



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 HOSPITAL INCINERATORS

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1. Introduction

The rapid increase in industrial activities, healthcare facilities, and urban waste management challenges in Khyber Pakhtunkhwa has necessitated the establishment of incinerators for safe waste disposal. Incinerators are essential for reducing the environmental and health hazards posed by non-biodegradable and hazardous wastes. However, improper siting and operation of incinerators can lead to severe environmental impacts.

1.1 Scope of the Guidelines

These guidelines are applicable to all Incinerators of any capacity to be established inside a Hospital 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 impact assessment form. The following steps are to be taken in this regard:

Step 1: Provide information on project



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[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 on mitigation measures and compliance [use Section V]

Completed form is to be submitted to the Concerned Regional Office of Khyber Pakhtunkhwa Environmental Protection Agency for evaluation. Khyber Pakhtunkhwa 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.

1.3 Glossary

Act means the Khyber Pakhtunkhwa Environmental Protection Act, 2014.

Biomedical Waste means the infectious and hazardous waste generated in the hospitals during the diagnosis, treatment, or immunization of humans or animals, as well as in related research activities.

Contamination introduction of impurities in the environment

Environment "environment" means,---
(i) air, water and land; (ii) all layers of the atmosphere; (iii) all organic and inorganic matter and living organisms; (iv) the ecosystem or flora and fauna, and ecological relationships; (v) buildings, structure's, roads, facilities, installations and works; (vi) all social or cultural and economic conditions and activities affecting community life; and

(vii) the inter-relationships between any of the factors specified in sub-clauses (i) to (vi);

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.

Healthcare Waste means all waste generated in healthcare facilities, such as hospitals, clinics, laboratories, and research institutions, that is not considered general waste.

Hospital Incinerator means an incinerator to be established inside the hospital for burning the concerned hospital biomedical and healthcare waste. The incinerator typically includes a combustion chamber, pollution control equipment (e.g., scrubbers, filters), and a stack for emissions release

Hydrocarbon an organic compound containing only carbon and hydrogen

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.

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.

Pollution the presence in the environment or the introduction into it, of substances that have harmful or unpleasant effects

Rules means the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021.



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2. Project Profile

2.1 Project Description

Incinerators typically include a combustion chamber, pollution control equipment (e.g., scrubbers, filters), and a stack for emissions release. They are used for burning hazardous, or infectious healthcare or biomedical waste, reducing its volume and potential toxicity.

These guidelines are specifically designed for establishment of a hospital incinerator that will specifically incinerate the biomedical and healthcare waste of the concerned hospital only. For any commercial use of an incinerator, approval shall be obtained as per the provisions of the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021.

2.2 Environmental Aspects

Siting

The incinerator site near the patient zone and administrative or residential buildings may pose health risks to the nearby residents. The health conditions of the patients may be further deteriorated.

Air Pollution:

- **Emissions of Harmful Gases:** Incinerators release pollutants like carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and volatile organic compounds (VOCs).
- **Dioxins and Furans:** These highly toxic chemicals can be released if waste is not incinerated at the required temperature or if proper filters are not installed.
- **Particulate Matter (PM):** Fine particles can contribute to air quality degradation.

Odor:

Burning waste can produce unpleasant

odors, impacting the surrounding community.

Ash Residue:

Incineration generates bottom ash and fly ash, which may contain toxic heavy metals (e.g., lead, cadmium, mercury) and require proper disposal in a hazardous waste landfill.

Resource Use:

High-energy consumption for operating the incinerator may contribute to carbon emissions indirectly.

Noise Pollution

The operation of incinerators may generate noise, which can affect hospital staff and nearby residents.

2.3 Mitigation Options

Siting

The incinerator shall be located inside a hospital at a suitable location, preferably at a maximum possible distance from the patient, administrative offices and nearby residents.

The siting shall follow other criteria as specified by the Hospital Waste Management Rules notified at the time and by the WHO.

Emission Control Technologies:

Installation of advanced air pollution control devices like scrubbers, filters, electrostatic precipitators, and activated carbon filters etc. shall be ensured to minimize harmful emissions and to achieve compliance with the National Environmental Quality Standards (NEQS).

Waste Segregation



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Proper segregation of waste at the source (e.g., separating non-combustible and hazardous/infectious materials) reduces harmful emissions.

