

GOA STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

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No: 3 – 181 – 2010/STE-DIR/91

Date: 3rd March, 2015

To,
The Director
Department of Science & Technology (S&T),
Opp. Saligao Seminary,
Saligao Bardez-Goa.

Sub.: Establishment of Solid Waste Management Facility (SWMF) at Calangute/ Saligao, Bardez Taluka, North Goa - Issuance of the Prior Environmental Clearance (EC) – Reg.

Ref.: (a) This office letter no. 3 – 181 – 2010 / STE / DIR / 64 dated 4th November 2014.

(b) Your letter no. 3-209-2015/STE-DIR/Part16B / SWMC / 46 dated 12th February 2015

Sir,

Whereas the Department of Science and Technology (DST), Goa having approached this Authority (i.e. Goa-SEIAA), seeking prior environmental clearance (EC) for establishment of a Solid Waste Management Facility (SWMF) at Calangute/Saligao, Bardez Taluka, North Goa district, Goa. The matter, at the relevant time, was considered by the Goa State Expert Appraisal Committee (Goa-SEAC) and pursuant to the site visit and recommendations, this Authority had considered to accord prior Environmental Clearance (EC) to the project under the provisions of the Environmental Impact Assessment (EIA) Notification, 2006 under peculiar circumstances inasmuch as the entire area was found to be completely degraded and required immediate remediation measures as stated in preliminary status report of **M/s National Environmental Engineering and Research Institute (NEERI), Nagpur** which was also placed before the GoaSEAC and this Authority, pursuant to which the prior Environmental Clearance (EC) was granted with 'Specific Conditions' to Project Proponent (PP) and to compile / submit a rapid site specific Environmental Impact Assessment (EIA) report to this Authority not later than 15th February 2015 so as to suggest further long term measures. It was further stipulated that on receipt and perusal a rapid site-specific EIA report, the conditions stipulated in the EC would be reviewed and accordingly modified for mandatory compliance by PP towards long-term management / post-EC monitoring of the site together with several other General Conditions.

And whereas a final Environmental Impact Assessment (EIA) Report has been prepared by M/s NEERI, Nagpur and submitted before the Goa-SEAC as well as this Authority. Whereas this Authority, during its 21st meeting held on 26th February 2015, has perused the entire report prepared by M/s NEERI, Nagpur including site specific conditions and all other relevant and material factors including ascertaining the feasibility of alternate site which has been requested by Comunidade of Saligao and not found suitable for MSW management for setting up of a CSWMF as per Annexure-1 to the Environmental Impact Assessment report.

It is of material importance to also consider the fact that there has been indiscriminate dumping of MSW since past more than 20 years, which has affected the area considerably, degrading the same.

In this regard the Environmental Impact Assessment (EIA) report prepared by M/s NEERI, Nagpur mentions the following:-

- a. There will be a health and lifestyle improvement due to scientific disposal of municipal solid waste, which otherwise is being dumped unscientifically creating unhygienic conditions and vector for various diseases which could spread in the surrounding residential areas.
- b. The Health Officer, Department of Health Services, Government of Goa has issued directions under Section 40 of the Goa Public Health Act to ensure that the work for setting up of Solid Waste Management Facility is taken up at top priority at first instance to ensure that existing waste at site is immediately treated and remediated to improve the health and hygiene and the quality of ground water in the said area.
- c. It is also informed that the site bearing Survey No. 47/1, Village Calangute has been identified as a garbage management site in the Regional Plan notified in the year 2021 by the Government of Goa.
- d. EIA Report further states a holistic approach has been followed while planning the integrated Municipal Solid Waste treatment facility in North Goa and the proposed facility will be a state of art modern facility based on mechanical-biological treatments process with proper segregation and bio-methanation technology and the said technology selected is as per the requirement of MSW Rules, 2000 and in accordance with the guidelines of the Central Pollution Control Board.
- e. The report also states that it is prudent to establish a solid waste management facility on a land/site which is degraded due to dumping of waste or immediately adjacent to the said site rather than selecting a green field site for establishment of the same.

