REPORT OF THE COMMITTEE CONSTITUTED

FOR

DEVELOPMENT OF CRITERIA AND FORMULATION

OF GUIDELINES FOR CATEGORIZATION OF NON COMPLIANCES INTO THE CATEGORY OF

SERIOUS AND NOT SO SERIOUS

September, 2011

MINISTRY OF ENVIRONMENT & FORESTS
NEW DELHI

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Foreword

As per EIA Notification 2006, Ministry of Environment & Forests (MoEF) and State Environmental Impact Assessment Authority (SEIAA) are granting Environmental Clearances (EC) to various developmental projects. The proper and effective implementation of EC Conditions are necessary to achieve the desired environmental quality specially to meet ambient air quality standards, ambient water quality criteria, ambient noise quality as notified under Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environment (P) Act, 1986. To provide suggestions for an effective monitoring mechanism for various projects that are accorded clearances, MoEF had earlier constituted an expert committee under the Chairmanship of Shri J.M. Mauskar, Special Secretary, MoEF, New Delhi. One of the recommendations of Mauskar Committee was to constitute a committee to develop criteria and formulation of guidelines for categorization of non-compliances of EC Conditions into the categories of serious and not so serious.

I am extremely grateful to MoEF for giving me the responsibility to chair the committee on "Development of Criteria and Formulation of Guidelines for Categorization of Non Compliances into the Category of Serious and Not So Serious" consisting of various senior officials of Regional Offices of MoEF and representatives of CPCB. Based on deliberations in four meetings and analysis of more than 200 EC letters issued to various sectors by MoEF / SEIAA, the committee has formulated the criteria to categorize non compliance of EC conditions as serious and not so serious category. Committee has also suggested action to be taken by implementing agency in case of non compliance of EC Conditions. I am thankful to committee members especially Dr. A.B. Harpanahalli, Dr. K.K. Garg and Dr. R.S. Kori (CPCB), for their valuable inputs and suggestions during the meetings. The feedback received from Dr. N.L.N.S. Prasad, Dr. A.K. Mehrotra, Mr. Surendra Kumar, Dr. C. Kaliyaperumal, Shri S. Kerketta and Dr. S.C. Katiyar who were invited during committee meetings, helped us to review clearance letters from all the Regional Offices for formulation of guidelines for the report. Special appreciation is due to Dr. V.P. Upadhyay, Member Secretary of the committee for his untiring effort to collect the EC letters and analysis of the conditions to develop the criteria and preparation of the draft report. It is due to sincere effort and hard work of Dr. Upadhyay, we are able to complete the work in shortest possible time.

I am personally thankful to Shri J.M. Mauskar, Special Secretary, MoEF for his guidance, encouragement and support to complete the task. Thanks are also due to Dr. S.K. Aggarwal and Dr. M.T. Karuppiah for their supports during our four meeting in MoEF.

I hope that this report would be useful to all implementation agencies that are responsible to implement the EC Conditions in various states to improve the environmental quality in India.

B Sengupta
3-10-11

Dated: October 3, 2011

(Dr. B. Sengupta)
Chairman of the Committee &
Former Member Secretary, CPCB

1.0 Background

The Ministry of Environment and Forests constituted a committee under the Chairmanship of Shri J. M. Mauskar, Special Secretary to Government of India vide Office Order No.J-11013/30/2009-IA.II (I) (Pt.) dated 14th December, 2009 to examine the issues relating to monitoring of projects. The mandate of the committee was as follows:

(i) To examine the existing monitoring procedures/methodology adopted under EIA and CRZ Notifications.

(ii) To provide suggestions for an effective monitoring mechanism for various projects that are accorded clearance.

(iii) To provide suggestions for the monitoring mechanisms to bring in quantitative analysis of the parameters listed in the environmental clearance (EC) letter.

(iv) To provide suggestions for use of information technology for effective monitoring at Ministry/State level, Regional Office level and at the level of industrial unit.

The above committee submitted its report in January, 2011 and recommended various actions for more effective monitoring and to achieve intended goals. One of the recommendations was to constitute a committee under the Chairmanship of Dr. B. Sengupta, Former Member Secretary, CPCB with representatives from Regional Offices of MoEF and CPCB to develop a criteria and formulate guidelines for categorization of non compliances into the category of serious and not so serious. Government of India, after accepting the report, constituted a committee under the Chairmanship of Dr. B. Sengupta, along with four members vide Order No.J-11013/30/2009-IA.II (I) dated 19th May, 2011 (Appendix-I) with following terms of reference of the committee:

(i) To develop a criteria and formulate guidelines for categorization of non compliances of the conditions stipulated while granting environmental clearance into the category of 'serious' and 'not so serious'.

The committee held detailed discussions on the subject during its 4 meetings held on 24.06.2011, 20.07.2011, 08.08.2011 and 08.09.2011, respectively. The scientists working in the Regional

Offices in addition to the members of the committee were also involved in the discussions and to assist the committee in developing the criteria and formulating the guidelines.

2.0 Categorization of the Environmental Clearance (EC) conditions

The Ministry of Environment and Forests while according environmental clearance generally stipulates two types of conditions viz., 'Specific Conditions' and 'General Conditions' in all categories of projects which are covered under EIA Notification, 2006 or Coastal Regulation Zone Notification, 2011. Whereas, there are changes in the Specific Conditions from one category of project to other, the General Conditions by and large remain the same. Therefore, the committee decided to categorise general conditions across all projects and specific conditions sector wise. The sectors selected for the categorization were the same in line of Environmental Appraisal Committees constituted for appraisal of projects for environmental clearance. The categorisation details are available in the report as Annexure from Annexure-I to Annexure-XXV. Several clearance letters in a particular sector from all the six Regional Offices of the Ministry were reviewed and conditions screened for categorisation into "Serious" and "Not So Serious".

3.0 Non compliance of EC conditions as per provisions in EP Act

The Section 5 of Environment (Protection) Act 1986 gives power to central Government (Ministry of Environment and Forests) to deal with non compliance of EC conditions and other violations of EC conditions as follows: -

Power to give directions

Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may[1], in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions[2]

Explanation – For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct—

a) The closure, prohibition or regulation of any industry, operation or process; or

b) Stoppage or regulation of the supply of electricity or water or any other service.

[1] The central government has delegated the powers vested in it under section 5 of the Act to the State Governments of Andhra Pradesh, Assam, Bihar, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Mizoram Orissa, Rajasthan, Sikkim and Tamil Nadu subject to the condition that the Central Government may revoke such delegation of Powers in respect of all or any one or more of the State Government or may itself invoke the provisions of section 5 of the Act, if in the opinion of the Central Government such a course of action is necessary in public interest, (Notification No. S.O. 152(E) dated 10-2-88 published in Gazette No 54 of the same date). These Powers have been delegated to the following State Governments also on the same terms: Meghalaya, Punjab and Uttar Pradesh vide Notification No. S.O.389(E) dated 14-4-88 published in the Gazette No. 205 dated 14-4-88; Maharashtra vide Notification No. S.O 488(E) dated 17-5-88 published in the Gazette No. 255 dated 17-5-88; Goa and Jammu & Kashmir vide Notification No. S.O. 881 (E) dated 22-9-88; published in the Gazette No. 749 dated 22-9-88 West Bengal Manipur vide Notification N. S.O. 408(E) dated 6-6-89; published in the Gazette No. 319 dated 6-6-89; Tripura vide Notification No. S.O. 479(E) dated 25-7-91 published in the Gazette No. 414 dated 25-7-91.

[2] For issuing directions see Rule 4 of Environment (Protection) Rules, 1986.

In case of any serious violation Central Government or any other agency to whom power under section 5 is delegated may take action as per section 5 of E (P) Act by giving show cause notice to the project proponent. However, in case of serious violation where immediate danger to public health is anticipated (for example : - release of toxic gas emission to environment, release to toxic chemicals to water bodies etc.), Central Government or other agency to whom section 5 power is delegated, may issue direct closure order to the polluter. The following guidelines are suggested to deal with non compliance of EC conditions as per E (P) Act.

