

    Proposed covered_____m^2

    Open space_____m^2

14. Brief Project Description _____

    _____

    _____

Please attach a plot plan of the proposed project site showing the location of the key structures, access, utilities, units, etc.

15. List key equipment of the plant

    _____

    _____

16. Design production capacity of the unit _____

    _____

    _____

17. Number and type of qualification of required staff to run the project? _____

    _____

18. What will be the expected water requirement for the project?_____ m^3/d
19. What is the proposed source of water? _____
20. Where the wastewater from the unit be disposed? _____
21. Describe the type of material that will be discharged with the wastewater? _____
_____
_____
22. Please describe any treatment system for the wastewater planned? _____
_____
23. Please describe all main vents and stacks of the proposed plant

No	Name	Type (Vent/Stack)	Height and Diameter	Flue Gas Contents and Temperature

24. Please describe the solid waste expected during operations:

No	Waste	Expected Weekly Quantity	Proposed Disposal (Municipal Dump, Waste Contractor, Recycle, etc.)

25. What are the expected operating hours?_____
26. Is night shift planned? _____
27. How many vehicles carrying raw material and finished product are likely to enter or leave the unit daily? _____

Construction

28. Who owns the proposed land for the project? _____
29. What is the present use of the land? _____
30. Are there any squatter settlements on the land? _____ If yes, please specify
    Number of settlements _____
    Will any compensation be paid to them? _____
31. Are there any structures on the proposed site now? ☐ Yes ☐ No
    If yes, will any structure be demolished? ☐ Yes ☐ No If yes, where the demolition waste will be disposed? _____
32. Are there any trees on the proposed site? ☐ Yes ☐ No

33. Will any tree be removed? ☐ Yes ☐ No If yes, how many? _____

34. Period of construction (start and end dates) _____

35. What major construction equipment (dozer, grader, crane, etc.) will be used? _____

36. Is construction work during the night planned? ☐ Yes ☐ No

Section II: Screening

Is the proposed project located in an ecologically sensitive area?:

☐ Yes ☐ No

If the answer to the above questions is yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021 for appropriate category.

Section III: Environmental Profile

1. Describe the terrain of the project area:
   - ☐ Flat or Level (Slope < 3%)
   - ☐ Level to moderately steep (Slope 3%-30%)
   - ☐ Moderately steep to mountainous (Slope > 30%)

2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?
   - ☐ Yes
   - ☐ No

   If yes, please describe (where, nature) _____

3. Is there any surface water body (river, canal, stream, lake, wetland) within 1,000 m of the proposed site?
   - ☐ Yes
   - ☐ No

   If yes, describe each water body:

Name (including type, ie, river, canal or stream)	**Dimensions**	**Status and Uses** (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

☐ Yes
☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	**Location** (Village, road, mohalla, etc. and distance from the site)	**Depth and Yield**	**Uses** (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Based on the interview of the surrounding population or a wildlife expert, is any form of wildlife found on, or around the proposed site of the project?

☐ Yes
☐ No

If yes, please describe _____

_____

Are there any existing trees or vegetation on the proposed site?

☐ Yes
☐ No

If yes, how many? _____

6. Are there any reserved forest or protected area within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, please describe?_____

7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road_____Count Location _____

	6:00 am-9:00 am	9:00 am-12:00 noon	12:00 noon-3:00 pm	3:00 pm-6:00 pm	6:00 pm-9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars, jeeps, taxis)					

Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal-driven carts, tongas)					
Others					

(*Please add additional sheets for every road*)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

Description	**Residential** (Thick, Moderate, Sparse)	**Commercial** (Office, Shops, Fuel Stations)	**Open Land** (Parks, Farmlands, unutilized plots, barren land	**Industrial**	**Other**

(*Please attach a map of the proposed project site and indicate roughly the area that you have considered for this evaluation*)

9. For any agricultural farmland on the proposed site and a radius of 500 m around it, provide the following information:

   Main crop(s) and average yield _____ Source of irrigation water_____ Area affected by salinity or water logging _____

10. Please describe all the sensitive receptors within 500 m of the proposed site:

Type (schools, colleges, hospitals, and clinics)	**Name**	**Size** (Number of students or number of beds)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

11. Roughly, how many houses are within a radius of 500 m of the proposed site?
    _____

12. What is the total population of the area?_____

13. What proportion of the houses in the area are *pukka, semi-pukka, and* kutcha? _____

14. How are the general hygienic conditions of the project area?

- ☐ Generally clean
- ☐ Fair
- ☐ Poor

15. Is there any bad odor in the project area?

- ☐ Yes
- ☐ No

What is the source of the odor?_____

16. What are the main sources of income of the surrounding community?_____

_____

17. Is there any site of cultural importance (graveyard, shrine, mosque, archeological site) within 1,000 m of the proposed scheme?

