

SCHEDULE-VII
Decision on EIA

1. **Name and address of Proponent:** Mr. Syed Zafar Ali Shah
Project Director KPCIP,
Project Management Unit,
Local Government Election and
Rural Development,
Govt. of Khyber Pakhtunkhwa
Ground floor, Afzal Apartments,
Jamrud Road, Phase-III Chowk,
Hayatabad Peshawar.

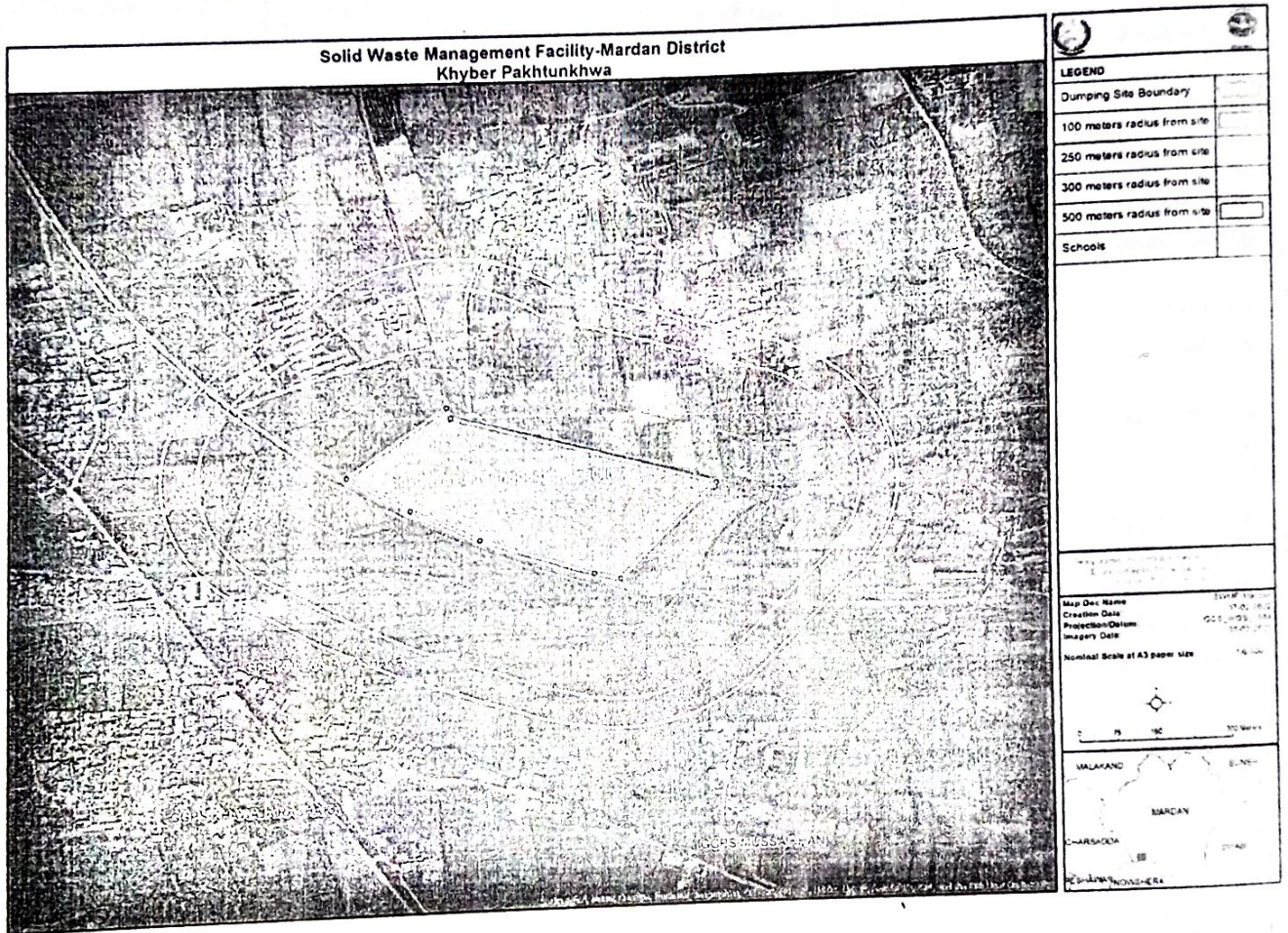
2. **Description of Project:** The Integrated Waste Management System within Mardan city is crucial for successful operation of the SWMF as it provides strategic approach to sustainable management of solid waste covering all sources and all aspects, including generation, segregation, transfer, sorting, treatment, recovery and disposal in an integrated manner, with an emphasis on maximizing resource use efficiency. The operational protocols and modalities of the IWMS have been established to improve environmentally sound practices with respect to waste management and attempting to close existing bottlenecks in the system. The proposed SWMF is located about 3 km away from Mardan Ring Road, about 6.9 km from Haryana via Nisata Road, about 9.9 km from Sheikh Maltoon Town via Mardan Ring Road and approximately 10.7 km from the city center. The total area of the landfill is 27 acres. The site has silty soils strata with no rock formation, and mainly comprises of unconsolidated surficial deposits of silts, sands and gravel. The area has a boundary wall constructed around it several years ago and no agricultural activity is taking place on the site. The access road to the landfill from main road is in good condition, which can be used for waste carrying vehicles.