S.No.	Nature of Violation	Action by MoEF or other agency to whom Section 5 power is delegated
1.	Non-compliance of EC conditions and due to that immediate threat to public life and property is anticipated (serious violation)	Direct closure using Section 5 of E(P) Act
2.	Non-compliance of EC conditions and due to same, public life, properties and vegetation will be affected.	Giving notice under Section 5 of E(P) Act. Decision on the basis of reply received from industry by Competent Authority within stipulated time

3.	Non-compliance of EC conditions (not so serious in nature)	Direction to SPCB under Section 18(1)(b) to take action as per Water / Air Act Or Writing letter to project proponent for compliance and repeated failure to comply will be considered as serious violation.

4.0 Suggested guidelines for categorization of conditions as serious and not so serious

Following guidelines after detail deliberation in the committee are suggested for making categorisation of stipulated conditions in to the two categories and the conditions stipulated in projects have been categorised following these guidelines which are placed in the report from **Annexure-I** to **Annexure-XXV**:

1. The Environmental Appraisal puts great emphasis on adoption of efficient pollution control and pollution abetment technologies, adoption of clean technologies, waste minimization technologies etc. by the developmental projects. Therefore, various conditions are stipulated for adoption of such technologies as EC condition. The committee has decided to categorise all such conditions into **"Serious Category"** where equipments stipulated for pollution abetment and control have not been installed.

2. The Ministry of Environment and Forests has notified general as well as industry specific environmental standards which are required to be complied by the developmental projects. Strict compliance to these standards are stipulated while according environmental clearance. As these are statutory provisions, the committee has decided to recommend all such conditions to be categorised into **"Serious Category"** in case the same is not complied.

3. Fly ash utilization by coal based thermal power plant is very important for proper environmental management in and around thermal power plants. MoEF has made

Rules on Fly ash utilization under E(P) Act, 1986. As such any violation of Fly Ash Management Rules is considered as "serious violation".

4. There are various stipulations in the clearance letter which need to be actually implemented by the state authorities. The conditions relating to implementation of Rehabilitation and Resettlement (R&R) provisions, Catchment Area Treatment (CAT), Command Area Development (CAD), Compensatory Afforestation (CA), Regional Environmental Management Plan (REMP), Wildlife Management Plan and peripheral development programmes for example fall in this category. Such conditions are to be categorised as "serious" in case of non compliance. It is suggested that the stipulations for such type of conditions may be suitably modified and implementation responsibility of the concerned authority may be explicitly mentioned in clearance letter.

5. The non-compliance to conditions for developing Environmental Management Cell and Environmental Laboratory may be categorised as "Serious" as it has direct linkage with performance and management of environmental safeguards. However, the committee suggests that in case a project is able to outsource its environmental monitoring work to a environmental laboratory recognized under provisions of Environment (Protection) Act, 1986, and also having NABL accreditation, such cases should not be grouped in "Serious Category".

6. The conditions relating to developing certain percentage of area under greenbelt also need to be reformed. Whereas, no greenbelt development will fall in "serious" non compliance category, the avenue plantation, block plantation and scattered plantations may serve the purpose of development of greenery for ecological benefit. If the stipulated limit of area under plantation/greenbelt is complied without achieving the greenbelt around the plant as stipulated, such cases of non compliances may be categorised as "not so serious".

7. All process/operation related conditions are to be categorised as "Serious' in case of non compliance.

8. Non compliance to all such stipulations for carrying out studies on ecology, wildlife and pollution management will be considered as "Serious".

4.1 Categorization of other conditions

The committee has also discussed about the impact of categorization of some significant conditions having greater environmental impact in the long run and has decided to recommend guideline in such cases as follows:

"The Non-compliances categorized as 'Not So Serious' will become 'Serious' when the particular condition remained 'Non Complied' during submission of Second Six Monthly report after receiving environmental clearance".

While reviewing the environmental clearance letters, it was observed by the committee members that there are some very specific conditions concerning a particular category/site/region. Such conditions have not been categorised into "Serious" and "Not So Serious" and reflected in the reports given in Annexures. For such conditions an uniform guideline has been recommended as follows:

"All such conditions stipulated concerning specific environmental parameter in a particular project in a specific area have been categorized as 'Serious' in case of non-compliance". Such conditions should be assigned greater value in terms of environmental significance.

The committee observed that in addition to stipulated conditions, the Ministry of Environment and Forests also stipulates additional safeguards by issuing orders and guidelines in the form of Circulars, Office Orders or Office Memorandum, which need to be implemented by the projects for enhancing the compliance level in respective projects. Such conditions will also be categorised as "Serious" in case of non-compliance. These type of conditions have also not been reflected in the Annexure where conditions of various sectors of projects have been enumerated and categorised in above two categories.

The members while deliberating on the non compliance issues observed that there are ambiguities in certain conditions stipulated in the clearance letters. It was decided to cover this aspect also and provide suggestions for modifying/changing the conditions so that the conditions are easily classified as "Serious" and "Not so serious" and are practical for monitoring and implementation.

5.0 Categories of non-compliance of EC Condition as Serious and Not So Serious

The sector-wise specific conditions given in EC letter by MoEF were deliberated by committee and based upon guidelines suggested above, the conditions have been categorized in case of non-compliance as serious and not so serious. For different categories of project sector as per EIA Notification, 2006 the categorization is given as follows (**Annexure – I to Annexure – XXV**)

S.No.	Sector	Categorization in case of non-compliance
1.	Mining of minerals	Annexure – I
2.	Offshore and Onshore oil and gas exploration, development and production	Annexure – II
3.	River Valley Project	Annexure – III
4.	Nuclear Power Project	Annexure – IV
5.	Metallurgical Industry (ferrous and non ferrous)	Annexure – V
6.	Aluminum Industry	Annexure – V-A
7.	Copper Industry	Annexure – V-B
8.	Cement Plants	Annexure – VI
9.	Petroleum oil refineries	Annexure – VII
10.	Coke oven plants	Annexure – VIII
11.	Asbestos milling and Asbestos based products	Annexure – IX
12.	Chlor Alkali industry	Annexure – X
13.	Leather / skin / hide processing industry	Annexure – XI
14.	Chemical fertilizer	Annexure – XII
15.	Pesticide industry	Annexure – XIII
16.	Synthetic organic chemical industry (dye and dye intermediates, Bulk drug and Pharmaceuticals industry)	Annexure – XIV
17.	Distilleries & Sugar Industry	Annexure – XV
18.	Paint industry	Annexure – XVI
19.	Pulp and paper industry	Annexure – XVII
20.	Airports	Annexure – XVII

21.	TSDF	Annexure – XIX
22.	Ports and harbour	Annexure – XX
23.	Highways	Annexure – XXI
24.	CETPs	Annexure – XXII
25.	Building and construction projects	Annexure – XXIII
26.	Thermal Power Plants	Annexure – XXIV
27.	General Conditions	Annexure – XXV

6.0 Suggestions

The committee deliberated on the following issues and opined that these suggestions may be submitted to MoEF for consideration while granting Environmental Clearance in future to development projects:

1. In case of ambient air quality monitoring to be done by project proponent at post commissioning stage, the parameters to be monitored, number of stations to be maintained, guidelines for location of monitoring stations etc. should be clearly mentioned in the EC letter.

2. Ambient air quality monitoring in critically polluted areas / severely polluted areas may preferably be done by concern State Pollution Control Board / Committees or independent approved agencies of SPCBs / CPCB.

3. Regarding continuous source (stack) emission monitoring, the parameters to be monitored stackwise and frequency of monitoring to be clearly mentioned in EC letter.

4. Regarding treated effluent monitoring, the number of sampling stations and parameters to be monitored should be mentioned in EC letter.

5. The effluent standard / emission standard to be met by project proponent by installing effluent treatment plant/ air pollution control equipment, should be clearly mentioned in the EC letter. In case the industry to meet Zero Effluent

Discharge, the guidelines to achieve zero effluent discharge should be mentioned in EC letter.

6. Occupational health parameters to be monitored by project proponent should be clearly mentioned.

7. The conditions like eco development, community development, peripheral development and socio-economic development stipulated in clearance letters are very subjective in nature. It is suggested that village/area specific quantified targets should be stipulated which will be easy to monitor.

8. The condition relating to news paper advertisement within 7 days of issue of clearance letter is most of the time violated. It is suggested that the condition may be changed to "Within 15 days of the receipt of the clearance letter".

9. There are sometimes same conditions stipulated under "Specific Conditions" as well as "General Conditions". Such repetitions should be avoided.