Regular Maintenance

Regular inspection and maintenance of the incinerator shall be ensured to operate at optimal efficiency as well as temperatures and ensure the compliance of NEQS.

Energy-Efficient Design

Energy-efficient incinerators must be used that recover and utilize heat energy for hospital operations.

Ash Management

Ash shall be safely collected, stored, and dispose of in designated hazardous waste disposal facilities or specially designed ash pits to prevent contamination.

Community Engagement

Adjacent residential community shall be informed prior to the installation of the facility and ensure their concerns are addressed, especially regarding air quality and noise.

Compliance Monitoring:

Regularly monitor emissions as well as effluents and environmental impacts to ensure adherence to environmental regulations.



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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. Telephone _____
5. Fax _____
6. E-mail _____
7. Representative of the Proponent _____
8. Designation _____
9. Name of the person who conducted this assessment _____
10. Designation _____
11. Qualification _____

Project Information

12. Project Location & GPS Coordinates _____
13. Cost of the Project _____
14. Area of the proposed land
Total _____ m²
Proposed covered _____ m²
Open space _____ m²
15. Capacity of the incinerator? _____
16. Brief Project Description _____

Please attach a incinerator design, capacity, treatment mechanism, certification of the manufacturer and product (incinerator), layout plan of the hospital including project site showing the location of the key structures, access, utilities, units, etc.

17. Number and qualification of required staff? _____



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18. Category of the Hospital and number of beds?

Per bed waste generation _____

Total amount of waste generation _____

Biomedical/Healthcare waste generated _____

General Waste generated _____

Other _____

19. Indicate the storage capacity for each of the following:

Red Room _____

Yellow Room _____

Other _____

20. Please provide the list of main equipment _____

21. Indicate what facilities will be provided in the project:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Other _____

22. What will be the expected water requirement for the project? _____ m³/d

23. What is the proposed source of water? _____

24. Where will the wastewater from the project be treated and be disposed? _____

Construction

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

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

27. Are there any squatter settlements on the land?

If yes, please specify

Number of settlements _____



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28. 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? _____
29. Are there any trees on the proposed site? Yes No
30. Will any tree be removed? Yes No
If yes, how many? _____
31. Period of construction (start and end dates) _____
32. What major construction equipment (dozer, grader, crane, etc.) will be used?

- 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.

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) _____



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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, i.e. 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 _____

Person Interviewed _____

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

Yes No

If yes, how many? _____



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

Yes No

If yes, please describe? _____

8. Please provide the distances of the nearby human settlement, school, mosque, community center, patient area, administrative offices and other sensitive receptors from the project site. Use the following format:

Project GPS coordinates _____

Description	GPS coordinates	Distance from project	Proposed impacts	Mitigation Measures	Others
Patient Area					
Administrative offices of the hospital					
Boundary wall of the hospital					
Residential house (s)					
others					

(Please add additional sheets for every road)



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9. 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)

10. 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 _____

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

Type	Name	Size	Location (GPS Coordinates.)	Distance from Site



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

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

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



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Section IV: Impact Assessment

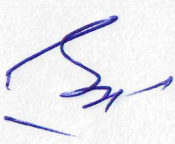
Potential Negative Environmental Impacts	Tick, if relevant	Mitigation Measures	Tick, if proposed	Monitoring
Siting near sensitive receptor		The site is not located within ____ m of any educational institution or health facility		
		Noise wall will be built		
		Incinerator will not be operated from _____ am/pm to ____am/pm		
Contamination		Proper red room constructed		
		Proper yellow room constructed		
		Segregation mechanism intact		
Hospital Waste Management Rules implemented				

Continued...



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...Continues

Potential Negative Environmental Impacts	Tick, if relevant	Mitigation Measures	Tick, if proposed	Monitoring
		Emission control system installed (Filter bags, scrubbers, ESP)		
		Waste water treatment plant constructed		
		NEQS compliance achieved in emissions		
NEQS Compliance		NEQS Compliance achieved in effluents		
		Ash pits constructed or designated site identified for disposal (documentary evidence required)		
		List of PPEs to be provided to the workers		
Incinerator and Staffing		List of trained staff to be hired		
		Manufacturer and the product is certified		



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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 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

Muhammad Ishaq
Section Officer (Environment)