

STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), KARNATAKA

(Constituted by MoEF, Govt. of India)

No. KSEAC/MEETING/2014

Dept. of Ecology & Environment,
Karnataka Government Secretariat,
Room No. 710, 7th Floor, 4th Gate,
M.S. Building, Bangalore,
Dated: 18.07.2014

To,

CEO & Executive Member,
Karnataka Industrial Areas Development Board (KIADB),
14/3, II Floor, Rashthrohana Parishat (RP) Building,
Nrupathunga Road,
Bengaluru - 560001.

Sub: Industrial Project: Establishment of Jakkasandra Industrial Area at Jakkasandra Village, Kolar Taluk and District 254.01Ha (627.47 Acre) of Karnataka Industrial Areas development Board (SEIAA 1 IND 2014).

Ref: Proceedings of the 112th SEAC meeting held on 16th June, 2014.

KIADB identified the land and propose to develop an industrial area with a purpose to promote an orderly development of industries in the state. KIADB has identified 254.01 hā (627.18 Acre) of land at Jakkasandra, Kolar dist to develop an industrial area.

Land will be developed by Karnataka Industrial Areas Development Board (KIADB). The proposed project location is very ideal in all aspects. No shifting of village or any settlements involved in the proposed project. Hence no rehabilitation and resettlements plans are proposed. However the land losers have been given appropriate compensation.

Jakkasandra Industrial Area is Approximately 20 KMS away from Kolar and is connected to Bangalore Via National Highway 7. The nearest sea port is at Mangalore and Chennai. These Ports provide a gateway for export and import trade throughout the year. The nearest airport to the Kolar Taluk is Bangalore, Mangalore, Hyderabad and Chennai. The Kolar is connected with narrow gauge.

The KIADB would have the following components:

- Industrial sheds, industrial plots, flatted factories, Grade A/B buildings with large floor plates,
- built to suit facilities

- Residential facilities for industrial workers
- Commercial facilities
- Education and training facilities
- Trunk and internal roads
- Water treatment & distribution facilities
- Drainage and sewerage facilities
- Power substation and distribution
- Solid waste and liquid effluent management facilities
- Data and telecom facilities
- Banks, Post office and Healthcare facilities
- Parks, parking and open spaces

Land Break up Details of the Proposed Project

S. No	Description	Area			
		Acre	Ha	m2	%
1	Production blocks of Industrial, Admin buildings & Auxiliary Units	376.308	152.406	1524060	60
2	Amenities, Utility, Parks, Parking & Roads	188.154	76.203	762030	30
3	15mt buffer (green belt)	62.747	25.401	254010	10
Total Area		627.47	254.01	2540100	100

Bore wells will be drilled & capacity of each bore well is 10,000 LPD.
Tentative power demand: is 3 MW from KPTCL.

Presentation of proposed ToR in the 111th SEAC meeting held on 16th June, 2014 was considered by the Committee. Besides, the ToR for EIA studies for IEs may include, but may not be limited to the following:

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 post-project monitoring plan in brief.

Project description

2. Details of the industries, for which the estate is being planned and their proposed capacities of installation, if available. In the absence of complete details, indicate the type of industries and capacity being considered.
3. Land requirement for the project including the peripheral greenbelt inside the boundary.
4. Justification for selecting the proposed size of the IEs.
5. Details on strategy being followed for development of IE.
6. Layout map of estate indicating processing zones, admin area, roads, plots, green belt, common utilities area, *etc.*, shall be shown along with contour map. Landscape plan including open spaces may be described.
7. Classify the proposed industries based on their pollution potential to the extent possible *i.e.*, A1 to A4 categories for air pollution and W1 to W4 categories for water pollution – CPCB Guidance may be referred for classification.
8. Backward and forward linkages of the IEs (availability of input resources and markets for the products / by-products and anticipated benefits for the regional development).
9. Details of Infrastructure Development within the IE and in the region.
10. Details on known industrial activity-specific proposed processes, resource consumption and rejects assessment.
11. Details on estimated quantity of fuel required, fuel type, nature, source and transportation.
12. Details on estimated water balance taking into account conservation measures, reuse and recycling of treated effluents.
13. Individual and/or common facilities for waste collection, treatment, recycling and disposal (all effluent, emission and refuse including MSW, and hazardous wastes).
14. Commitment from the concerned authorities regarding availability of power, water and sewerage network.
15. Details of Solid Waste management including arrangements for hazardous waste management and e-waste.
16. Details on provisions made for safety in storage of materials, products and wastes.
17. Details on use of local building materials. The provisions of fly ash Notification should be kept in view.
18. Detailed plan of treated water disposal, reuse and utilization/management.
19. In case of site leveling involving quarrying, details thereof.
20. Any litigation pending against the project and /or any direction /order passed by any Court of Law related to the environmental pollution and impacts in the last two years, if so, details thereof.

