

TERMS OF REFERENCE

1. Executive summary of the project – giving a prima facie idea of the objectives of the proposal, use of resources, justification, etc. In addition, it should provide a compilation of EIA report, including EMP and the post-project monitoring plan in brief.

Project description:

2. Justification for selecting the proposed product and unit size.
3. Land requirement for the project including its break up for various purposes, its availability and optimization.
4. Details of proposed layout clearly demarcating various units within the plant.
5. Product spectrum (Proposed products along with production Capacity) and processes.
6. Complete process flow diagram describing each unit, its processes and operations, along with material (material balance).
7. Details on raw materials, source and storage within the premises.
8. Details on solvent balance, measures for solvent recovery
9. Details on requirement of energy and water along with its source and authorization from the concerned department.
10. Details on water balance including quantity of effluent generated, recycled & reused. Efforts to minimize effluent discharge and to maintain quality of receiving water body.
11. Segregation of waste stream, characterization and quality with specific treatment
12. Details of end of the pipe effluent treatment plant, inlet and treated water quality with specific efficiency of each treatment unit in reduction in respect of all concerned / regulated environmental parameters.
13. Details on volatile organic compounds from the plant operations and occupational safety and health protection measures
14. Details on channelized emissions and control equipment for each of the source.
15. Control technologies for combustion emissions
16. Details on composition, generation and utilization of waste from the plant.
17. Management plan for solid/hazardous waste including storage, utilization and safe disposal. CPCB guidelines in respect of specific treatment, such as solar evaporation, incineration, etc., need to be followed.
18. Details of proposed source-specific pollution control schemes and equipments to meet the national standards.

19. Details regarding infrastructure facilities such as sanitation, fuel storage, restroom, etc., to the workers during construction and operation phase.
20. In case of expansion of existing industries, remediation measures adopted to restore the environmental quality if the groundwater, soil, crop, air, etc., are affected and a detailed compliance to the prior environmental clearance/consent conditions.
21. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.

Description of the environment:

22. The study area shall be up to a distance of 10 km from the boundary of the proposed project site.
23. Location of the project site and nearest habitats with distances from the project site to be demarcated on a toposheet (1: 50000 scale).
24. Landuse based on satellite imagery including location specific sensitivities such as national parks / wildlife sanctuary, villages, industries, etc., for the study area.
25. Demography details of all the villages falling within the study area.
26. Topography details of the project area.
27. The baseline data to be collected from the study area w.r.t. different components of environment viz. air, noise, water, land, and biology and socio-economic.
28. Geological features and geo-hydrological status of the study area.
29. Details of groundwater and surface water quality of nearby water sources and other surface drains. Water quality parameters may include pH*, BOD* (3 days at 27 oC), COD*, toxicity factor*, Nitrate* (as N), Arsenic*, Chromium*, Hexavalent*, Total Lead*, Zinc*, Copper*, Nickel*, Sulphide, etc. (* - as applicable)
30. Details on existing ambient air quality and expected, stack and fugitive emissions for PM10*, PM2.5*, SO2*, NOx*, VOC*, chlorine* other process-specific pollutants*, etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (* - as applicable)
31. The air quality contours may be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any and wind roses.
32. Details on noise levels at sensitive/commercial receptors.
33. Site-specific micro-meteorological data including mixing height.
34. One season site-specific data excluding monsoon season.
35. Proposed baseline monitoring network for the consideration and approval of the Competent Authority.