- ☐ Yes
- ☐ No

If yes, please describe?_____

18. What other main sources of pollution exist within a radius of 500 m of the proposed site:

Name of the Source	**Type of Pollution** (Noise, air water)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

Section IV: Impact Assessment

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Siting near sensitive receptor	☐	Plant is not located within _ _____m of any educational institution or health facility	☐	
Noise	☐	Noise wall will be built	☐	
		Grinding machines that meet the criterion for noise levels in the workplace will be employed.	☐	
		Proper maintenance procedures will be enforced to ensure that noise levels do not increase over Time	☐	
Interruption to local traffic	☐	Deliveries will be scheduled at times of light traffic load to avoid congestion	☐	
		Sufficient space needs to be allocated for the parking of the required vehicles inside the Premises	☐	
		Plant is located such that ingress of heavy vehicles does not block the traffic	☐	
Dust	☐	Dust control bags will be installed	☐	
		Conveying systems will be designed to ensure that leakage of dust is kept under control	☐	
		High efficiency filters will be used	☐	

Continued...

...Continues

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Chemical	☐	All chemicals will be handled and stored as per the manufacturer's		
Wastewater	☐	Volume and strength reduction of the effluent is to be achieved by preventing mixing of waters from washing activities and processing activities	☐	
		Liquid effluent is to be treated by sedimentation process meaning subjecting the effluent to flow through settling tanks	☐	
		Effluent is to be treated by coagulation that is adding any coagulant to the settling tanks	☐	
		Effluent is to be treated by coagulation and filtration		
Occupational Safety	☐	Workers will be provided with protective equipments	☐	

Section V: Undertaking

I,_____(*full name and address*) as proponent for__(*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for_____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____

Signature_____
Name_____
Designation _____
(with official stamp/seal)

Witnesses:

	Signature	Name	Address
1	_____	_____	_____
2	_____	_____	_____

-sd-
Secretary to Govt. of Khyber Pakhtunkhwa
Climate Change, Forestry, Environment & Wildlife Department

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025:
Copy for information to;

1. All members of Environmental Protection Council (EPC) Khyber Pakhtunkhwa
2. PS to Secretary Climate Change, Forestry, Environment & Wildlife Department, Khyber Pakhtunkhwa

20/8/25

Muhammad Ishaq
Section Officer (Environment)

GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

NOTIFICATION

Peshawar Dated the 25/07/2025

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025: In exercise of powers conferred under Clause xxii of Section 7 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014, (Khyber Pakhtunkhwa Act No. XXX of 2022), the Khyber Pakhtunkhwa Environmental Protection Council (EPC) in its 3rd Meeting held on 13.05.2025 has been pleased to approve the following guidelines for General Environmental Approval (GEA);

GUIDELINES FOR RICE MILLS

Contents

1. Introduction

The Rice mills are part of a vital industrial sector that produces Rice in the country.

1.1 Scope of the Guidelines

These guidelines are applicable to all new Rice mills to be established in Khyber Pakhtunkhwa.

1.2 How to use These Guidelines

The project proponent is obliged to use these guidelines. The project proponent has to fill in an environmental assessment checklist/form. The following steps are to be taken in this regard:

Step 1: Provide information on project [use Section I]

Step 2: Determine Applicability (*Are you sure that IEE or EIA is not required?*) [use Section II

Step 3: Describe the physical, biological and social environment [use Section III]

Step 4: Assess potential impacts and applicable mitigation measures [use Section IV]

Step 5: Provide undertaking to the EPA Khyber Pakhtunkhwa on mitigation measures and compliance [use Section V]

Completed form is to be submitted to the Environmental Protection Agency Khyber Pakhtunkhwa for evaluation. EPA Khyber Pakhtunkhwa may request for additional information or decide to undertake visit to the proposed project site in order to assess the environmental impacts of the proposed project.

1.3 Glossary

- Act means the Pakistan Environmental Protection Act, 2014.
- Coagulation means the use of chemicals (the coagulants) to make suspended solids to gather or group together to form larger masses or flocs, which can settle to the bottom
- Dusts are fine powdery material such as dry earth or pollen that can be blown about in the air
- Environment means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the factors in sub-clause (a) to (f).

- Environmental Assessment a technique and a process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account by the planning authority in forming their judgments on whether the development should go ahead.
- Filtration means subjecting any effluent to pass through a membrane or a layer of sand or gravel to separate the suspended particles
- Impact on Environment means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.
- Liquid Effluent is the used water coming out of the flour mill unit
- Mitigation Measure means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.
- Noise is defined as unwanted sound; sound that is loud, unpleasant or unexpected.
- Rodents relatively small gnawing (worrying) animals having a single pair of constantly growing incisor teeth specialized for gnawing e.g. mouse
- Rules means the Khyber Pakhtunkhwa Environmental Assessment Rules-2021.
- Sedimentation means settling of particles by gravity.