Description of the environment

21. The project study area for EIA studies shall be up to a distance of 10 km from the boundary of the proposed IE.
22. Location of the project site and nearest habitats with distances from the project site to be demarcated on a topo sheet (1: 50,000 scale).
23. Landuse based on satellite imagery including location specific sensitivities such as national parks / wildlife sanctuary, villages, industries, *etc.* for the study area.
24. Demography details of all the villages falling within the study area.

25. Topography details of the project area.
26. Anticipated pollution loads from each of the known composition of industrial units. Cumulative wastewater quantity and pollution load, point source-specific details for air pollutants and their loads, total solid/hazardous waste generation *etc.*
27. Details of rainwater harvesting and how it will be used in the IE & outfall.
28. 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. Actual monitoring of baseline environmental components shall be strictly according to the parameters prescribed in the ToR after considering the proposed coverage of parameters by the proponent in draft ToR and shall commence after finalization of ToR by the competent Authority.
29. Identification of existing potential sources of pollution in the study area.
30. Present and projected population; present and proposed land use; planned development activities, issues relating to squatting and relocation, community structure, employment, distribution of income, goods and services; recreation; public health and safety; cultural peculiarities, aspirations and attitudes shall be explored in study.
31. Details regarding availability of social infrastructure and future projections, details of facilities such as sanitation, fuel, restroom *etc.* to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
32. Detailed study of the hydrological and geo-hydrological conditions of the project area including a contour plan indicating slopes and showing drainage pattern and outfall.
33. Information regarding surface hydrology and water regime and impact of the same, if any due to the project.
34. Examine soil characteristics, topography, rainfall pattern and soil erosion.
35. Details on surface water quality of nearby water sources and other surface drains.
36. Details of groundwater quality in and around the IE.
37. Examine water quality with reference to Persistent Organic Pollutants, if relevant.
38. Details on water quality for parameters such as pH, Temperature (oC), Oil and grease*, Cyanide* (as CN), Ammoniacal nitrogen* (as N), Phenolic compounds* (as C₆H₅OH), Hexavalent Chromium*, Total chromium*, Copper*, Nickel*, Lead*, Arsenic*, Mercury*, Cadmium*, Selenium*, Fluoride*, Boron*, Radioactive Materials*, Alfa emitters*, Hc/ml*, Beta emitters*, Hc/ml*, *etc.* (* - As applicable). These parameters to be determined depend on the type of industries coming in industrial estates.
39. Details on existing ambient air quality and expected, stack and fugitive emissions for PM₁₀, PM 2.5, SO₂*, NO_x*, O₃, suspended particulates, VOC, Mercury, *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 and these parameters to be determined depends on the type of industries coming in industrial estates).
40. 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.
41. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from boilers.
42. Details on noise levels at sensitive/commercial receptors.
43. Site-specific meteorological data including mixing heights and secondary data for future predictions.
44. One season site-specific data excluding monsoon season.

45. Proposed baseline monitoring network for the consideration and approval of the Competent Authority.
46. Fuel analysis to be provided (sulphur, ash content and mercury). Details of auxiliary fuel, if any including its quantity, quality, storage, *etc.*, should also be given.
47. Examine entry/exit of the project including the crossings from the highway and provision of service roads on the basis of traffic density studies and analysis.
48. Climatic conditions of the study area shall be monitored for hourly wind speed, wind direction, relative humidity, ambient dry and wet bulb temperatures and precipitation.
49. Ecological status (terrestrial and aquatic) of the study area such as habitat type and quality, species, diversity, rarity, fragmentation, ecological linkage, age, abundance, *etc.*
50. If ecologically sensitive 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 EAC/SEAC. Ecological sensitive attribute include.
 - National parks
 - Wild life sanctuaries Game reserve
 - Tiger reserve/elephant reserve/turtle nesting ground
 - Mangrove area
 - Wetlands
 - Reserved and Protected forests, *etc.*
 - Any other closed/protected area under the Wild Life (Protection) Act, 1972, any other area locally applicable.
51. 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 EAC/SEAC.
Incompatible land use attributes include:
 - Public water supply areas from rivers/surface water bodies, from ground water
 - Scenic areas/tourism areas/hill resorts
 - Religious places, pilgrim centers that attract over 10 lakh pilgrims a year
 - Protected tribal settlements (notified tribal areas where industrial activity is not permitted)
 - Monuments of national significance, World Heritage Sites
 - Cyclone, Tsunami prone areas (based on last 25 years);
 - Airport areas
 - 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.*
52. If the location falls in Valley, specific issues connected to the natural resources management shall be studied and presented.

