# 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 PRESERVATION AND STORAGE OF ANIMAL SKIN

### 1. SCOPE OF THE GUIDELINES:

These guidelines are applicable to the existing & future developments of Preservation & Storage of Animal Skin that fall under KP Environmental Assessment Rules-2021 (Schedule-IV GEA). The project proponent should consult the guidelines while planning the project. Once the project design is complete, follow these steps:

- Provide information of the project on Schedule-I
- Determine Applicability (Sure that the IEE or EIA is not required for the said Project and the Project falls under Schedule-IV GEA).
- Assess potential impacts and applicable mitigation measures.
- Provide undertaking to the EPA on mitigation measures and compliance.

Completed form is to be submitted to this Agency (EPA) for evaluation before commencing any construction on the project Site. KP EPA 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 before granting its approval.

### 2. INTRODUCTION:

The skin is the body's largest organ that protects the body from germs and regulates body temperature which is made up of 60–65% water, 30–32% protein, approximately 10% fat, and 0.5–1% minerals. Animal skins have long been valued particularly as raw materials for clothing (leather and wool), gloves (leather), shoes (leather), furniture (leather), blankets (wool), and other uses. The process involves two steps

1. Preservation of Skin includes Salting, Freezing & Drying.
2. Storage of Skin

### 1. Preservation of Skin (Salting, Freezing & Drying)

**Salting:**

- Animal skin is preserved with salting. It is essential that the salt is fresh. Salt includes chemical such as sodium chloride.

- The salt should not contain impurities. Only very small amounts of calcium or magnesium may be present as impurities.
- The salting process can be carried out by hands or by a machine.
- Sufficient salt is required to completely saturate the skin, so to stop any bacterial growth.

**Freezing:**

- It is the most straight forward method. Fresh skins are packed in plastic and in stored in cooling rooms.
- This method has a lot of advantages.
- Freezing stops the decomposition process immediately.
- The optimal temperature for storing the skin is between 4-7 degree Celsius.
- The advantage over salt preservation is avoiding salt waste water and other negative impacts due to salt and chemical reactions.

**Drying:**

- The simplest and oldest preservation process is drying.
- The skin is thus stretched in the dry air in such a way that air can flow around the hide from all sides.
- The moisture required for the development of microorganisms is thereby removed from the skins.
- The skins should dry quickly, but never at too high temperatures (not above 30 ° C) and never in direct sunlight or next to a radiator, since this leads to irreversible damage of the skin collagen.
- The skin must not be exposed to moisture during drying. Otherwise, the decomposition process is initiated, the skin starts to rot, and insects are being lured.

**2. Storages of Skin:**

- If a fresh animal skin cannot be processed immediately in the tannery, it is stored and preserved in order to halt decay. This must be done quickly to prevent bacterial growth, which usually begins approximately 2 hours after slaughter.
- The raw hides and skins are generally re-salted in small warehouses (mandis) for making different goods. Most of the salt (about 80 percent) applied to raw hides and skins finds its way into effluent streams, primarily from the soak liquor.

## 3. ENVIRONMENTAL ASPECTS:

During operation following environmental issues are usually encountered:

- Use of Salt/Chemical.
- Bad Odor.
- Solid waste.
- Waste Water from the Unit.

**1. Use of Salt/Lime/Chemical:**

Salt/Chemical or similar material is spread over the Skin for storage but there is some waste material also on the skin that is not required for leather production. Disposal of this contaminated material pose some environmental threats. Improper disposal may lead to breeding of flies and insects, bad odor, and water pollution.

**2. Bad Odor:**

If a fresh animal skin cannot be processed immediately in the tannery and it is stored that may cause bad odor in the vicinity and the Skins becomes wet, it gives rise to an unpleasant odor, which can be a source of annoyance for the workers and nearby communities. This must be done quickly to prevent bacterial growth, which usually begins approximately 2 hours after slaughter.

**3. Solid waste:**

Solid waste such as meat pieces, hair and Shoppers etc. it should be disposed off properly and avoid throwing in Nallah/Drain or on open land. Dumping of these waste should be adopted in the specified area by TMA.

**4. Waste Water from the Unit:**

Tannery/ Animal skin unit located in Residential /Commercial areas are often the source of pollution of the Drains / Nallah /Streams / rivers etc. Run-off from the units carries various pollutants to the Drains / Nallah / stream during rainy season.