Industry Profile

1.4 Description

A rice mill operation usually involves following processes:

a) Pre-cleaning

When paddy comes into the mill, it contains foreign materials such as straw, weed seeds, soil, and other inert materials. If these are not removed before hulling, the efficiency of the huller and milling recovery will be reduced.

b) Removing the husk (dehusking or dehulling)

Brown rice is produced by removing the husk from rough paddy rice. The husk is removed by friction as the paddy grains pass between two abrasive surfaces that move at different speeds. After dehusking, the husk is removed by suction and transported to a storage dump outside the mill.

c) Paddy separation

The paddy separator separates unhusked paddy rice from brown rice. The amount of paddy present depends on the efficiency of the husker and should not be more than 10%. Paddy separators work by making use of the differences in specific gravity, buoyancy, and size between paddy and brown rice.

d) Whitening or polishing

White rice is produced by removing the bran layer and the germ from the paddy. The bran layer is removed from the kernel through either abrasive or friction polishers. The amount of bran removed is normally between 8 and 10% of the total paddy weight. To reduce the number of broken grains during the whitening process, rice is normally passed through two to four whitening machines connected in series.

e) Separation of white rice

After polishing, white rice is separated into head rice, large and small broken rice by an oscillating screen sifter. Head rice is normally classified as kernels that are 75–80% or more of a whole kernel.

f) Rice mixing

A good rice mill will produce 50–60% head rice (whole kernels), 5–10% large broken and 10–15% small broken kernels. Depending on country standards, rice grades in the market will contain from 5–25% broken kernels.

Mist polishing

Mixing a fine mist of water with the dust retained on the whitened rice improves the luster of rice (polishes) without significantly reducing milling yield. A friction type of whitening machine, which delivers a fine mist of water during the final whitening process, is used for "final" polishing before sale.

g) Rice weighing

Rice is normally sold in 50 kg sacks which must be accurately weighed and labeled. While most rice mills use a manual mechanical weighing system, very accurate, and fast electronic systems are also available. The product is then warehoused and distributed.

1.5 Environmental Aspects

Materials receiving

Rice is generally received overland. Hence increase in traffic in the vicinity of the mill, and simultaneous noise is the main environmental aspects of this activity.

Storage

Stored rice require proper environment to maintain quality. Preservatives may be used to extend the stored life. Similarly rice needs to be protected against insects and rodents that

may render the grain unfit for human consumption. Chemicals are deployed to achieve these objectives. Thus there are two environmental aspects in the storage area. The fact that chemicals are used and therefore improper selection, use and storage of the materials could lead to an environmental impact.
Secondly those rodents, insects and other disease promoting vectors may contaminate the grain which if not segregated and disposed off properly may lead to a health and environmental impact.

Rice milling (cleaning & Polishing)

The main environmental aspects of rice milling are generation of dust and noise. Conveyors, cleaning machine/paddy separator and polishing machines can be noisy and conveying systems, hoppers and cyclones that are not well maintained can leak and cause lots of dust to spread.

Packaging

Packaging operation can also lead to dust emissions and workers in the area can be impacted.

Product transportation

Transportation activity will increase in the vicinity of the Mill for grain and product movements and can be the cause of both overcrowding and increased noise levels faced by the surrounding receptors. If trucks are allowed to queue up in the vicinity of the mills then engine exhaust fumes could also accumulate in the area and create nuisance for any local residents.

Staff Quarters

Office and mill staff and transport crews will generate sanitary wastewater in toilets, dining and washing rooms.

1.6 Mitigation Options

Materials receiving

Proper planning and scheduling of the rice transporting vehicles must be carried out so as to minimize congestion and prevent conflicts with local rush hours. Approach roads to have sufficient width to accommodate two- way traffic for the type of vehicles likely to be used for transport (farm trolleys, multiple axle trucks etc). Sufficient space needs to be allocated for the parking of the required vehicles inside the premises. Drivers to be instructed to refrain from gunning of the engines, use of pressure horns and to drive slowly when passing through residential or other sensitive areas.

Rice storage

A plan for preserving and maintaining the quality and contaminant free state of the rice in the storage area should be prepared and its implementation monitored. Only approved

chemicals and processes should be employed for the preservation and fumigation of the stored grain. The chemicals should also be stored as per the manufacturer's instructions.

All contaminated or moldy grain/rice unfit for consumption should be disposed off in manner such that it would not be used for food.

Rice milling (Cleaning/dehusking & Polishing)

I. Cleaning/dehusking & polishing machines that meet the criterion for noise levels in the workplace should be employed. Proper maintenance procedures must be enforced to ensure noise levels do not increase over time.