10. CREP stipulations should not be made part of EC conditions as these are not statutory in nature and are only the guidelines.

11. There is need for reengineering of several environmental clearance conditions. It is suggested that the EAC may consider following points for making conditions more explicit and practical for implementation:

    (a) During appraisal of EIA reports and projects, a review of latest clean process technology, pollution prevention technology, waste minimization technology, its efficiency and availability may be discussed and condition for adoption of best technology may be considered for recommendation in EC letter.

    (b) The stipulations not directly concerning the provisions of E(P) Act, 1986 may not be stipulated. Such conditions are otherwise covered and implemented by other regulatory authorities.

    (c) Explicit conditions like methods of reclamation in case of mining as per area need, name of institutions which can be approached for specific study as

stipulated in the clearance letter and responsibility of state authorities for conditions to be implemented by them may be stipulated in the clearance letter.

12. In case industry generates hazardous waste (landfill waste / incinerable waste), the mode of disposal to be mentioned in EC letter.

13. In case of industry proposed to be established or existing industry proposed for expansion is located in 43 critically polluted areas (CPAs) or 44 severely polluted areas (SPAs) then regional carrying capacity based environmental clearance may be considered by MoEF.

14. The guideline / TOR to conduct regional carrying capacity / assimilative capacity study may be prepared by MoEF through an expert committee.

7.0 Recommendation

1. Considering the importance of effective post project monitoring to improve the environmental quality, the mechanism suggested in Mauskar Committee Report on post project monitoring to be implemented in a time bound manner.

2. In case of coal based Thermal Power Plant, the condition to implement coal beneficiation regulation to be stipulated in EC letter.

3. In case of thermal power plant, requirement of flue gas de-sulphurization (FGD) system and space for FGD to be stipulated in EC letter. SO2 emission standard for thermal power plant may be developed by CPCB and notified by MoEF under E(P) Act urgently.

4. In case of cement plant, use of hazardous waste (having high calorific value) to be used as partial fuel in cement kiln to be stipulated as EC condition.

5. To promote the use of fly ash generated from thermal power station, cement plant may be asked to use dry fly ash for making fly ash pozzolona cement. This may be put as EC condition for cement plant.

6. In case of oil refinery, the specific condition to be given to meet the fugitive emission standard for HC, VOC etc. as given in GSR 186(E) notified vide amendment dated 18th March, 2008 under E(P) Rules, 1986.

7. In case of sponge iron plant, the condition of fluidized bed combustion (FBC) boiler for char management and waste heat recovery boiler (WHRB) for kiln emission should be clearly mentioned as EC condition for large sponge iron plant (>200 TPD). In case of small unit, common char based FBC boiler for char management should be stipulated as EC condition.

8. In case of integrated iron and steel plant, condition of coke oven emission control as per EPA notification (PLL, PLD, Benzo(a)pyrene standard etc.) should be given as EC condition.

9. Specific condition for effective utilization of steel melting shop (SMS) slag to be given in case of iron and steel plant EC letter.

10. In case of aluminum plant, the secondary emission monitoring and control of fluoride in pot room emission to be stipulated as EC condition.

11. In case of non-ferrous metallurgical industry (zinc/lead plant), the disposal of jerosite, lead slag etc. to be clearly mentioned in EC letter.

12. In case of large building project, the condition for installation of decentralized waste water treatment, recycling of treated waste water and reuse, energy efficient lightening system, DG set emission control etc. to be clearly stipulated as EC condition.

13. In case of coal washery project / coal beneficiation project / mineral beneficiation projects, the reject management guidelines should be clearly stipulated as EC condition.

14. For chemical industry (drug and pharmaceutical, pesticide etc.) condition to install full fledge solvent recovery plant should be given to reduce emission of VOC and other solvents.

15. For asbestos industry, condition to monitor asbestos fibre in particulate matter at workzone area and stack emission / vent emission should be given as EC condition.

16. In case of lead industry, the measurement of lead level in blood of workers working in lead plant through reputed national institute should be stipulated.

Annexure-I

Mining of minerals

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained. Rainwater harvesting measures and artificial recharge for augmentation of groundwater resource should be taken up in consultation with the Regional Central Ground Water Board.	✓	
2.	Crushers at the CHP shall be operated with high efficiency bag filters. Water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, loading and unloading areas including transfer points. These should be properly maintained and operated.	✓	
3.	The mineral transportation outside the lease shall be carried out through piped conveyor system/ through covered trucks only and the vehicles carrying the mineral shall not be overloaded.	✓	
4.	The quality of effluent finally discharged into the main water course should conform to the standards prescribed under GSR 919 (E), dated 12.9.88. A clarifloculator along with vortex thickener has to be set up to take care of the fines in the effluent before its discharge.	✓	
5.	The decanted water from the tailing dam of coal washery shall be re-circulated and there should be zero discharge from the tailing dam. Acid mine water, if any, shall be neutralized and reused within the plant.	✓	
6.	Land oustees and land losers/affected people, if any, shall be compensated and rehabilitated as per the National Policy on Resettlement and Rehabilitation of Project Affected Families.	✓	

7.	Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure shall be submitted to the Ministry and its Regional Office. A final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	✓	
8.	Garland/ surface drains (size, gradient and length) should be constructed to divert the surface water from the ML and from low lying areas. Sump capacity should be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.	✓	
9.	Appropriate mitigative measures shall be taken to prevent pollution of the river water/nullah located close by the mines.		✓
10.	Beneficiation of the ore shall not be carried out without obtaining prior environmental clearance.	✓	
11.	Blasting operation shall be carried out only during the daytime. Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.		✓
12.	The over burden generated shall be stacked at earmarked dump site(s) only and it should not be kept active for long period of time. The maximum height of the dump shall not exceed 35m, in two terraces of 20m and 15m each, so that the overall slope of dump should not exceed 28 degree. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off.	✓	
13.	Drills shall be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads. Plantation would be developed along the sides of roads.		✓
14.	The existing over burden (OB) and the likely to be generated over burden during the course of mining shall be re-handled and backfilled. There shall be no external over burden dumps. The backfilled area shall be afforested. Monitoring and		✓

	management of rehabilitated areas should continue until the vegetation becomes self-sustaining.		
15.	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.	✓	
16.	Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the mining operations.		✓
17.	Sewage treatment plant shall be installed for the colony. ETP should also be provided for workshop, coal washery and CHP wastewater. There shall be no discharge of wastewater from CHP and the coal washery.		✓
18.	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds (capital and recurring which is not less than 15% of the capital expenditure) for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office.		✓ *
19.	The void left unfilled shall be converted into the water body. The higher benches of the excavated void/mine pit shall be terraced and plantation done to stabilize the slopes. The slopes of higher benches shall be made gentler for easy accessibility by the local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.		✓
20.	The proponent shall bear the cost of all ex-gratia relief and compassionate payments to the persons affected by wildlife depredation within the lease.		✓

21.	The slime ponds shall be provided with a lining of silpulin (plastic film) to make the ponds impervious.	✓	
22.	The topsoil shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	✓	
23.	The total area brought under afforestation shall be not less than 33% or as proposed and includes backfilled area, existing OB dumps, along ML boundary, infrastructure, 7.5 m greenbelt in safety zone and vacant area including avenue plantation, and area in township by planting native species found within the study area in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.		✓
24.	No depillaring operation shall be carried out below villages and other surface structures.	✓	
25.	While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.	✓	
26.	Regular safety audit should be done for fire hazards on any other major accident in the workshop.	✓	
27.	Spontaneous heating and fire in coal dumps should be controlled by proper stacking. Heating spots and fire sites should be watered regularly/continuously, as necessary.	✓	
28.	The CHP, Mine Ventilation Fans, workshop, etc. should be designed and located so as to minimize noise pollution. Effective noise control measures should be implemented so that the noise levels are within the prescribed norms.	✓	
29.	The project proponent shall constitute an emergency management team and develop emergency response plan under the control of project in-charge to deal with the emergency situation pertaining to the tailing dam for the timely and effective control. It shall be ensured that training programme & mock drills shall be organized for the employees.	✓	