19/14

3. **Location of project and GPS Coordinates/GIS map:**

The project is located in District Mardan.

Latitude	Longitude
34.15217	71.97028
34.15228	71.9698
34.15296	71.96772
34.15353	71.96648
34.15417	71.96535
34.15539	71.9613
34.1552	71.9672
34.15385	71.97202
34.15217	71.97028
34.15539	71.96713



4. **Date of filing of EIA.** 03/03/2021 Ref. (EPA Diary No. 1315)
5. After careful review of the EIA and all the comments thereon, the Environmental Protection Agency, Govt. of Khyber Pakhtunkhwa has decided to accord approval of the Environmental Impact Assessment of **“Mardan Solid Waste Management Facility (SWMF) Development”** under Khyber Pakhtunkhwa Environmental Protection Act, 2014 and Khyber Pakhtunkhwa

[Handwritten Signature]
19/1/21

Environmental Assessment Rules, 2021, subject to the following terms & conditions:-

- i) The proponent shall adopt all precautionary and mitigation measures recommended in the EIA Report as well as replies of the proponent submitted to this Agency and any un-anticipated impacts arising during the construction and operation phase of the project.
- ii) The design of land fill must consider any nuisance that may arise during the construction and operation phase of the landfill including noise, odor, dust, littering, vermin or fire.
- iii) A boundary wall shall be constructed around the project site. Boundary wall shall be erected high enough in order to avoid odor and noise pollution. Moreover, proper security arrangement shall be made to safeguard the dumping site.
- iv) As the site is selected on the basis of Sector Specific Guidelines on Solid Waste Management of International Funds Corporation (IFC) and hence the same shall be followed in letter and spirit.
- v) Ground water of the area shall be protected and a distance of 1.5 meter shall be maintained between the ground water table and base of the dumping site. Moreover, as committed vertical dumping site shall be constructed above the ground level with extra thick impermeable membrane layers of geotechnical membrane and concrete base with extra thickness to protect ground water from any contamination.
- vi) In case of any contamination to ground waters, surface waters or surround human belongings, the proponent shall be responsible to compensate the same.
- vii) Residential development should be typically further than 250 meters from the perimeter of the proposed landfill cell. Residential houses falling with the radius of 250m shall be compensated as per IFC guidelines before commencement of project activities as committed in a meeting dated 25/03/2022.
- viii) Irrigations channels located in close vicinity of the dumping site shall be properly cemented as committed during a meeting held on 25/03/2022 in the office of Director General EPA Khyber Pakhtunkhwa.
- ix) The management shall submit the detail of budget allocation for maintenance/ repair / rehabilitation of the existing link road.
- x) Temporary storage facility for solid waste shall be established in the landfill site to accommodate the waste in case of non-operation of waste processing and during emergency or natural calamities.
- xi) The landfill cells shall be properly bio-engineered & soil and ground water shall be protected from the solid waste/ leachate contamination.
- xii) Prior to operation phase of the project, a 50 meter buffer zone with having 20 meter plantation inside the project area along the boundary shall be established. Thick plantation / buffer zone especially towards the human settlement must be maintained. Moreover, the plantation of Trees of 10-15 feet height shall be carried out around the boundary wall, inside the project area & if possible outside of the boundary wall.
- xiii) The landfill cell shall have proper liners as identified in the design. The liner system must be provided at the bottom of the waste cell to prevent any percolation and contamination into groundwater strata. The liner