- 36.** Ecological status (terrestrial and aquatic) of the study area such as habitat type and quality, species, diversity, rarity, fragmentation, ecological linkage, age, abundance, etc.
- 37.** If any incompatible land use attributes fall within the study area, proponent shall describe the sensitivity (distance, area and significance) and propose the additional points based on significance for review and acceptance by the SEAC. Incompatible land use attributes include:
- a.** Public water supply areas from rivers/surface water bodies, from ground water
 - b.** Scenic areas/tourism areas/hill resorts
 - c.** Religious places, pilgrim centers that attract over 10 lakh pilgrims a year
 - d.** Protected tribal settlements (notified tribal areas where industrial activity is not permitted)
 - e.** Monuments of national significance, World Heritage Sites
 - f.** Cyclone, Tsunami prone areas (based on last 25 years);
 - g.** Airport areas
 - h.** Any other feature as specified by the State or local government and other features as locally applicable, including prime agricultural lands, pastures, migratory corridors, etc.
- 38.** If ecologically sensitive attributes fall within the study area, proponent shall describe the sensitivity (distance, area and significance) and propose additional points based on significance for review and acceptance by the SEAC. Ecological sensitive attributes include:
- a.** National parks
 - b.** Wild life sanctuaries Game reserve
 - c.** Tiger reserve/elephant reserve/turtle nesting ground
 - d.** Mangrove area
 - e.** Wetlands
 - f.** Reserved and protected forests
 - g.** Any other closed/protected area under the Wild Life (Protection) Act, 1972, any other area locally applicable
 - h.** Any other eco-sensitive areas
- 39.** Anticipated generic environmental impacts due to this project.
- 40.** Impact prediction tools used for the appropriate assessment of environmental impacts .
- 41.** While identifying the likely impacts, also include the following for analysis of significance and required mitigation measures:
- a.** impacts due to transportation of raw materials and end products on the surrounding environment
 - b.** impacts on surface water, soil and groundwater
 - c.** impacts due to air pollution
 - d.** impacts due to odour pollution

- e. impacts due to noise
- f. impacts due to fugitive emissions including VOCs / HAPs
- g. impact on health of workers due to proposed project activities

42. Proposed odour control measures

43. Action plan for the greenbelt development – species, width of plantations, planning schedule, etc., in accordance to CPCB published guidelines.

44. In case of likely impact from the proposed project on the surrounding reserve forests, Plan for the conservation of wild fauna in consultation with the State Forest Department.

45. Mitigation measures – for source control and treatment.

46. Details on improved technologies.

47. Details on proposed recovery options.

Environmental monitoring program:

48. Monitoring programmed for pollution control at source.

49. Monitoring pollutants at receiving environment for the appropriate notified parameters – air quality, groundwater, surface water, gas quality, etc. during operational phase of the project.

50. Specific programmer to monitor safety and health protection of workers

51. Proposed plan to estimate and monitor fugitive emissions including VOCs from all the sources and appropriated control measures.

52. Stack and fugitive emissions may be monitored for SPM, PM10, PM2.5, SO2, NOx, HC, CO, VOC and evaluation of the adequacy of the proposed pollution control devices to meet gaseous emissions.

53. Monitoring of carbon foot print

54. Details of in-house monitoring capabilities and the recognized agencies if proposed for conducting monitoring.

Additional studies:

55. Details on risk assessment and damage control during different phases of the project and proposed safeguard measures.

56. Details on socio-economic development activities such as commercial property values, generation of jobs, education, social conflicts, cultural status, accidents, etc.

- 57.** Proposed plan to handle the socio-economic influence on the local community. The plan should include quantitative dimension as far as possible.
- 58.** Details on compensation package for the people affected by the project, considering the socioeconomic status of the area, homestead oustees, land oustees, and landless laborers.
- 59.** Points identified in the public hearing and commitment of the project proponent to the same. Detailed action plan addressing the issues raised, and the details of necessary allocation of funds.
- 60.** Details on plan for corporate social responsibility including the villages, population spread, SC/ST/backward communities, up gradation of existing schools, establishing new schools with facilities (such as laboratories, toilets, etc.), link roads, community halls, primary health facilities, health camps, etc.
- 61.** Administrative and technical organizational structure to ensure proposed post-project monitoring programmed for approved mitigation measures.
- 62.** EMP devised to mitigate the adverse impacts of the project should be provided along with item-wise cost of its implementation (capital and recurring costs).
- 63.** Allocation of resources and responsibilities for plan implementation.
- 64.** Details of the emergency preparedness plan and on-site and off-site disaster management plan.

Above points shall be adequately addressed in the EIA report at corresponding chapters, in addition to the contents given in the reporting structure as below: .