**4. <u>MITIGATION MEASURES:</u>**

1. Tanning industry should not be allowed in residential area and existing units must be shifted outside the residential area. There should be no human settlement & Agricultural land in radius of 300 to 500 meter of Unit.
2. Workers may be exposed to disease-agents such as bacteria, fungi, mites, and parasites which may be present in the hides or as part of the manufacturing process. Management measures that can be taken to avoid the negative consequences of worker exposure to biological hazards include the following:
3. Inform workers of potential risks of exposure to biological agents and provide training in recognizing and mitigating those risks.
4. Provide personal protective equipment to reduce contact with materials potentially containing pathogens and Guide the workers about proper use of PPEs.
5. Ensure that those who have developed allergic reactions to biological agents are not working with these substances.
6. There should no hospital, school, or Educational institution or any other sensitive building and park in a 300-meter radius of these units.
7. The Tannery should be away from natural streams/seasonal water, river etc.
8. Regular lime sprinkling / spray must be carried out near the unit to control bed odor.
9. The solid waste shall be properly handled and transported to designated place. Hazardous waste shall be incinerated.
10. Waste water of the unit should be treated before discharging into any drain/stream etc.
11. Underground Water: Examination of the quality of bore-well and tube-well water within 5 Km area of the tanneries is desirable as the effluents are discharged on the open land thus affecting the underground water which is the main source of drinking water for the inhabitants of the area.
12. Soils: Crops are grown around tannery effluent ponds. The chemical examination of the soil in the nearby area is desirable to assess its quality and the possible uptake of pollutants by the food crops.

**Solid wastes:**

1. Cover tannery sludges with inert material immediately, to avoid odors and insect infestation.

2. Prevent waste being stored on site for lengthy periods of time. Return packaging of hazardous materials (wherever possible), such as empty drums, to supplier for reuse.
3. Develop and implement a waste management plan covering all aspects of waste treatment on site.
4. Wherever possible, priority should be given to reduction of wastes generated, and recovery and re-use of raw materials.
5. Treat waste on site for example by dewatering (thickening) of sludges, compacting, rendering (drying and grinding to make bone meal), anaerobic digestion, composting and thermal treatment.
6. The effluents from the tanning processes may be characterized and studied for their pollution load. It should be mandatory for animal skin units to treat the effluents to NEQS levels before disposal into the surroundings.

**Waste water:**

1. Minimize the consumption of water used in production processes and equipment cleaning.
2. Use 'batch' instead of 'running water' washes & Recycle wastewater where possible.
3. Recover and recycle spent chrome, degreasing solvents and extraction salts from effluent.
4. Design effluent systems to accommodate blending of acid and alkali discharges to reduce the need for pH adjustment.
5. Ensure untreated wastewater does not discharge to watercourses through use of wastewater treatment facilities and monitoring of wastewater discharges.
6. Segregate wastewater, effluent streams and rainwater to reduce the need for wastewater treatment.
7. Install roofs where there is a risk that rainwater may fall on contaminated areas. Where necessary, rainwater should be captured and treated before discharge.

**Groundwater contamination:**

1. Install devices to prevent spills and overfills e.g. alarms to warn of overfilling and automatic shut-off devices.
2. Install a layer of impermeable hard standing in all areas at high risk of contamination to prevent ground infiltration by pollutants.
3. Install secondary spill containment (bunds etc.) for storage units containing hazardous materials. Maintain and inspect storage units regularly.
4. Consider installation and use of groundwater monitoring points on site to check for contamination.
5. Fire and Explosion Control the effect of fires and explosions by segregating process, storage, utility and safe areas.
6. Avoid potential sources of ignition including banning smoking in and around facilities.
7. Introduce accident, fire and explosion precautions and emergency response plans and involve the emergency services and neighboring community in the creation and practice of these plans to respond to major incidents at the installation.
   Provide the local fire department with a list volume of products stored on the premises. Emergency storage lagoons may be needed to prevent contaminated firewater reaching watercourses.

**Chemical storage:**

1. Label chemicals with appropriate, internationally recognized, diamond shaped hazard symbols.
2. Chemicals with different hazard symbols should not be stored together.

3. Store chemicals in a dedicated, enclosed and secure facility with a roof and a paved/concrete floor.
4. Chemical tanks should be completely contained within secondary containment such as bunding.
5. Inspect tanks routinely to prevent overfilling or filling with incompatible materials.
6. Consider feasibility of substitution of hazardous chemicals with less hazardous alternatives.

**Setting-up of Glue-Manufacturing Unit for Utilization of Fleshing Waste:**

Quick disposal and use of fleshing waste from the tanneries is most essential for keeping a healthy and cleaner environment within and around tanneries. The delay in disposing it off is due to the lack of local consumption in glue manufacturing. Setting-up of a glue-manufacturing unit nearby the tanneries is a dire need and strongly recommended to free the environment from unbearable and lasting bad odor caused by fleshing waste.

**Ban on endangered species leather:**

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Products using fur or skins from endangered species may be subject to restrictions or bans in countries that are signatories to the CITES agreement.

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

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**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)**