II. Similarly the design of the conveying systems as well as the house keeping procedures should ensure that leakage of dust is kept under control.

Packaging

Dust control is the major challenge in this area. Efforts to capture the dust at source will be most effective. Use of high efficiency filters is recommended.

Product transportation

Same measures as listed under Material receiving above.

Staff Quarters

Sanitary waste water must be disposed off in properly designed and located septic tanks.

Safe distance criteria

Dust emissions from processing may cause an impact. Odor impacts mainly relate to wastewater storage/irrigation, waste product produced as part of the processing, and on-site storage/composting of these wastes. Noise from exhaust fans, crushing machinery and vehicular movements have the potential to cause impacts dependent on the scale of the operations and shall have impact on the surrounding environment. The safe distance criteria for flour mill from residential area (single house) and other sensitive receptor (educational institution & Hospital) shall be at least 300 m.

Environmental Assessment Checklist

Section I: Project Description

File No_____(To be filled by EPA)

Date _____

General Information

1. Project Name or Title_____
2. Project Proponent (Department, organization, or owner) _____
3. Address_____
4. Contact No: _____
5. Representative of the Proponent_____
6. Designation _____
7. Name of the person who conducted this assessment _____
8. Designation _____
9. Qualification_____

Project Information

10. Project Location_____
11. GPS Coordinates_____
12. GPS Coordinates_____
13. Cost of the Project_____
14. Area of the proposed land for the project

    Total_____m^2

    Proposed covered_____m^2

    Open space_____m^2
15. Brief Project Description _____

    _____

    _____

Please attach a plot plan of the proposed project site showing the location of the key structures, access, utilities, units, etc.

16. List key equipment of the plant _____

    _____

17. Design production capacity of the unit _____

18. Number and type of qualification of required staff to run the project? _____

19. What will be the expected water requirement for the project? _____ m^3/d

20. What is the proposed source of water? _____

21. Where the wastewater (if any) from the unit be disposed? _____

22. Describe the type of material that will be discharged with the wastewater? _____

23. Please describe any treatment system for the wastewater planned? _____

24. Please describe all main vents and stacks of the proposed plant

No	Name	Type (Vent/Stack)	Height and Diameter	Flue Gas Contents and Temperature

25. Please describe the solid waste expected during operations:

No	Waste	Expected Weekly Quantity	Proposed Disposal (Municipal Dump, Waste Contractor, Recycle, etc.)

26. What are the expected operating hours? _____

27. Is night shift planned? _____

28. How many vehicles carrying raw material and finished product are likely to enter or leave the unit daily? _____

Construction

29. Who owns the proposed land for the project? _____
30. What is the present use of the land? _____
31. Are there any squatter settlements on the land? _____

    If yes, please specify

    Number of settlements _____

    Will any compensation be paid to them? _____

32. Are there any structures on the proposed site now? ☐ Yes ☐ No

    If yes, will any structure be demolished? ☐ Yes ☐ No

    If yes, where the demolition waste will be disposed? _____

33. Are there any trees on the proposed site? ☐ Yes ☐ No
34. Will any tree be removed? ☐ Yes ☐ No

    If yes, how many? _____

35. Period of construction (start and end dates) _____
36. What major construction equipment (dozer, grader, crane, etc.) will be used?

    _____

37. Is construction work during the night planned? ☐ Yes ☐ No

Section II: Screening

Is the proposed project located in an ecologically sensitive area?:

☐ Yes ☐ No

If the answer to the above questions is yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021 for appropriate category.

Section III: Environmental Profile

1. Describe the terrain of the project area:
   - ☐ Flat or Level (Slope < 3%)
   - ☐ Level to moderately steep (Slope 3%-30%)
   - ☐ Moderately steep to mountainous (Slope > 30%)

2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?

☐ Yes
☐ No

If yes, please describe (where, nature) _____

_____

3. Is there any surface water body (river, canal, stream, lake, wetland) within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, describe each water body:

Name (including type, ie, river, canal or stream)	Dimensions	Status and Uses (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

☐ Yes
☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	Location (Village, road, mohalla, etc. and distance from the site)	Depth and Yield	Uses (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Based on the interview of the surrounding population or a wildlife expert, is any form of wildlife found on, or around the proposed site of the project?

☐ Yes
☐ No

If yes, please describe _____

_____

Are there any existing trees or vegetation on the proposed site?