- system can either be natural or synthetically made to meet the requirement of permeability and thickness.
- xiv) An efficient leachate collection system would be provided within the waste cell, so that the leachate is accumulative at the base and transported to collection pit. After collection, the leachate shall be properly treated in treatment plant before final safe disposal. The proponent must submit specifications and number of leachate monitoring wells. It is proposed that monitoring wells should be allocated around the four sides of dumping site.
 - xv) Landfill gas shall not be allowed to escape directly to the atmosphere. The Landfill Gas needs to be collected through gas pipes & waste cell. The collected gas shall be treated / utilize or disposed of in a safe manner.
 - xvi) The storm water drain shall be designed and constructed in such a way that the surface runoff water is diverted from the landfill site and leachate from solid waste do not get mixed with the surface runoff water.
 - xvii) The ground water quality within 500 meter of the periphery of landfill site shall be quarterly monitored to ensure that the ground water is not contaminated. Moreover, monitoring wells shall be constructed
 - xviii) A Grievance Redressal Committee shall be notified prior to start of project activities comprising representative s from the locals. The Committee will look after all the issues pertaining to the project activities specifically environment & social related issues.
 - xix) The landfill site shall have waste inspection facility to monitor waste brought in for landfilling; office facility for record keeping and shelter for keeping equipment and machinery includes pollution monitoring equipment.
 - xx) The operator of the facility shall maintain record of waste received, processed and disposed.
 - xxi) Provisions like weigh bridge to measure quantity of waste brought at landfill site, fire protection equipment and other facilities as may be required shall be provided.
 - xxii) Storage area of the waste shall be properly confined & covered to avoid seepage.
 - xxiii) The nearby irrigation and other seasonal water channels shall be protected from solid waste and all types of contamination because of the proposed project.
 - xxiv) The gaseous emissions from the compost plant & bio-gas plant during the composting process may potentially affect the ambient air quality. The ambient air quality shall quarterly be monitored in the vicinity of the plant to ensure that the concentration levels of the gases are within the permissible limits.
 - xxv) A proper fumigation system shall be established on project site.
 - xxvi) The composting facility shall be properly managed & maintained in order to avoid contamination in the environment (Soil, ground / surface water & ambient air).
 - xxvii) Effective aerobic composting conditions shall be maintained. In addition, de-odorizing agents shall be used where needed to suppress the offensive odors. Odor measurements shall be carried out quarterly.
 - xxviii) The Material Recovery Facility (MRF) shall be properly managed. Record registers shall be maintained for the same.

- xxix) Spraying of appropriate environmental friendly insecticides shall be carried out to kill/ repel the insects and reduce their threat as a nuisance to the surrounding communities as well as to their agricultural activities.
- xxx) Most of the non-biodegradable (inert) waste such as metals and glass shall be separated from Municipal Solid Waste (MSW) for recycling; however, a small portion of the inert waste that cannot be recycled shall be disposed off in environment-friendly manner.
- xxxii) The hospital/ hazardous waste shall not be disposed off in the landfill site. The biomedical waste/ Hospital Hazardous waste shall be disposed off in accordance with the Hospital Waste Management Rules, 2005.
- xxxiii) All vehicles, generators and other equipment shall be properly tuned and maintained in good working condition in order to minimize emission of pollutants.
- xxxiiii) The vehicles and construction equipment's shall have appropriate and properly functioning exhaust mufflers (silencers). The noise level shall be monitored during the construction phase.
- xxxv) To avoid the traffic congestion, a traffic management plan in consultation with the locals, shall be submitted to this Agency prior to commencement of activities.
- xxxvi) Unauthorized access to the Landfill site shall not be allowed and the defensive driving practices shall be promoted among the project drivers.
- xxxvii) The MSW trucks/ transportation vehicles shall be appropriately covered / sealed and the waste spillage on the roads during the transportation shall be prevented.
- xxxviii) Health certificates of the workers working at the plant shall be submitted to this Agency after every six months. Safety provisions including health inspections of workers at landfill sites shall be carried out.
- xxxix) Proper record registers shall be maintained for daily collection, disposal, material recovery, and composting / biogas production of MSW.
- xl) The project site must be kept clean & tidy and shall be protected from animals & birds.
- xli) The management shall be bound to adopt any additional mitigation measures suggested by EPA from time to time during construction & operation of the project activities.
- xlii) During land leveling, the muck/ debris material shall not be disposed off outside the project site. Cut & fill mechanism shall be adopted during construction / development of the project site.
- xliii) All land/ building/ houses payment/ compensation/ relocation shall be completed before commencement of the project activities. A certificate in this regard shall be obtained from concerned revenue Department and shall be submitted to EPA.
- xliv) Proper parking area shall be allocated for transportation vehicles.
- xlvi) Water sprinkling shall be carried out where required to reduce the public nuisance caused by the dust emissions.
- xlvi) Landfill closure plan and the site restoration / reuse plan shall be submitted and duly approved from this Agency prior to commencement.
- xlvi) Non-technical jobs shall be provided to the locals and preference shall be given in technical jobs. Moreover, details of the same shall be submitted to EPA.