30.	The Washery rejects should be dumped in a pre-selected and suitably identified area and the presence of heavy metals in the solid wastes should be analyzed and closely monitored. Wherever possible, washery rejects will be used for power generation, otherwise, the rejects dumps have to be reclaimed technologically and biologically as per time bound action plan.		✓
31.	A workshop for vehicle maintenance shall be established. Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral within the mine lease.		✓
32.	Monitoring and management of existing reclaimed dumpsite shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office on yearly basis.		✓
33.	The project proponent shall explore the possibility to reduce concentration of heavy metals in the tailing pond, if any, in consultation with an expert scientific institution.		✓
34.	The project proponent shall modify the mine plan of the project at the time of seeking approval for the next mining scheme from the Indian Bureau of Mines so as to reduce the area for external over burden dump by suitably increasing the height of the dumps with proper terracing.	✓	
35.	No transportation of ore outside the mine lease area shall be carried out after sunset.	✓	
36.	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land.		✓
37.	The workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, and the results reported.		✓
38.	Environmental clearance is subject to grant of forestry clearance. Necessary forestry clearance under the Forest (Conservation) Act, 1980 shall be obtained before starting mining operation. No mining shall be undertaken in the forest area without obtaining requisite prior forestry clearance.	✓	

Annexure - II

Offshore and Onshore Oil and Gas Exploration, development and production

Sl. No.	EC Conditions	Non compliance of EC Condtions	
		Serious	Not so serious
1.	Appropriate Flaring of Gas produced during exploration shall be done as per guidelines.		✓
2.	Flare system shall be designed as per Oil Industry Safety Directorate (OISD) guidelines. Stack height and emissions from stacks shall meet the guidelines.	✓	
3.	Total water requirement shall not exceed the value given in condition and prior permission shall be obtained from Competent Authority. Only water based mud system to be used.	✓	
4.	Water based drilling mud (WBM) shall be discharged as stipulated in E (P) Rules dated 30.08.2005.	✓	
5.	Company shall ensure that there is no impact on flora fauna due to drilling of wells in offshore sea. Conservation measures to protect the marine animals/biota to be undertaken. Company shall monitor the petroleum hydrocarbons & heavy metals concentration in the marine fish species regularly and submit the report.	✓	
6.	Treated wastewater shall comply with the marine disposal standards notified under E(P)A. Sewage treatment to be done as per MARPOL regulation. Residual Chlorine shall not exceed stipulated standard before disposal.	✓	-
7.	Drill cutting (DC) wash water shall be treated to meet the notified limits in E(P)A before disposal in sea and shall be monitored regularly.	✓	

8.	Guidelines for disposal &segregation of solid waste, drill cutting & drilling fluids for onshore & offshore drilling operations shall be followed as per E (P) Rule.		✓
9.	High efficiency equipments shall be used to separate solids, hydrocarbons & water as stipulated in conditions.		✓
10.	Good book keeping practices shall be followed regarding waste tracking programme i.e., source of waste generation, type, volume, disposal method etc.		✓
11.	Waste minimization plan shall be developed & followed through ways as mentioned in conditions		✓
12.	Provision of requisite infrastructure facility near the off shore installation to tackle accidental oil leakage.	✓	
13.	Approval from DG Shipping under Merchant Shipping Act prior to commencement of drilling operations shall be obtained with intimation about the exact location of drilling.	✓	
14.	Full details of Blow Out Preventor to encounter well kick due to high formation presence shall be submitted to MoEF.	✓	
15.	On completion of work, well shall be either plugged or suspended as per the methods as stipulated in condition with detailed submission to MoEF.	✓	
16.	Strict adherence to Petroleum & Natural Gas Rules 2008 of OISD to be followed.	✓	
17.	The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005 and drill cutting (DC) wash water shall be treated to conform to limits notified under the Environment (Protection) Act, 1986 before disposal. The treated effluent shall be monitored regularly.	✓	
18.	The company shall construct the garland drain all around the drilling site to prevent runoff of any oil	✓	

	containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.		
19.	Drilling wastewater including drill cuttings wash water shall be collected in disposal pit, which is lined with HDPE. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office.	✓	
20.	Oil spillage scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers/reprocessors.	✓	
21.	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation. To prevent fire and explosion at Oil and Gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.	✓	
22.	The company shall develop a contingency plan for H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self containing breathing apparatus.		✓
23.	Blow Out Preventor (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by	✓	

	proper pre-well planning and drilling fluid logging etc.		
24.	The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.	✓	
25.	In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.		✓
26.	The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.		✓
27.	Pre-hire rig inspection, safety meetings, tool box meeting, job safety analysis and audits shall be carried out to identify hidden potential hazardous.		✓
28.	The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.		✓
	Oil Development and Production		
1.	The surface facilities shall be installed as per applicable codes and standards, international practices and applicable local regulations.		✓
2.	Monitoring of HC concentration in the ambient air and non-methanated HC shall be undertaken	✓	
3.	The recyclable waste (oily sludge) and spent oil shall be disposed as per Hazardous Waste Management Rules	✓	

4.	Pre hire rig inspection, safety meetings, tool box meeting, job safety analysis and audits shall be carried out to identify hidden /potential hazardous.		✓
5.	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.	✓	
6.	To prevent fire and explosion at Oil and Gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material should be in place.	✓	
7.	The company shall develop a contingency plan for H2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H2S detectors in locations of high risk of exposure along with self containing breathing apparatus	✓	
8.	The emissions of (PM_{10}, SO2, NOx, HC & VOC) from DG Set and from flare stack shall conform to the standards prescribed under E(P) Act. Regular monitoring of Ambient Air for HC and VOC shall be carried out	✓	

Annexure-III

River Valley Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	A scientific study from reputed institute for deciding the minimum flow to be released during the lean season should be undertaken. Till the study is completed 15% of the average flow of four consecutive leanest months should be maintained for environmental flow. After the study is completed release of minimum flow should be studied based or 15% whichever is higher.	✓	
2.	Prescribed minimum flow shall be maintained for sustenance of the aquatic life in the downstream. Continuous monitoring system for the flow measurement shall be installed and data be displayed at appropriate site for information of civil society and stake holders.	✓	
3.	Consolidation and compilation of the muck shall be carried – out only in the designated muck dumping sites. The dump sites shall be **away as stipulated** from the high flood level of the river.	✓	
4.	Catchment Area Treatment Plan as has been proposed should be completed in given period.	✓	
5.	All corrective steps i.e. residual insecticidal spray in all the project impact area should be taken keeping the flight range of mosquitoes to control vector borne diseases.	✓	
6.	Wildlife Management & development and Conservation of Biodiversity Plans shall be taken up strictly as outlined in the EIA/EMP Report and implemented in consultation with the State Forest Department without any diversion of funds.	✓	
7.	Development of Biodiversity Conservation & Management Plan should be implemented. Anti-poaching measurements	✓	

	should also be implemented.		
8.	The equipment likely to generate high noise levels shall meet the ambient noise standards as notified under the Environment (Protection) Act, 1986.	✓	
9.	No fugitive dust emissions should be observed at the construction sites. Water sprinkling arrangements shall be made to suppress the fugitive emissions.		✓
10.	Fish ladder at appropriate places in the dam as stipulated should be provided for migration of fishes.		✓
11.	Early warning telemetric system shall be installed.	✓	
12.	NOC from National Commission of Seismic Design Parameters(NCSDP) of CWC should be obtained.	✓	
13.	To monitor the micro-seismic activities of the area, prescribed number of micro-seismic stations should be installed.	✓	
14.	Conjunctive use of surface water has to be planned in the project to check water logging as well as to increase productivity. The field drains shall be connected with natural drainage	✓	
15.	Water user association/ Co-operative and involvement of the whole community for disciplined use of available waters should be formed.		✓
16.	Remodeling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector drains etc. are to be ensured. This work should be given high priority without waiting for drainage problem to appear.	✓	
17.	Micro-irrigation should be adopted on pilot basis in selected command areas as stipulated. The farmers are to be apprised of this system and trained in the use of such systems. Proper crop selection should be done for making pressurized irrigation effective.		✓
18.	Compensatory afforestation programme should be implemented in toto. The proposed greenbelt development	✓	

	using different plant species in identified areas.		
19.	To enhance the environment of project site, greenbelt shall be developed as proposed in the EIA/EMP Report. The greenbelt along the periphery of reservoir shall be undertaken in 2 layers with identified tree species.	✓	
20.	Restoration of construction area including dumping site of excavated materials should be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation. Consolidation and compilation of the muck should be carried out in the muck dumping sites and the dumping sites should be above high flood level. The generated muck may be utilized for construction material & other filling purposes and remaining be disposed of at designated disposal areas.	✓	
21.	On farm development (OFD) works like land shaping land leveling, drainage facilities, field irrigation channels and farm roads etc should be taken-up in phased manner in advance of the start of irrigation from canal system in the entire command area. The Command Area Development Plan should be strictly implemented.	✓	
22.	The fisheries management plan for stocking of fish in the streams, tributaries of river and the main river itself should be strictly adhered. The total budget proposed for fish management plan and community & social development plan including community welfare schemes in the budgetary provisions shall be strictly adhered to.		✓
23.	The clearance from Steering Committee of NBWL under the Wildlife (P) Act, 1972 should be obtained, as applicable.	✓	
24.	A Multi Disciplinary Committee (MDC) to monitor environmental safeguards during the construction shall be constituted. Six monthly monitoring report of this Committee shall be displayed on the web – site of the Proponent.	✓	