☐ Yes
☐ No

If yes, how many? _____

6. Are there any reserved forest or protected area within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, please describe?_____

7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road_____Count Location _____

	6:00 am-9:00 am	9:00 am-12:00 noon	12:00 noon-3:00 pm	3:00 pm-6:00 pm	6:00 pm-9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars, jeeps, taxis)					
Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal-driven carts, tongas)					
Others					

(*Please add additional sheets for every road*)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

	Residential (Thick, Moderate, Sparse)	Commercial (Office, Shops, Fuel Stations)	Open Land (Parks, Farmlands, unutilized plots, barren land	Industrial	Other
Description					

(*Please attach a map of the proposed project site and indicate roughly the area that you have considered for this evaluation*)

9. For any agricultural farmland on the proposed site and a radius of 500 m around it, provide the following information:

   Main crop(s) and average yield _____

   Source of irrigation water_____

   Area affected by salinity or water logging _____

10. Please describe all the sensitive receptors within 500 m of the proposed site:

Type (schools, colleges, hospitals, and clinics)	Name	Size (Number of students or number of beds)	Location (Village, road, mohalla, etc.)	Distance from Site

11. Roughly, how many houses are within a radius of 500 m of the proposed site?
    _____

12. What is the total population of the area? _____

13. What proportion of the houses in the area are *pukka, semi-pukka, and* kutcha? _____

14. How are the general hygienic conditions of the project area?

    ☐ Generally clean
    ☐ Fair
    ☐ Poor

15. Is there any bad odor in the project area?

☐ Yes
☐ No

What is the source of the odor?_____

16. What are the main sources of income of the surrounding community?_____

_____

17. Is there any site of cultural importance (graveyard, shrine, mosque, archeological site) within 1,000 m of the proposed scheme?

☐ Yes
☐ No

If yes, please describe?_____

18. What other main sources of pollution exist within a radius of 500 m of the proposed site:

Name of the Source	Type of Pollution (Noise, air water)	Location (Village, road, mohalla, etc.)	Distance from Site

Section IV: Impact Assessment

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Siting near sensitive receptor	☐	Plant is not located within _ _____m of any educational institution or health facility	☐	
Noise	☐	Noise wall will be built	☐	
		Grinding machines that meet the criterion for noise levels in the workplace will be employed.	☐	
		Proper maintenance procedures will be enforced to ensure that noise levels do not increase over Time	☐	
Interruption to local traffic	☐	Deliveries will be scheduled at times of light traffic load to avoid congestion	☐	
		Sufficient space needs to be allocated for the parking of the required vehicles inside the Premises	☐	
		Plant is located such that ingress of heavy vehicles does not block the traffic	☐	
Dust	☐	Dust control bags will be installed	☐	
		Conveying systems will be designed to ensure that leakage of dust is kept under control	☐	
		High efficiency filters will be used	☐	

Continued...

...Continues

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Chemical	☐	All chemicals will be handled and stored as per the manufacturer's instructions		
Wastewater	☐	Volume and strength reduction of the effluent is to be achieved by preventing mixing of waters from washing activities and processing activities	☐	
	☐	Liquid effluent is to be treated by sedimentation process meaning subjecting the effluent to flow through settling tanks		
	☐	Effluent is to be treated by coagulation that is adding any coagulant to the settling tanks		
	☐	Effluent is to be treated by coagulation and filtration		
Occupational safety	☐	Workers will be provided with protective equipments	☐	

Section V: Undertaking

I,_____(*full name and address*) as proponent for _____(*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for_____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____

Signature_____
Name_____
Designation _____
(with official stamp/seal)

Witnesses:

	Signature	Name	Address
1	_____	_____	_____
2	_____	_____	_____

-sd-
Secretary to Govt. of Khyber Pakhtunkhwa
Climate Change, Forestry, Environment & Wildlife Department

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025:

Copy for information to;

1. All members of Environmental Protection Council (EPC) Khyber Pakhtunkhwa
2. PS to Secretary Climate Change, Forestry, Environment & Wildlife Department, Khyber Pakhtunkhwa

20/8/25

Muhammad Ishaq
Section Officer (Environment)

GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

NOTIFICATION

Peshawar Dated the 25/07/2025

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GUIDELINES FOR GUAR GUM PROCESSING MILLS

Contents

1. Introduction

Guar or cluster bean is an annual legume plant that grows in semiarid regions. Guar is drought-tolerant and can be eaten green like snap beans, fed to cattle or used as a green manure. It bears many bean-like pods, each of which contains six to nine small, rounded seeds , while Guar gum, a natural gum, is an edible thickening agent extracted from the guar bean .The guar gum mills are part of a vital industrial sector that produces Guar gum in the country.

1.1 Scope of the Guidelines

These guidelines are applicable to all new Guar gum mills to be established in Khyber Pakhtunkhwa.