Anticipated environmental impacts and mitigation measures

53. Anticipated generic environmental impacts due to this project which may be evaluated for significance and based on corresponding likely impacts VECs may be identified. Baseline studies may be conducted for all the concerned VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.

54. While identifying the likely impacts, also include the following for analysis of significance and required mitigation measures:
 - Impacts due to transportation of raw materials and end products on the surrounding environment.
 - Impacts on surface water, soil, groundwater, drainage due to project activities
 - Impacts due to air pollution
 - Impacts due to odour pollution
 - Impacts due to noise
 - Impacts due to fugitive emissions
 - Impact on health of workers due to proposed project activities
55. Proposed odour control measures.
56. Examine in detail the proposed site with reference to possible impact of infrastructure covering water supply, pipelines, roads, storm water drainage, sewerage, power, temporary waste storage facilities, treated wastewater disposal (land/sewer/surface water bodies), common facilities, *etc.*
57. Environmental condition scenarios shall be developed based on industrial activities and pollution potentials.
58. Details of traffic density vis-à-vis impact on the ambient air.
59. Cumulative impact on regional supportive capacity shall be studied in terms of population density, water supply, sewerage, storm water drainage, power supply, educational facilities, medical facilities, public transport, traffic, housing for EWS, and community facilities, *etc.*
60. Details on positive and negative impacts, direct and indirect impacts, induced impacts.
61. Project activities and impacts shall be represented in matrix form with separate matrices for pre and post mitigation scenarios.
62. Traffic management plan including parking and loading/unloading areas may be described. Traffic survey should be carried out on week days and weekends and also analyze the anticipated traffic increase.
63. Odour mitigation plan may be described. Also make provision of green cover as a measure for mitigation of dust and noise and buffer between habitation and industry.
64. Rain water harvesting proposals should be made with due safeguards for groundwater quality. Maximize recycling of water and utilization of rain water.
65. Temporary plans for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile Sewage Treatment Plant (STP), safe drinking water, medical health care, crèche, *etc.*
66. Proposed measures for occupational safety and health of the workers.
67. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure would need to be constructed and the agency responsible for the same with time frame.
68. Action plan for the greenbelt development – species, width of plantations, planning schedule *etc.* within the boundary around the IE in accordance to CPCB published guidelines.
69. 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.
70. For identifying the mitigation measures, please refer Chapter III for source control and treatment. Besides typical mitigation measures which may also be.

Analysis of alternative resources and technologies

71. Comparison of alternate sites considered and the reasons for selecting the proposed site. Conformity of the site with the prescribed guidelines in terms of CRZ, river, highways, railways, etc.
72. Evaluate alternative disposal modes of effluent and solid wastes, from the point of view of disposal points and associated impacts.
73. All kind of resources both renewable and non-renewable shall be taken into account.
74. Details on improved technologies.

Environmental monitoring program

75. Monitoring programme for pollution control at source.
76. Monitoring pollutants at receiving environment for the appropriate notified parameters – air quality, groundwater, surface water, etc. during operational phase of the project.
77. Specific programme to monitor safety and health protection of workers.
78. Appropriate monitoring network has to be designed and proposed, to assess the possible residual impacts on VECs.
79. Details of in-house monitoring capabilities and the recognized agencies if proposed for conducting monitoring.

Additional studies

80. Details on risk assessment and damage control during different phases of the project and proposed safeguard measures.
81. Details on socio-economic development activities such as commercial property values, generation of jobs, education, social conflicts, cultural status, accidents, etc.
82. Proposed plan to handle the socio-economic influence on the local community. The plan should include quantitative dimension as far as possible.
83. Details on compensation package for the people affected by the project, considering the socio-economic status of the area, homestead oustees, land oustees, and landless labourers.
84. Public hearing should be conducted as per the prescribed procedure. 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.
85. The historical importance of the area shall also be examined in the study. While this analysis is being conducted, it is expected that an assessment of public perception of the proposed development be conducted.
86. Describe the application of industrial ecology concept for planning of IEs. Explore possibility of utilizing waste of one unit as raw material for the other units.
87. Specific chemical emergency response and proposed rescue system.
88. Details on corporate social responsibility proposal.