Annexure-IV

Nuclear Power Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	AERB clearance for the site shall be obtained before starting any construction work.	✓	
2.	Regular monitoring of radioactive pollutants in the air as well in the discharged water shall be monitored regularly as per AERB standards. Also radio active pollutant emission standard as prescribed by AERB should be strictly followed.	✓	
3.	Regular monitoring of ambient air quality shall be carried out in and around the power plant as per norms and records maintained. Besides air quality, water, food samples and soil shall also be monitored regularly for radioactive levels in the surrounding areas and records maintained.	✓	
4.	The radioactive waste shall be managed as per the norms prescribed by AERB.	✓	
5.	On-line continuous monitoring of the temperature of the discharged cooling water shall be carried out at the discharge point. It shall be ensured that the temperature differential of the discharged water w.r.t. the receiving water does not exceed stipulated limit at any given point of time.	✓	
6.	A Disaster Management Plan and Emergency Preparedness Plan shall be prepared and put in place as per the norms of AERB. Regular mock drills shall be undertaken and based on the same, any modification required, if any, shall also be incorporated.	✓	
7.	The non radioactive waste water generated from the plant premises will be suitably treated in STP and the treated effluents shall be recycled and reused within the plant premises for greenbelt etc.		✓
8.	Noise levels shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided.		✓
9.	The radioactive liquid waste emanating from the plant will be treated and managed as per the guidelines of AERB/ICRP in this regard.	✓	

Annexure-V

Metallurgical(Iron and Steel including sponge iron plant)

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The prescribed emission standards for coke oven plants and integrated steel plants as notified under E(P) Act, 1986 shall be complied with.	✓	
2.	Total requirement of the water shall not exceed prescribed limit and prior 'permission' for the total water requirement shall be obtained from the concerned Department before commissioning the project. Effluent Treatment Plant (ETP) shall be installed for the treatment of process water. During the rebuilding of coke oven battery, BOD plant shall be provided for the disposal of liquid effluent. The wastewater generated from blast furnace (BF) shall be treated in clarifier and reused in the system. Blow down from BF re-circulation system shall be reused in SGP as make up water. Blow down from BOF re-circulation system shall be reused in SMS slag yard. Reverse Osmosis plant shall be installed. All the wastewater generated shall be treated, recycled, and reused either in the process or for dust suppression or greenbelt development.	✓	
3.	All the BF slag shall be either sold to cement plant for making granulated cement or used for road construction. BF sludge and BOF sludge shall be partly used in sinter plant and partly dumped. BOF slag shall be reused in BF, sinter plant as well as ballast. All the BF fume dust, BOF scale, Mill scales, Lime dust, Dolo dust, Burnt lime, Pig casting machine sludge, etc. shall be reused in sinter plant. All the mill scrap and skull/scrap shall be reused in BOF plant. Blast furnace gas, Coke oven gas, BOF gas, Liquid Oxygen, LPG shall be used in the power plant, Tar sludge, BOD plant sludge and waste oil shall be generated during the rebuilding of coke oven battery shall be properly disposed off as per the	✓	

	Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.		
4.	ESP to the sinter plant, ventury scrubber to BOF shop, pulse jet type bag filter to lime and dolomite plant and bag filters in material handling areas and material transfer points shall be provided. A fume extraction system comprising suction hood, associated duct, cyclone/scrubber shall be provided to control dust generated during secondary refining. De-dusting system shall be provided at different material transfer points. Tar, NH_3 shall be cleaned in the process and H2S recovery from the coke oven shall be ensured. By-product fuel gases shall be used for steam and power generation.	✓	
5.	On-line ambient air quality monitoring, continuous stack monitoring facilities etc. should be provided.	✓	
6.	Fume extraction system shall be provided to induction furnaces to control the emissions within the prescribed standards.	✓	
7.	Standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be strictly followed.	✓	
8.	Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.	✓	
9.	Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted.		✓
10.	The water consumption shall not exceed as per the standard prescribed for the steel plants.		✓
11.	All the coal fines, char from DRI plant and washery rejects shall be utilized in FBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be provided to the cement manufacturers. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed	✓	

	off in environment-friendly manner.		
12.	The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site(s) within sheds/stockyards fitted with wind breakers/shields. Adequate measures hall be taken to ensure that the stored minerals do not catch fire.		✓
13.	Hoppers of the coal crushing unit at the crushing shed and washery unit shall be fitted with high efficiency bag filters/Dust extractors and mist spray water sprinkling system.	✓	
14.	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers.		✓
15.	The washery unit shall be a zero-discharge facility and no wastewater shall be discharged from the washery.	✓	
16.	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted.	✓	
17.	Slag from EAF shall be utilized without land filling/dumping and the waste processing area shall be provided with lining. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	✓	
18.	The Company shall submit their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.		✓

Annexure-V-A

Non Ferrous Metallurgical Industry (Aluminum Industry)

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Total fluoride emission from pot room should not be more than 1 kg/tonne of aluminum produced. Particulate fluoride emission shall not be more than 0.65 mg/Nm3 and secondary particulate fluoride emission from pot room shall not be more than 1.85 mg/Nm3.	✓	
2.	The poly aromatic hydrocarbon (PAH) from the anode baking plant shall not be more than 2 mg/Nm3. The data on PAH shall be monitored regularly and report submitted to MoEF and SPCB.	✓	
3.	The spent pot-lining which is hazardous waste shall be disposed as per Hazardous Waste Management Rules. In case of in-house SLF disposal the designed of SLF should be approved by SPCB.	✓	
4.	The particulate emissions from the calciner plant should be controlled by installation of ESP. The particulate emissions shall not exceed 50 mg/Nm3. All the boiler stacks shall be provided with stack of adequate height as per the CPCB guidelines. The boiler and calciner stacks should be equipped with continuous monitoring devise to check SPM emissions levels. The poly-aromatic hydrocarbon (PAH) from calciner plant should be monitored and report submitted to the Ministry's Regional Office at Bhubaneswar and CPCB.	✓	
5.	The Company should adopt Thickened Tailing Disposal (TTD) system in the existing and the new red mud pond to be constructed in future. The construction of the red mud pond should be in accordance with the CPCB guidelines. The ground water quality should be monitored around the red mud ponds by providing piezometeric holes. The location of the ground water monitoring station should be decided	✓	

	based on the hydrological study of the area.		
6.	Utilisation of red mud should be encouraged based on CBRI process to the extent possible.		✓
7.	Disposal sites for red mud, vanadium sludge, sodalite, sodium oxalate, etc. should be made impervious to avoid ground water level. These sites should have the approval of the State Pollution Control Board. Adequate monitoring of the impoundment sites (Soil, surface and ground water, etc) should be carried out regularly and record maintained. In plant control measures for checking fugitive emission from spillage/raw materials handling shall be provided. Water sprinklers shall be provided to control the fugitive emissions from the active red mud disposal areas and ash coverage in inactive areas.	✓	
8.	The project authorities must ensure: (a) regular medical examination for two occupational diseases viz. fluorosis, pneumoconiosis and other respiratory ailments; (b) fluoride levels in workers' urine and blood should be regularly monitored and data recorded along with their occupational and medical history ; and (c) adequate measures to protect the work force from tar particulates.	✓	
9.	Steps must be taken to limit diffusion of coke dust when the baked anodes are removed from the oven and the green anodes are placed in it.	✓	
10.	Disposal site of cathode carbon, anode pieces and floatation tailing should be impervious to avoid ground water contamination. These sites should have approval of the State Pollution Control Board. Adequate monitoring facilities should be provided for monitoring of impoundment sites (soil, surface and ground water etc.) and record maintained.	✓	
11.	Measures should be taken to reduce fluorine levels in the vicinity of the pot-line building and in the effluent emanating from anode preparation section. Surface run-off outside the pot house should be properly collected, handled and disposed off. Report on fluorine levels in the ground water should be made available to this Ministry.	✓	
12.	Biological monitoring of flora must be started within and in	✓	