- f. It is informed that the Comunidade of Saligao had suggested an alternate site. Accordingly, joint site-inspection conducted by officials of the Department of Science and Technology, Town and Country Planning Department, Directorate of Land Survey and Records and representatives of the Comunidade of Saligao has indicated that the alternate site being a green site was not suitable for setting-up of a Solid Waste Management Facility.
- g. EIA Report mentions that there is a presence of volatile organic carbons near the existing dump sites clearly substantiating the existence of uncontrolled petrification of mixed municipal solid waste at the site.
- h. The report also mentions that the Salmona Spring water is contaminated with coliforms when compared to other surface and ground water sample. The Bacteriological contamination observed in the Salmona Spring and open wells, situated downstream to the existing dump site clearly indicates the negative impact of existing dump sites on water environment this is attributed to the surface run off from the dump site over the areas.
- i. EIA Report predicts the following positive impacts on the Site and the surrounding due to the establishment of the said proposed Solid Waste Management Facility –
1. Salmona Spring water quality will improve due to the proper scientific management of the solid waste and also the treatment of the existing old dumped un-segregated solid waste at the site.
 2. The quality of the soil which is presently degraded will be restored upon remediation/treatment and disposal of the existing waste dumped at the site.
 3. Upon commissioning of the said facility there will be improvement on the esthetics of the said area.
 4. Report also does not predict any significant negative impact due to the establishment of the said facility.
- j. The PP has made the provision to treat the combined wastewater in a separate effluent treatment plant (ETP) equipped with reverse osmosis (RO) system to ensure efficient recycle of water within the proposed CMSWMF. Wastewaters generated from non-plant use washing and other processes are treated at ETP and shall be used in floor washing, dust suppression, if required and development of green belt. These will ensure to be a zero discharge model and it will improve the water quality of the ‘Salmona Spring’ which is contaminated due to the leachate seepage from the existing MSW dumpsite.
- k. The existing dumpsite is being used for unscientific dumping of mixed MSW by nearby Panchayats for last 20 years and is severely contaminated, thereby posing serious risk to air, soil, surface water, and groundwater resources in and around the existing site.

1. As per the joint inspection report by the Department of Science and Technology (DST), Town and Country Planning (TCP) Department, Directorate of Land Survey and Records (DSLRL) and Communitadae of Saligao, the proposed alternate site was not found suitable /feasible for the MSW management.

After considering the matter from all necessary and relevant angles and after perusal of the Environmental Impact Assessment (EIA) report prepared by M/s NEERI, Nagpur and upon examination of the entire matter afresh, and after perusing the recommendations of the GoaSEAC, this Authority has decided to accord a environmental clearance (EC) to the said project in accordance with the provisions of the Environmental Impact Assessment (EIA) Notification 2006, subject to compliance of the following ‘**General Conditions**’.

1. The PP should comply with all the measures towards environment management as envisaged and documents in the Tender Document (i.e. Concept Note and the Request for Proposal (RFP)).
2. PP should comply with the terms and conditions as stipulated by the Goa State Pollution Control Board (GSPCB) while issuing Consent to Establish under the Air and Water Acts as well as Authorization issued under the Municipal Solid Waste (Management and Handling) Rules, 2000.
3. PP should prioritize the issues related to health and hygiene in complying with the matters related to waste disposal & treatment / air & water pollution / waste-water management.
4. PP should not disturb the natural drainage and as far as possible maintain the original topography while designing for landscape development by planting local site-specific plant species and which are not alien to the local environment. In any case, no varieties of acacia be used either as avenue plantations or as live-fencing.
5. PP should also submit half-yearly compliance report(s) in hard as well as soft copy format to the Authority for the period upto project completion so as to enable project monitoring during the construction phase.
6. In the event of a modification / alteration / expansion in the project profile or change in the implementing agency / executing agency, a fresh reference shall be made to this Authority / Regional Office of the Ministry of Environment, Forests and Climate Change (MoEF&CC), as applicable.
7. Project proponent shall advertise at least in two local newspapers widely circulated in the region, one of which shall be in the Konkani or Marathi language within seven days of the receipt of this letter, informing that the project has been accorded prior Environmental Clearance (EC).

8. The Authority reserves the right to add any stringent conditions or to revoke the EC, if conditions stipulated are not implemented / complied with to the satisfaction of the Authority or for that matter, for any other reasons such as submission of false and misleading information, etc.,
9. Validity of the Environmental Clearance (EC) accorded shall be for a period of 05 (five) years from the date of issue of this letter.
10. Any appeal against this prior environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010 (Central Act 19 of 2010).

In addition, following 'project-specific conditions' need to be complied with by the PP:

- a. The PP shall make arrangement for periodic assessment of the landfill quality as the ground water changes over the period of time, so the long-term plan for site specific hydro-geological assessment should be submitted in coordination with the M/s NEERI, Nagpur. In order to keep track of groundwater quality over a long period of time, hydro-geological assessment, setup details, time frame for its periodic assessment should also be submitted. Further, the requisite clearance / NOC from the Ground Water Cell of the State Water Resources Department (WRD) shall be obtained and furnished, as applicable.
- b. The PP shall get the site conditions / physico-chemical parameters (i.e. pH, microbial contamination, metal content, etc.,) monitored during all the stages of construction activity vis-à-vis post-construction operational phase with specific reference to 'Salmona spring' at regular intervals.
- c. The tripartite concessionaire agreement for effective implementation of EMP (refer EIA report: Section – 5, pg. no.5) for implementation should be submitted to the authority before commencing the plant operation.
- d. Appropriately authenticated documents accessed from the statutory agencies concerned for preparation of biodiversity inventories shall be submitted.
- e. All compliance documents shall be appropriately authenticated and signed by the concerned consultant / statutory agencies and complied.

Yours faithfully,

Sd/-
(Srinet Kothwale)
Member Secretary, Goa-SEIAA