1.2 How to These Guidelines

The project proponent is obliged to use these guidelines. The project proponent has to fill in an environmental assessment checklist. The following steps are to be taken in this regard:

Step 1: Provide information on project [use Section I]

Step 2: Determine Applicability (*Are you sure that IEE or EIA is not required?*) [use Section II]

Step 3: Describe the physical, biological and social environment [use Section III]

Step 4: Assess potential impacts and applicable mitigation measures [use Section IV]

Step 5: Provide undertaking to the EPA Khyber Pakhtunkhwa on mitigation measures and compliance [use Section V]

Completed form is to be submitted to the Environmental Protection Agency Khyber Pakhtunkhwa for evaluation. EPA Khyber Pakhtunkhwa may request for additional information or decide to undertake visit to the proposed project site in order to assess the environmental impact of the proposed project.

1.3 Glossary

- Act means the Pakistan Environmental Protection Act, 2014.
- Coagulation means the use of chemicals (the coagulants) to make suspended solids to gather or group together to form larger masses or flocs, which can settle to the bottom
- Dust are fine powdery material such as dry earth or pollen that can be blown about in the air
- Environment means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the factors in sub-clause (a) to (f).
- Environmental Assessment a technique and a process by which information

about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account by the planning authority in forming their judgments on whether the development should go ahead.

- Filtration means subjecting any effluent to pass through a membrane or a layer of sand or gravel to separate the suspended particles
- Impact on Environment means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.
- Liquid Effluent is the used water coming out of the mill /unit.
- Mitigation Measure means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.
- Noise is defined as unwanted sound; sound that is loud, unpleasant or unexpected.
- Rodents relatively small gnawing (worrying) animals having a single pair of constantly growing incisor teeth specialized for gnawing e.g. mouse
- Rules mean Environmental Assessment Rules, 2021.
- Sedimentation means settling of particles by gravity.

Industry Profile

1.4 Description

A Guargum mill operation usually involves following processes:

a) **Pre-cleaning**

When Guar or cluster bean comes into the mill, it contains foreign materials such as straw, weed seeds, soil, and other inert materials. If these are not removed before hulling, the efficiency of the huller and milling recovery will be reduced.

b) **Removing the husk (dehusking or dehulling)**

c) Guar gum is prepared by removing the husk and germ portions before extracting the gum from the endosperm. The husk is removed by friction as guar seed pass between two abrasive surfaces that move at different speeds.

d) **Germ separation**

The seeds are broken and the germ is separated from the endosperm. Two halves of the endosperm are obtained from each seed and are known as undehusked guar split.

e) **Polishing**

When the fine layer of fibrous material, which forms the husk, is removed and separated from the endosperm halves by polishing, refined guar splits are obtained. The hull (husk) and germ portion of guar seed are termed as guar meal which is a major byproduct of guar gum powder processing and is utilized as cattle feed.

f) **Pulverization (Crushing)**

The refined guar splits are then treated and finished into powders (known as guar gum) by a variety of routes and processing techniques depending upon the end product desired. The guar splits are crushed in flacker mill and then uniformly moved to ultra-fine grinder, which grinds the splits. The grinded material is dried and passed through screens for grading of the material according to the particle size. After pulverization, sieving is done toget the required mesh size i.e. fine, coarse, etc. Various grades are available depending upon color, mesh size, viscosity potential and rate of hydration.

g) **Packing**

The material that passes from all the screens is sent to Nauta mixer separately by gravity for blending and assembling it to a uniform lot, which is then tested and packed.

1.5 Environmental Aspects

Materials receiving

Guar is generally received overland. Hence increase in traffic in the vicinity of the mill, and simultaneous noise is the main environmental aspects of this activity.

Storage

Stored Guar Seeds require proper environment to maintain quality. Preservatives may be used to extend the stored life. Similarly Guar seeds needs to be protected against insects and rodents that may render the grain unfit for human consumption. Chemicals are deployed to achieve these objectives. Thus there are two environmental aspects in the storage area. The fact that chemicals are used and therefore improper selection, use and storage of the materials could lead to an environmental impact. Secondly the rodents, insects and other disease promoting vectors may contaminate the grain which if not segregated and disposed off properly may lead to a health and environmental impact.

Guar milling *(cleaning, Polishing & crushing)*

The main environmental aspects of Guar milling are generation of dust and noise. Conveyors, cleaning machine/ separator and polishing machines can be noisy and conveying systems, hoppers and grinding machines that are not well maintained can leak and cause lots of dust to spread.

Packaging

Packaging operation can also lead to dust emissions and workers in the area can be impacted.

Product transportation

Transportation activity will increase in the vicinity of the Mill and product movements can be the cause of both overcrowding and increased noise levels faced by the surrounding receptors. If trucks are allowed to queue up in the vicinity of the mills then engine exhaust fumes could also accumulate in the area and create nuisance for local residents.

Staff Quarters

Office and mill staff and transport crews will generate sanitary wastewater in toilets, dining and washing rooms.