	the vicinity of the smelter. Pollution isopleths should also be plotted based on the fluorine content of certain species of plants.		
13.	The advanced clean technology such as pre-baked technology should be used for aluminum smelting.	✓	
14.	The emission of PM, SO2, fluoride, VOC, PAH from various process units of aluminum smelter should be within the prescribed standard as notified under EP Act, 1986 and prescribed by SPCB.	✓	
15.	Adequate measures shall be kept to monitor pot room emission of fluoride and particulate matter both as fugitive and point source emission following CPCB protocol.	✓	
16.	The project authority will evaluate the efficiency of SO_2 absorption by alumina and recommendations submitted to this Ministry.		✓
17.	Regular ground water monitoring for cyanide, fluoride and other heavy metals shall be carried out by installing Peizometers all around the SLF site in consultation with SPCB and Central Groundwater Board and data should be submitted to MoEF / SPCB regularly.	✓	
18.	No effluent should be discharged outside the premises during non-monsoon period and shall be allowed to discharge during the monsoon period only after proper treatment and meeting the prescribed norms. All effluents be treated in properly designed effluent treatment plant and treated effluent should be within the prescribed stipulated standard under EP Act.	✓	
19.	Regular monitoring of ground level concentration of SO2, NOx, PM10, fluoride and forage fluoride shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional Office of the Ministry. The data shall also be put on the website of the Company.		✓

20.	Base line health data within study area shall be collected. Mitigation measures for control of endemic diseases shall be implemented in the study area.		✓
21.	The Project authorities must ensure that village located around the plant within stipulated radius should have no pollution problem especially from fluoride because of the refinery and other operations. Drinking water should be provided to all villages where fluoride contamination has taken place. Fluoride levels in drinking water should be within the WHO standards of 1.5 mg/l.		✓

Annexure-V-B

Non Ferrous Metallurgical Industry (Copper Industry)

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	On-line continuous monitors to monitor SO2, SPM and NOX shall be provided in furnace stack. The acid mist shall conform to the prescribed standard of 50 mg/Nm3 in H2SO4 plant. Electrostatic precipitators (ESP) and scrubbers shall be provided to control gaseous emissions. All the scrubbed SO2 shall be treated in ETP. Data collected for Fluorine, SPM, SO2, NOX and acid mist shall be submitted regularly to the Ministry. Fugitive emissions of SO2 in ISA furnace shall be reduced by installing proper pollution control systems and monitored regularly.	✓	
2.	The Company shall achieve SO2 emissions of 0.7 Kg/Ton of Sulphuric acid produced in the proposed expansion plant. On-line stack monitoring for SO2 from the Sulphuric Acid Plant shall be carried out and instruments shall be calibrated properly.	✓	
3.	Arsenic bearing sludge, scrubber cake, sludge from refinery ETP, to be disposed off in the secured landfill facility (SLF) and SLF shall be controlled strictly as per design details of CPCB. Sludge generation from ISA furnace, which is hazardous in	✓	

	nature and shall be disposed off as per Hazardous Waste (Management & Handling) Rules, 2003. Also possibility shall be explored to recover metals from the waste.		
4.	ETP cake, scrubber cake and spent catalyst shall be stored in secured landfill (SLF) at the site till TSDF is functional. The location and design of the landfill site shall be approved by the SPCB as per Hazardous Wastes (Management and Handling) Rules, 2003. The ground water quality around the landfill site shall be monitored and data submitted to the Ministry / SPCB. ESP and WHRB dust and Lime grit shall be recycled in the smelter. Metal slag shall be recycled back to smelter to recover metal. All the phospho-gypsum shall be sold to cement manufacturers and other users. All the used oil and batteries shall be sold to the authorized recyclers / reprocessors.	✓	
5.	Only non-hazardous slag shall be used for road construction. Toxic Chemical Leachability Potential (TCLP) test as per the guidelines shall be carried out before using slag for the road construction. Use of hazardous slag for road construction shall be immediately stopped.	✓	
6.	Reverse osmosis plants shall be installed to treat the ETP wastewater and utility water. Multi-effect evaporator (MEE) with thermal vapour compressor shall be installed to achieve 'zero' discharge and recover water for recycling back to the plant. No wastewater shall be disposed off outside the premises.	✓	
7.	ETP cake, scrubber cake and spent catalyst shall be stored in secured landfill (SLF) at the site. The ground water quality around the landfill site shall be monitored. ESP and WHRB dust and Lime grit shall be recycled in the smelter. Metal slag shall be recycled back to smelter to recover metal. All the phospho-gypsum shall be sold to cement manufacturers and other users.	✓	

Annexure-VI

Cement plants

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	High Efficiency Electrostatic Precipitators (ESPs) / Bag filters shall be installed in rotary kiln, clinker cooler, coal mill, grinding unit and packing unit, etc., to meet stipulated emission standard.	✓	
2.	Adequate dust extraction system such as and water spray system shall be installed in coal handling, fly ash handling areas and lime stone handling areas to reduce fugitive emission.	✓	
3.	Stacks of prescribed height shall be provided with continuous online monitoring equipments for SOx, NOx and Particulate matter.	✓	
4.	Continuous monitoring system for particulate matter should be installed in cement kiln, coal mill, clinker cooler, cement mill and data should be displayed in company's website.	✓	
5.	Possibilities shall be explored for the proper and full utilization of gases generated for the kiln in waste heat recovery boiler (WHRB).		✓
6.	Effort should be made to use high calorific value hazardous waste in the cement kiln and necessary provisions in the kiln should be made accordingly.	✓	
7.	Asphalting / concreting of roads and water spray all around the critical areas prone to air pollution and having high levels of PM shall be ensure. Fugitive emission should be controlled and maintained within the prescribed limit and regularly monitored. Guidelines / code of practice issued in this regard should be followed.	✓	

8.	Effort should be made to use low grade lime stone, more fly ash and other industrial solid wastes such as blast furnace slag, gypsum etc.		✓
9.	Low NOx burner shall be provided to reduce the NOx emission.	✓	
10.	Noise levels emanating from plants shall be so controlled such that the noise in the work zone shall be limited to prescribed limit. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.		✓
11.	Efforts should be made to reduce impact of the transport of raw materials and product on the surrounding environment including agriculture land. All the raw materials including fly ash shall be transported in the closed containers and should not be overloaded. Vehicular emission should be regularly monitored.	✓	

Annexure-VII

Petroleum Oil Refinery and Petrochemicals

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The existing refinery should meet all the standards notified under E(P) Act including fugitive emission standard.	✓	
2.	Oily sludge generated various unit of refinery should be collected and disposed as per Hazardous Waste Management Rules	✓	
3.	The company shall use low sulphur fuel to minimize SO_2 emission. Stacks which are contributing to more SO_2 emissions shall be identified and SO_2 emissions shall be reduced by changing to low sulphur fuel.	✓	
4.	To control the fugitive emissions, the unit shall have provision for internal floating roof tanks with flexible double seal for MS and intermediate products; mechanical seals in pumps; regular inspection of floating roof seals and proper maintenance of floating roof seals for storage tanks; preventive maintenance of valves and other equipment; regular skimming of oil from separators/equalization basin in ETP. The unit shall assess and minimize the fugitive VOC emission wherever possible.	✓	
5.	Fugitive emissions of HC from product storage tank yards etc must be regularly monitored. Sensors for detecting HC leakage shall also be provided at strategic locations.	✓	
6.	The project shall implement Leak Detection and Repair (LDAR) programme as per standard given in E(P) Act, 1986.	✓	
7.	The Centralized ETP and standalone ETP shall be designed based on the raw water and waste water quality. Design details of ETP shall be submitted to the Ministry. The effluent shall be segregated into low TDS and high TDS stream which shall after primary, secondary and tertiary treatment shall be	✓	

