

F. No. 10-2/2018-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110003

Date: 28 February, 2018

To,

Shri Sridhar,
Senior Manager,
M/s Maridi ECO Industries Private Limited,
Regional Office No. 5, 2nd Floor, C.M. Plaza,
No. 71, 8th Cross, 1st Main,
Sampangirama Nagar, Bangalore.

E- Mail: Sridhar.maridi@gmail.com

Subject: Common Hazardous Waste and Bio-medical Waste Treatment Facility at Harohalli Industrial Area - 2nd Phase, Harohalli Village, Ramanagara District, Karnataka by M/s Maridi ECO Industries Private Limited - Terms of Reference - reg.

Sir,

This has reference to your online proposal No.IA/KA/MIS/71634/2017 dated 16.12.2017, submitted to this Ministry for seeking Terms of Reference (ToR) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986. The proposal is for grant of Terms of Reference to the project 'Common Hazardous Waste and Bio-medical Waste Treatment Facility at Harohalli Industrial Area - 2nd Phase, Harohalli Village, Ramanagara District, Karnataka by M/s Maridi ECO Industries Private Limited.

2. The project/activity is covered under category 'A' of item 7(d) 'Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central Level.

3. The proposal for grant of Terms of Reference (ToR) to the project was considered by the Expert Appraisal Committee (Infra-2) in its 27th meeting held on 25th January, 2018.

4. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said meeting, are as under:

- (i) M/s. Maridi Eco Industries Pvt. Ltd. proposes to establish a Common Hazardous Waste and Bio-Medical Waste Treatment Facility in an area of 2.43 acres (9835 sqm) at Plot no. 312-A2 & 312-A2 (Part), 2ndPhase, Harohalli Industrial Area, Sy no. parts of 799 & 800, Harohalli Village, HarohalliHobli, KanakapuraTaluk, Ramanagara District, Karnataka.
- (ii) The proposed Common Hazardous Waste and Bio-Medical Waste Treatment Facility will provide scientific disposal of industrial hazardous waste through incineration along with bio-medical waste treatment and disposal services to

health care establishments located in Bengaluru Urban, Bengaluru Rural, Mandya and Ramanagara Districts (approximately 25,000 beds).

- (iii) The total waste handling capacity of the proposed facility will be 25 TPD. The proposed facility will handle up to 20 TPD of Bio-Medical Waste, up to 5 TPD of Hazardous Waste, up to 2 TPD of non-hazardous commercial waste and up to 1 TPD of household domestic hazardous waste. However the total waste handled in a day will not exceed 25 TPD.
- (iv) The proposed facility shall include: (a) Incinerators for treatment of both hazardous and bio-medical waste – 1 x 500 kg/hr rotary kiln incinerator and 2 x 250 kg/hr static incinerators, (b) Autoclave – 5 TPD and (c) Shredder – 1000 kg/hr. In addition to hazardous waste and bio-medical waste, Maridi proposes to manage household hazardous waste and different kinds of non-hazardous waste streams (through incineration) including: (a) commercial and institutional waste (b) expired/rejected branded and packaged products (c) narcotics/drugs from customs/police department etc. Plastic recycling unit will also be established for recycling of shredded plastic after autoclave.
- (v) The capital cost for the proposed project is estimated to be Rs. 15 Crores.
- (vi) The net water requirement will be 80 KLD and will be met through KIADB industrial water supply/tankers/ borewell.
- (vii) The power requirement will be about 300 KW. Power will be supplied by Bangalore Electricity Supply Company Limited (BESCOM) and a DG set of 375 kVA will be used for emergency power backup.
- (viii) The proposed facility will be developed as Zero Liquid Discharge (ZLD) system.
- (ix) The wastewater shall be treated in in-house ETP and the treated wastewater shall be continuously re-circulated to fulfil the water requirement of Air Pollution Control Devices (APCDs) attached to the incinerator(s).
- (x) A Continuous Emission Monitoring System (CEMS) will be installed and the online emission data generated will be transmitted simultaneously to SPCB/CPCB.

5. As per the recommendation of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords ToR to the above project for preparation of the Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP) with the following specific and general conditions in addition to Standard ToR provided at Annexure -1:

Specific Guidelines

- (i) Importance and benefits of the project.
- (ii) The E.I.A. would address to the conformity of site to the stipulations as made in the Hazardous and other wastes (Management, handling and trans boundary movement) Rules 2016 and will have a complete chapter indicating conformity to the said rules.
- (iii) Certified Compliance Report issued by the MoEF&CC, Regional Office or concerned Regional Office of Central Pollution Control Board or the Member Secretary of the respective State Pollution Control Board for the conditions stipulated in the earlier environmental clearance issued for the project along with

an action taken report on issues which have been stated to be partially complied or non/not complied.

- (iv) Project proponents would also submit a write up on how their project proposals conform to the stipulations made in the "Protocol for Performance evolution and monitoring of the Common Hazardous Waste Treatment Storage and Disposal facilities including common Hazardous Waste incinerators", published by the CPCB on May 24, 2010.
- (v) Status of compliance to the provisions of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and Bio-Medical Waste Management Rules, 2016.
- (vi) Compliance to the conditions of the consent to operate and authorization for the existing facilities.
- (vii) Details of various waste management units with capacities for the proposed project.
- (viii) List of waste to be handled and their source along with mode of transportation.
- (ix) Other chemicals and materials required with quantities and storage capacities.
- (x) Details of temporary storage facility for storage of hazardous waste at project site.
- (xi) Details of pre-treatment facility of hazardous waste at TSDF.
- (xii) Details of air emissions, effluents, hazardous/solid waste generation and their management.
- (xiii) Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
- (xiv) Process description along with major equipments and machineries, process flow sheet (quantitative) from waste material to disposal to be provided.
- (xv) Hazard identification and details of proposed safety systems.
- (xvi) Layout maps of proposed Solid Waste Management Facilities indicating storage area, plant area, greenbelt area, utilities etc.
- (xvii) Details of Drainage of the project up to 5 km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided.
- (xviii) Ground water quality monitoring in and around the project site.
- (xix) The Air Quality Index shall be calculated for base level air quality.
- (xx) Status of the land purchases in terms of land acquisition Act and study the impact.
- (xxi) Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- (xxii) R&R details in respect of land in line with state Government policy.