1.6 Mitigation Options

Materials receiving

Proper planning and scheduling of the transporting vehicles must be carried out so as to minimize congestion and prevent conflicts with local rush hours. Approach roads to have sufficient width to accommodate two- way traffic for the type of vehicles likely to be used for transport (farm trolleys, multiple axle trucks etc). Sufficient space needs to be allocated for the parking of the required vehicles inside the premises. Drivers to be instructed to refrain from gunning of the engines, use of pressure horns and to drive slowly when passing through residential or other sensitive areas.

Guar Seed storage

A plan for preserving and maintaining the quality and contaminant Free State of the Guar seed in the storage area should be prepared and its implementation be monitored. Only approved chemicals and processes should be employed for the preservation and fumigation of the stored grain/seed. The chemicals should also be stored as per the manufacturer's instructions.

All contaminated or moldy grain/seed unfit for consumption should be disposed off in manner such that it would not be used for food.

Guar milling (Cleaning/dehusking, Polishing& crushing)

I. Cleaning/de-husking, polishing & crushing/grinding machines that meet the criterion for noise levels in the workplace should be employed. Proper maintenance procedures must be enforced to ensure noise levels do not increase over time.

II. Similarly the design of the conveying systems as well as the house keeping procedures should ensure that leakage of dust is kept under control.

Packaging

- Dust/fine particles of guar gum control are the major challenge in this area. Efforts to capture the dust at source will be most effective. Use of high efficiency filters is recommended.

Product transportation

Same measures as listed under Material receiving above.

Staff Quarters

Sanitary waste water must be disposed off in properly designed and located septic tanks.

Safe distance criteria

Dust emissions from processing may cause an impact. Odor impacts mainly relate to wastewater storage/irrigation, waste product produced as part of the processing, and on-site storage/composting of these wastes. Noise from exhaust fans, crushing machinery and vehicular movements have the potential to cause impacts dependent on the scale of the operations and shall have impact on the surrounding environment. The safe distance criteria for flour mill from residential area (single house) and other sensitive receptor (educational institution & Hospital) shall be at least 300 m.

Environmental Assessment Checklist

Section I: Project Description

File No_____(To be filled by EPA)

Date _____

General Information

1. Project Name or Title_____
2. Project Proponent (Department, organization, or owner) _____
3. Address _____
4. Contact No: _____
5. Representative of the Proponent_____
6. Designation _____
7. Name of the person who conducted this assessment _____
8. Designation _____
9. Qualification_____

Project Information

10. Project Location_____
11. GPS Coordinates_____
12. Cost of the Project_____
13. Area of the proposed land for the project

    Total_____m^2

    Proposed covered_____m^2

    Open space_____m^2

14. Brief Project Description _____

Please attach a plot plan of the proposed project site showing the location of the key structures, access, utilities, units, etc.

15. List key equipment of the plant _____

16. Design production capacity of the unit _____

17. Number and type of qualification of required staff to run the project? _____

18. What will be the expected water requirement for the project? _____ m^3/d

19. What is the proposed source of water? _____

20. Where the wastewater from the unit be disposed? _____

21. Describe the type of material that will be discharged with the wastewater? _____

22. Please describe any treatment system for the wastewater planned? _____

23. Please describe all main vents and stacks of the proposed plant

No	Name	Type (Vent/Stack)	Height and Diameter	Flue Gas Contents and Temperature

24. Please describe the solid waste expected during operations:

No	Waste	Expected Weekly Quantity	Proposed Disposal (Municipal Dump, Waste Contractor, Recycle, etc.)

25. What are the expected operating hours? _____

26. Is night shift planned? _____

27. How many vehicles carrying raw material and finished product are likely to enter or leave the unit daily? _____

Construction

28. Who owns the proposed land for the project? _____
29. What is the present use of the land? _____
30. Are there any squatter settlements on the land? _____

    If yes, please specify

    Number of settlements _____

    Will any compensation be paid to them? _____

31. Are there any structures on the proposed site now? ☐ Yes ☐ No

    If yes, will any structure be demolished? ☐ Yes ☐ No

    If yes, where the demolition waste will be disposed? _____

32. Are there any trees on the proposed site? ☐ Yes ☐ No
33. Will any tree be removed? ☐ Yes ☐ No

    If yes, how many? _____

34. Period of construction (start and end dates) _____
35. What major construction equipment (dozer, grader, crane, etc.) will be used?

    _____

36. Is construction work during the night planned? ☐ Yes ☐ No

Section II: Screening

Is the proposed project located in an ecologically sensitive area?:

☐ Yes ☐ No

If the answer to the above questions is yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021 for appropriate category.

Section III: Environmental Profile

1. Describe the terrain of the project area:

☐ Flat or Level (Slope < 3%)

☐ Level to moderately steep (Slope 3%-30%)

☐ Moderately steep to mountainous (Slope > 30%)

2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?