	used and recycled for green belt development, cooling tower make up etc. The treated effluent shall comply with the prescribed standards. The return sea water shall be discharged into the sea through a multi-port diffuser system at a point identified by NIO for coastal refinery.		
8.	Action plan for reduction of SO_2 and NOx emissions from the present level shall be submitted to the Ministry.	✓	
9.	The Company shall install low NOx burner to mitigate the NOx emission, ventury scrubbers, sulphur recovery unit and tail gas treatment for mitigating SO_2 emission.	✓	
10.	The Company shall install detectors for phosgene and specific steps shall be taken for phosgene management.	✓	
11.	Process emissions shall be controlled by scrubbers. Flue gas emissions from the various stacks attached to the boilers, furnace/heaters shall conform to the prescribed standards.	✓	
12.	Measures shall be undertaken for odour control and inventory of odours compounds shall be maintained.	✓	
13.	The product-loading gantry shall be connected to the product sphere in closed circuit through the vapour arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records maintained.		✓
14.	The company shall ensure that no halogenated organic is sent to the flares. If any of the halogenated organic are present then the respective streams may be incinerated, if there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.	✓	
15.	The Project authority should explore the possibility of thermal destructing of the semi-solid and solid still bottom and progress report of its implementation should be furnished once in three months to this Ministry.	✓	
16.	The company shall submit time bound action plan for brine management. Further, possibility of setting up of salt manufacturing facility for management of huge volume of brine shall be explored or tie up with the salt manufacturing units in the area for brine disposal.		✓
17.	The company shall prepare integrated risk assessment report considering domino effect which shall be done after freezing	✓	

	overall layout of the Petrochemical Complex with precise location of all individual plants as well as all offsite and battery limit storage areas of the Petrochemical Complex and after all storage capacities and tank sizes are decided.		
18.	Refinery should install VOC control system to reduce VOC emission.	✓	
19.	Flare gas recovery system should be installed.	✓	
20.	The Quantitative Risk Assessment (QRA) shall be done in comprehensive manner by taking into all consideration listed below but not limited to, ▪ Report to consider two mega size refineries in the same industrial area and shall deal with the risk arising out of major incident (VCE, Flash fire)in either the existing refineries or proposed petrochemical complex and its domino effect on the each other ▪ Report to consider precise layout of particular units, bulk storages and storage quantities determined, details of safety system, safeguard provided against domino effect"	✓	
21.	All pressure vessels shall be of SIL-3 level product at par with existing refineries.	✓	
22.	Any relief system for major hazardous releases shall have at least double or triple backup system against the possibility of human error.	✓	
23.	Risk assessment shall include BLEVE for propane and shall be considered in the lay out plan.	✓	
24.	Details for integrated QRA study with respect to lay out including, the bulk storages with storage quantities determined, details of safety system, safeguard provided against domino effect and other details as prescribed in the specific conditions regarding catalyst and the mode of their disposal , steps for mitigation of SO_2 and NOx releases, details of phosgene management and model used for diffuser for discharge of saline water into the sea shall be submitted to the Ministry.	✓	
25.	The Company shall comply with effluent and emission standards for Petrochemical Plants.	✓	
26.	Details regarding type of catalyst to be used and plan for disposal of spent catalyst shall be submitted. The company shall incinerate the oil cotton rags only.	✓	

Annexure-VIII

Coke oven plants (Recovery and Non-recovery type)

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
	Non recovery coke oven plants		
1.	Multi stage scrubber shall be installed to control gaseous and dust emission from the coke oven stack. Measures shall be taken to prevent leakages from the coke oven plant.		✓
2.	The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall be complied with.	✓	
3.	In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	✓	
4.	Waste from the hard coke unit, shall be provided to the briquette manufacturing units. Coal and coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling, Handling and Transboundry Movement) Rules, 2008.		✓
	Coke Oven (Recovery Type)		
1.	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air. Sulphur shall be recovered from the	✓	

	coke oven gases.		
2.	The company shall adopt dry quenching system within the prescribed period and wet quenching shall be replaced by dry quenching.	✓	
3.	Detailed Analysis of the imported coking coal may be done to ensure that there are no toxic heavy metals.		✓
4.	Continuous monitoring of Total Organic Compounds (TOC) in the wastewater treated in BOD plant from the coke oven plant shall be done at the outlet of ETP (BOD plant). All the treated wastewater should comply with notified standard. Monitoring of pH, BOD, COD, oil & grease, cyanide, phenolic compounds, Chromium+6 etc. to be conducted besides other relevant parameters.	✓	
5.	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the EPA whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted.	✓	
6.	The effluent shall be treated in the effluent treatment plant and treated effluent shall be used for coke quenching and gas cooling in CO complex. 'Zero' effluent discharge shall be strictly followed and no additional wastewater shall be discharged outside the premises.	✓	
7.	As proposed, coal tar sludge and BOD sludge shall be recycled for coke making by mixing with the coal charge. Chromium sludge shall be disposed in a HDPE lined secured landfill. All the other solid Waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	✓	
8.	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted.	✓	

Annexure-IX

Asbestos Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The unit shall comply with total dust emission limit of 2 mg/Nm^3 as notified under the Environment (Protection) Act, 1986. Adequate measures shall be adopted to control the process emission and ensure that the stack emission of asbestos fibre shall not exceed the emission limit of 0.2 fiber/cc. Asbestos fibre in work zone environment shall be maintained within 0.1 fibre/cc.	✓	
2.	Only Chrysotile white asbestos fibre shall be used. Blue asbestos shall not be utilized as raw material in the manufacturing process. A written commitment in this regard shall be furnished within a period of one month.	✓	
3.	Fugitive emissions shall be controlled by bringing cement in closed tankers, fly ash in covered trucks and asbestos in impervious bags opening inside a closed mixer. Pulse jet type bag filters shall be provided to Fibre mill, Bag opening device (BOD), Cement and Fly ash silos to control emissions. Bag filters shall also be provided to bag shredder and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and Pulverizer shall be channelized through hood with proper suction arrangement, bag filter and stack. Cement, fly ash and gypsum shall be stored in Silos to control fugitive emissions.	✓	
4.	Bags containing asbestos fibre shall be stored in enclosed area to avoid fugitive emissions of asbestos fibre from damaged bags, if any. The cut and damaged fibre bags shall immediately be repaired. Empty fibre bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only.		✓
5.	Regular measurement of pollutants (SPM, Asbestos fibre count) in the work zone area and stack(s) shall be undertaken by the Project proponents. In addition, the asbestos fibre	✓	

	count in the work zone area shall be monitored by an Independent monitoring agency.		
6.	Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, bloat tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per stipulation.		✓
7.	The entire solid waste generated including process rejects, asbestos residue, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. Process sludge shall be 100% recycled and reused in the process after processing in Ball mill and Pulverizer. Hazardous waste shall be ground in dust proof pulverizer with integrated bag filter and recycled back to the process. Asbestos fibres which can not be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.	✓	
8.	The unit shall adhere to the prescribed BIS standards and laws regarding use and handling of asbestos, safety of employees etc. Raw materials like asbestos fibre and cement shall be transported in closed containers. Asbestos fibre shall be brought in palletized form in impermeable bags and under compressed condition.	✓	
9.	There shall be no manual handling/opening of asbestos fiber bags. The company shall install fully automatic asbestos fiber debagging system before commissioning the unit.	✓	
10.	All the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.	✓	