- (xxiii) Details of effluent treatment and recycling process.
- (xxiv) Leachate study report and detailed leachate management plan to be incorporated.
- (xxv) Action plan for measures to be taken for excessive leachate generation during monsoon period.
- (xxvi) Action plan for any pollution of ground water is noticed during operation period or post closure monitoring period.
- (xxvii) Detailed Environmental Monitoring Plan as well as Post Closure Monitoring Plan.
- (xxviii) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
- (xxix) A detailed Plan for green belt development.
- (xxx) A certificate from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- (xxxi) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
- (xxxii) Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- (xxx) A tabular chart with index for point wise compliance of above TORs.

General Guidelines

- (i) The EIA document shall be printed on both sides, as far as possible.
- (ii) All documents should be properly indexed, page numbered.
- (iii) Period/date of data collection should be clearly indicated.
- (iv) Authenticated English translation of all material provided in Regional languages.
- (v) The letter/application for EC should quote the MoEF&CC File No. and also attach a copy of the letter prescribing the ToR.
- (vi) The copy of the letter received from the Ministry on the ToR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues mentioned in ToR. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific ToR prescribed by the Ministry. Questionnaire related to the project (posted on

MoEF&CC website) with all sections duly filled in shall also be submitted at the time of applying for EC.

- (viii) Grant of ToR does not mean grant of EC.
 - (ix) The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.
 - (x) On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed ToRs (ToR proposed by the project proponent and additional ToR given by the MoEF&CC) have been complied with and the data submitted is factually correct (Refer MoEF&CC Office memorandum dated 4th August, 2009).
 - (xi) While submitting the EIA/EMP reports, the name of the experts associated with/involved in the preparation of these reports and the laboratories through which the samples have been got analysed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MoEF&CC Office Memorandum dated 4th August, 2009). The project leader of the EIA study shall also be mentioned.
 - (xii) All the ToR points as presented before the Expert Appraisal Committee (EAC) shall be covered.
6. The above ToR along with Public Hearing prescribed by the Expert Appraisal Committee (Infrastructure - 2) should be considered for preparation of EIA/EMP report for the project 'Common Hazardous Waste and Bio-medical Waste Treatment Facility at Harohalli Industrial Area - 2nd Phase, Harohalli Village, Ramanagara District, Karnataka by M/s Maridi ECO Industries Private Limited', in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.
7. The project proponent shall submit the detailed final EIA/EMP prepared as per ToRs to the Ministry for considering the proposal for environmental clearance within 3 years as per the MoEF&CC O.M. No.J-11013/41/2006-IA-II(I) (P) dated 08.10.2014.
8. The consultants involved in preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other Organization(s)/ Laboratories including their status of approvals etc. vide Notification of the MoEF&CC dated 19.07.2013.
9. The prescribed ToR would be valid for a period of three years for submission of the EIA/EMP Reports.
10. This issues with the approval of the Competent Authority.


(Kushal Vashist)
Director

Copy to:

1. The Member Secretary, Karnataka State Pollution Control Board, No. 25, 6th – 9th Floor, Public Utility Building, M.G. Road, Bangalore - 560 001.



7(d): STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR COMMON HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES (TSDFS) AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

- 1) Reasons for selecting the site with details of alternate sites examined/rejected/selected on merit with comparative statement and reason/basis for selection. The examination should justify site suitability in terms of environmental damages, resources sustainability associated with selected site as compared to rejected sites. The analysis should include parameters considered along with weightage criteria for short-listing selected site.
- 2) Submit the details of the road/rail connectivity along with the likely impacts and mitigative measures
- 3) Submit the present land use and permission required for any conversion such as forest, agriculture etc
- 4) Examine the details of transportation of Hazardous wastes, and its safety in handling.
- 5) Examine and submit the details of on line pollutant monitoring.
- 6) Examine the details of monitoring of Dioxin and Furon.
- 7) MoU for disposal of ash through the TSDF.
- 8) MoU for disposal of scrubbing waste water through CETP.
- 9) Examine and submit details of monitoring of water quality around the landfill site.
- 10) Examine and submit details of the odour control measures.
- 11) Examine and submit details of impact on water body and mitigative measures during rainy season.
- 12) Environmental Management Plan should be accompanied with Environmental Monitoring Plan and environmental cost and benefit assessment. Regular monitoring shall be carried out for odour control.
- 13) Water quality around the landfill site shall be monitored regularly to examine the impact on the ground water.
- 14) The storage and handling of hazardous wastes shall be as per the Hazardous Waste Management Rules.
- 15) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.



- 16) Public hearing to be conducted for the project in accordance with provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environmental Management Plan. The Public Hearing should be conducted based on the ToR letter issued by the Ministry and not on the basis of Minutes of the Meeting available on the web-site.
- 17) A detailed draft EIA/EMP report should be prepared in accordance with the above additional TOR and should be submitted to the Ministry in accordance with the Notification.
- 18) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 19) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 20) Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website <http://moef.nic.in/Manual/Incinerator>