☐ Yes
☐ No

If yes, please describe (where, nature) _____

3. Is there any surface water body (river, canal, stream, lake, wetland) within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, describe each water body:

Name (including type, ie, river, canal or stream)	Dimensions	Status and Uses (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

☐ Yes
☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	Location (Village, road, mohalla, etc. and distance from the site)	Depth and Yield	Uses (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Based on the interview of the surrounding population or a wildlife expert, is any

form of wildlife found on, or around the proposed site of the project?

☐ Yes
☐ No

If yes, please describe_____

_____

Are there any existing trees or vegetation on the proposed site?

☐ Yes
☐ No

If yes, how many? _____

6. Are there any reserved forest or protected area within 1,000 m of the proposed site?

☐ Yes
☐ No

If yes, please describe?_____

7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road_____Count Location _____

	6:00 am-9:00 am	9:00 am-12:00 noon	12:00 noon-3:00 pm	3:00 pm-6:00 pm	6:00 pm-9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars, jeeps, taxis)					
Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal-driven carts, tongas)					
Others					

(*Please add additional sheets for every road*)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

Description	Residential (Thick, Moderate, Sparse)	Commercial (Office, Shops, Fuel Stations)	Open Land (Parks, Farmlands, unutilized plots, barren land	Industrial	Other

(*Please attach a map of the proposed project site and indicate roughly the area that you have considered for this evaluation*)

9. For any agricultural farmland on the proposed site and a radius of 500 m around it, provide the following information:

Main crop(s) and average yield _____

Source of irrigation water_____

Area affected by salinity or water logging _____

10. Please describe all the sensitive receptors within 500 m of the proposed site:

Type (schools, colleges, hospitals, and clinics)	Name	Size (Number of students or number of beds)	Location (Village, road, mohalla, etc.)	Distance from Site

11. Roughly, how many houses are within a radius of 500 m of the proposed site?

_____

12. What is the total population of the area? _____

13. What proportion of the houses in the area are *pukka, semi-pukka, and* kutcha? _____

14. How are the general hygienic conditions of the project area?

- ☐ Generally clean
- ☐ Fair
- ☐ Poor

15. Is there any bad odor in the project area?

- ☐ Yes
- ☐ No

What is the source of the odor?_____

16. What are the main sources of income of the surrounding community? _____

_____

17. Is there any site of cultural importance (graveyard, shrine, mosque, archeological site) within 1,000 m of the proposed scheme?

- ☐ Yes
- ☐ No

If yes, please describe?_____

18. What other main sources of pollution exist within a radius of 500 m of the proposed site:

Name of the Source	Type of Pollution (Noise, air water)	Location (Village, road, mohalla, etc.)	Distance from Site

Section IV: Impact Assessment

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Siting near sensitive receptor	☐	Plant is not located within _ _____m of any educational institution or health facility	☐	
Noise	☐	Noise wall will be built	☐	
		Grinding machines that meet the criterion for noise levels in the workplace will be employed.	☐	
		Proper maintenance procedures will be enforced to ensure that noise levels do not increase over Time	☐	
Interruption to local traffic	☐	Deliveries will be scheduled at times of light traffic load to avoid congestion	☐	
		Sufficient space needs to be allocated for the parking of the required vehicles inside the Premises	☐	
		Plant is located such that ingress of heavy vehicles does not block the traffic	☐	
Dust	☐	Dust control bags will be installed	☐	
		Conveying systems will be designed to ensure that leakage of dust is kept under control	☐	
		High efficiency filters will be used	☐	

Continued...

...Continues

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Chemical	☐	All chemicals will be handled and stored as per the manufacturer's instructions		
Wastewater	☐	Volume and strength reduction of the effluent is to be achieved by preventing mixing of waters from washing activities and processing activities	☐	
	☐	Liquid effluent is to be treated by sedimentation Process meaning subjecting the effluent to flow through settling tanks		
	☐	Effluent is to be treated by coagulation that is adding any coagulant to the settling tanks		
	☐	Effluent is to be treated by coagulation and filtration		
Occupational safety	☐	Workers will be provided with protective equipments	☐	

GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

Section V: Undertaking

I,_____(*full name and address*) as proponent for _____(*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for_____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____

Signature_____

Name_____

Designation _____

(with official stamp/seal)

Witnesses:

	Signature	Name	Address
1	_____	_____	_____
2	_____	_____	_____

-sd-
Secretary to Govt. of Khyber Pakhtunkhwa
Climate Change, Forestry, Environment & Wildlife Department

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025:

Copy for information to;

1. All members of Environmental Protection Council (EPC) Khyber Pakhtunkhwa
2. PS to Secretary Climate Change, Forestry, Environment & Wildlife Department, Khyber Pakhtunkhwa

20/8/25

Muhammad Ishaq
Section Officer (Environment)