Environmental management plan

89. Administrative and technical organizational structure to ensure proposed post-project monitoring programme for approved mitigation measures.
90. 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).
91. Allocation of resources and responsibilities for plan implementation.
92. Details of the emergency preparedness plan and on-site and off-site disaster management plan.
93. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
94. Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
95. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
96. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

97. Additional Corporate Environmental Responsibility :-

- (i) (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- (b) Does the Environment Policy prescribe for standard operation process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms/conditions? If so, it may be detailed in the EIA.
- (ii) What is the hierarchical system or Administrative order of the company to deal with environmental issues and for ensuring compliance with the Environmental Clearance conditions details of this system may be given.
- (iii) Does the company have a system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

As per the decision of the committee, for the preparation of EIA report, following additional ToRs along with the model ToRs/Proposed ToR are issued here by,

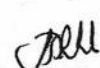
- PP made oral submission that only automobile industries to come up in the proposed lay out. Electroplating industry will not be set up in the proposed area. However, for painting units proper waste management is required to be addressed.

- Source of Power is BESCOM. Committee suggested to PP to evaluate impact on competitive users and sought information on possibility of generating Solar powered energy.
- Source of water is secondary treated water from BWSSB's STP at Bellandur which would be further treated for tertiary quality by KIADB and supplied for even potable purpose. PP admitted that KIADB is educating and creating awareness in clients about the use of tertiary treated water. Committee suggested that the individual units could establish STP for recycling purpose.
- In the key plan, area marked as commercial is for establishing eateries and spare parts retailers.
- Bulk use of LPG is to be addressed properly for risk assessment.
- Two number of entry and exit are provided for the proposed lay out.
- PP admitted to preserve and protect water bodies within the proposed lay out.
- PP informed the committee that the land scape would be of three tier. The amount would be deposited with Forest Department.
- Land use for civic amenities like police station, fire station, ESI dispensary as informed to the Committee must be clearly indicated in the plan. Also, biomedical waste management to be addressed.
- PP informed the Committee that proposed development is limited to 414.57 Acres as possession of remaining land is yet to be handed over to KIADB.
- PP admitted to provide buffer zone of 200M between existing adjoining villages.
- PP informed the Committee that there will not be any residential colony inside the proposed layout. PP was asked to revise key plan accordingly.
- Committee suggested that habitations in proposed lay out shall be with proper RR plan.
- Abandoned quarry within the proposed area to be properly barricaded from surroundings to prevent accidents.
- Socio Economic importance to be addressed by PP.
- Committee suggested that KIADB can be role model by reusing plastic waste in formation of road humps and signal posts within the proposed lay out.

Instructions to Project proponents and Consultants:

- (i) The project proponent shall submit an undertaking as a part of the EIA report, owning the contents (information and data) of the EIA report in accordance with O. M. No. J-11013/41/2006-IA-II(I) dated: 05.10.2011 issued by MoEF, GoI.
- (ii) The following instructions shall be adhered to by the consultants in the preparation of EIA report as per O. M. No. J-11013/41/2006-IA-II(I) dated: 04.08.2009 issued by MoEF, GoI :
 - (a) On the front page of EIA/EMP reports, the name of the consultants/consultancy firm along with their complete details including their accreditation, if any, by an organization such as Quality Council of India/National Accreditation Board for Education & Training (NABET) should be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed ToRs have been complied with and that the data submitted is factually correct.
 - (b) While submitting the EIA/EMP reports, the names of all the Experts associated with/involved in the preparation of these reports and the laboratories through which the sample have been got analysed should be stated in the report. It should clearly be indicated whether these laboratories are approved under Environment (Protection) Act, 1986 and the Rules made there under.

The Terms of Reference (ToR) & Additional ToRs prescribed by the State Expert Appraisal Committee (SEAC), Karnataka should be considered for the preparation of EIA report for the above mentioned project 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.


- (Dr. M.H. Balakrishnaiah)
- Secretary,
State Level Expert Appraisal Committee,
Karnataka.

Copy for information to:-

1. The Member Secretary, SEIAA, Karnataka.
2. Member Secretary, Karnataka State Pollution Control Board, KSPCB, Parisara Bhavan, 4th & 5th Floor, church street, Bangalore for information.
3. Guard File.