- xlvi) This approval is issued on the basis of information / documents related to land ownership submitted to EPA. This Agency shall not be responsible for any issue related to land ownership, etc. All such issues to be resolved at proper forum like Revenue Department/ Courts, etc.
- xlvi) The proponent is bound to submit detailed process and feasibility study of composting facility prior to commencement.
- xlvi) Analysis reports of emissions, noise, effluents of the facility and analysis reports of surrounding surface water bodies as well as ground water quality from EPA, Khyber Pakhtunkhwa certified laboratory shall be submitted to this Agency on quarter basis.
- l) Analysis reports of monitoring wells shall be submitted on quarter basis to this Agency.
- li) The proponent must submit detail regarding expected quantity of produced gas generation and its consumption/ safe disposal.
- lii) The proponent is bound to provide the details of Refuse-Derived Fuel (RDF) produced from waste and its ultimate disposal / supply to other facilities / industrial units.
- liii) Health & Safety sign boards/posters shall be installed in various places within the plant.
- liv) All the effluents and emissions shall be kept within NEQS parameters.
- lv) Fire extinguishers, first aid box etc shall be installed inside the premises of the facility in case of any emergency.
- lvi) Health and Safety Equipment shall be provided to the workers with the direction to use during working hours.
- lvii) A comprehensive CSR document shall be finalized and submitted to this Agency, keeping in view the demands of locals and quantum of project activity.
- lviii) The proponent shall be bound to make changes in the design and capacity of the proposed project as per recommendations of EPA, Khyber Pakhtunkhwa if the desired compliance is not achieved.
- lix) Bi-annual Compliance reports of the Environmental Approval shall be submitted to this Agency.
6. The proponent shall be liable for correctness and validity of the information supplied by the environmental consultant.
7. The proponent shall be liable for compliance of Rule 14, 15, 18, 19, & 20 of Khyber Pakhtunkhwa Environmental Assessment Rules, 2021, regarding approval, confirmation of compliance, entry, inspections and monitoring.
8. This approval is accorded only for the construction phase of "**Mardan Solid Waste Management Facility (SWMF) Development**". Separate Approval shall be obtained for operational phase of the project as per provisions of the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021.
9. Any change in the approved project shall be communicated to EPA Khyber Pakhtunkhwa and shall be commenced after obtaining the approval.
10. This approval shall be treated as null and void if all or any of the conditions mentioned above is/are not complied with.

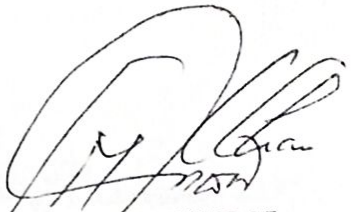


11. This approval does not absolve the proponent of the duty to obtain any other approval or clearance that may be required under any law in force.
12. There shall be no legal case pending in the courts against the project.
13. In exercise of the power under Section 13 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014, the undersigned is pleased to approve the EIA Report for construction phase of "**Mardan Solid Waste Management Facility (SWMF) Development**" with the above mentioned terms and conditions.



Dated: Peshawar: 20/10/2022

Tracking/File No. EPA/EIA/SWM/Mardan/22/51-52


DIRECTOR GENERAL
EPA, Khyber Pakhtunkhwa
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