Annexure-X

Chlor Alkali Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The vent gases from Sodium hydrochloride plant and HCL acid plant shall be controlled at source by effective absorption system so that Chlorine concentration in the vent gases shall not exceed 5 ppm. Waste Chlorine gas shall be used in preparation of HCL. The vent gases shall be discharged from the stacks of adequate height for effective dispersion. Additional Chlorine sensors shall be installed to monitor Cl_2.	✓	
2.	The Company shall install Chlorine gas detectors to detect leakage of Chlorine at liquid Chlorine storage tanks, Sodium hypo plant, HCL synthesis unit and Electrolysis area. The company shall install on-line analyzer in HCL plant and hypo stack with recording facility.	✓	
3.	The unit shall obtain requisite permission from PESO, Nagpur for storage of chlorine, hydrogen etc. before commissioning of the project.	✓	
4.	No ground water shall be used for the project. If stipulated. Entire water requirement shall be met through the concerned department for water supply as stipulated.		✓
5.	The industrial effluent generation from the project shall not exceed the stipulated quantity.		✓
6.	The industrial effluent shall be treated in the ETP consisting of Zinc Clarifier Tanks, Grit Chambers, Primary Clarifier, Equalization Tank, Biological Reactor, Final Clarifiers, Thickeners, Belt Press and Sludge Dryers, etc. The ETP shall be operated regularly and efficiently so as to achieve the PCB norms at the ETP outlet.	✓	
7.	The treated waste water conforming to the norms shall be discharged into the underground drain for its final disposal into the deep sea.	✓	
8.	A Guard / Polishing Pond shall be provided before discharge of treated effluent into underground drain. The unit shall	✓	

	provide on line pH meter, TDS meter & TOC meter for online monitoring of the treated effluent.		
9.	The domestic wastewater shall be treated in the adequate STP. The STP shall be operated regularly and efficiently so as to achieve PCB norms at the STP outlet. The domestic wastewater generation shall not exceed the stipulated quantity		✓
10.	The treated domestic wastewater conforming to the norms shall be utilized for gardening / plantation within premises. However during the rainy season, it shall be transferred to the ETP for its discharge into the underground drain.		✓
11.	The unit shall provide metering facility at the inlets and outlets of the ETP & STP and maintain the records of the same.	✓	
12.	Proper logbooks of ETP & STP operation and also showing the quantity of effluent generated, discharged into underground drain, utilized for plantation / gardening etc. shall be maintained and furnished.	✓	
13.	Regular performance evaluation of the ETP & STP shall be undertaken every year to check its adequacy, through credible institutes or such other institutes of similar repute, and its records shall be maintained.	✓	
14.	Rain water harvesting of surface as well as rooftop runoff shall be undertaken and the same water shall be used for the various activities of the project to conserve fresh water as well as to recharge ground water. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.		✓
15.	The unit shall join and participate financially and technically for any common environmental facility / infrastructure as and when the same is taken up statutory authority created for this purpose.		✓
16.	Process emission shall be controlled with the air pollution control equipments (APCE) as mentioned below. ➢ Poly Aluminium Chloride Plant - Water scrubber for absorption of HCl vapor ➢ Caustic Soda Plant - Water scrubber having	✓	

	bubble cap tray system for absorption of HCl vapour & three tower systems with alkali scrubber for absorption of unreacted chlorine to produce sodium hypochlorite. ➢ Bleaching Powder Plant, Aluminium Chloride Plant and Chlorinated Paraffin Plant – Alkali scrubbers of absorption of Cl2 emission. ➢ Sulphuric Acid Plant – DCDA system in manufacturing and scrubbing system. ➢ Chlorosulphonic Acid Plant – Acid scrubber for absorption of SO3 emission		
17.	The APCE shall be operated efficiently and effectively to achieve the norms prescribed by the PCB at stack outlets. Adequate stack height as per prevailing norms shall be provided for the process emissions.	✓	
18.	Natural gas shall be used as a raw material in the CS2 plant. Thus, there shall be no CS2 & H2S emission from the CS2 Plant.	✓	
19.	High efficiency Electro Static Precipitators (ESP) with efficiency not less than 99.9% shall be installed for control of flue gas emission from the power plant. The ESP shall be operated efficiently to ensure that particulate matter emission does not exceed the norms. The control system shall be designed and integrated in plant DCS in such a way that if emission from ESP exceeds the specified standard, utilization of boiler capacity shall reduce so that flue gas emission from the stack meets with the specified norms or boiler shall shut down totally.	✓	
20.	There shall be one extra field in the ESP to ensure that even though one field goes out of order, the prescribed standard of PM is met with. In case of failure of two or more fields of the ESP, the unit shall immediately shut down the power plant.	✓	
21.	Online monitoring system shall be installed to monitor at least SOx & PM concentrations in the flue gas emission and the results shall be displayed at strategic locations in the premises.	✓	
22.	The company shall prepare schedule, carry regular preventive maintenance of mechanical and electrical parts of ESPs and assign responsibility of preventive maintenance to the senior officer of the company.		✓
23.	Adequate air pollution control systems shall be provided as	✓	

	proposed for control of fugitive emission viz. water sprinklers at all coal transfer points and truck unloading points, dust suppression along coal storage locations, paddle type dust conditions for wetting the fly ash during unloading etc.		
24.	The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities.	✓	
25.	Regular performance evaluation of the air pollution control systems shall be undertaken every year to check its adequacy, through credible institutes and its records shall be maintained.		✓
26.	Regular monitoring of ground level concentration of CS2, H2S, SO2, NOx, Cl2, HCl, PM10 and PM2.5 shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be provided immediately.	✓	
27.	The hazardous wastes shall be stored in separate designated hazardous waste storage facility with pucca bottom and leachate collection facility, before its disposal.	✓	
28.	The unit shall dispose its ETP sludge, brine / process sludge, spent resin, spent catalyst and spent carbon at the nearest common TSDF. The unit shall obtain membership of the nearest common TSDF for disposal of the aforesaid solid wastes.	✓	
29.	Discarded containers / barrels / bags / liners shall be either reused or sold only to the authorized recyclers after decontamination.	✓	
30.	A well designed fire hydrant system shall be installed as per the prevailing standards.	✓	
31.	All the risk mitigation measures, general & specific recommendations mentioned in the EIA Report shall be implemented.		✓
32.	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals, especially chlorine, hydrogen, CS2, HCl	✓	

	etc.		
33.	Storage and use of hazardous chemicals shall be minimized to the extent possible and all necessary precautions shall be taken to mitigate the risk generated out of it. Storage of hazardous chemicals shall be in multiple small capacity tanks / containers instead of one single large capacity tank for safety purpose.	✓	
34.	During material transfer, spillages shall be avoided and garland drain be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.	✓	
35.	All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals. Close handling system for chemicals shall be provided.		✓
36.	Tie up shall be done with nearby health care unit for seeking immediate medical attention in the case of emergency, regular medical check up of the workers and keeping its record etc.		✓
37.	Personal Protective Equipments shall be provided to workers and its usage shall be ensured and supervised.	✓	
38.	First Aid Box and required antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.		✓
39.	Training shall be imparted to all the workers on safety and health aspects of chemicals handling.		✓
40.	Occupational health surveillance of the workers shall be done and its records shall be maintained. Pre-employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.		✓
41.	Handling and charging of the chemicals shall be done in such a manner that minimal human exposure occurs.		✓
42.	Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.	✓	
43.	The overall noise level in and around the plant area shall be kept well within the prescribed standards by providing noise control measures including acoustic insulation, hoods, silencers, enclosures, vibration dampers etc. on all sources of		✓

	noise generation. The ambient noise levels shall confirm to the standards prescribed. Workplace noise levels for workers shall be as per the Factories Act and Rules.		
44.	The unit shall install energy efficient devices and appliances conforming to the Bureau of Energy Efficiency norms.	✓	
45.	The energy audit shall be conducted at regular intervals and the recommendations of the audit report shall be implemented.	✓	
46.	The unit shall implement the application of solar energy which shall be utilized as solar lighting for illumination of common areas, lighting of internal roads and passages in addition to utilization of solar water heating systems.	✓	
47.	The transformers and motors shall have minimum efficiency of 85 %.	✓	
48.	Variable frequency drives shall be installed.	✓	
49.	Energy conservation measures shall include use of electronic lighting system, use of CFL tubes to minimize energy use, use of programmable timers for pumping system and lighting, water level controllers for water pumps, centralized cooling etc.	✓	
50.	Energy saving practices as follows shall be practiced:- • Constant monitoring of energy consumption and defining targets for energy conservation. • Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort level. • Use of solar cells for lighting. • Use of solar water heater for canteen & washing area. • Proper load factor shall be maintained by the unit. • Provision of day light roof to utilize maximum natural light in the production plant instead of electrical lighting. • Use of electronic ballast to save energy. • Automatic switching system for lighting & water tank pumping shall be used. • To the maximum extent possible and technically feasible, energy efficient equipment like motors, pumps, air conditioning systems shall be selected. • Gravity flow shall be preferred wherever possible to save pumping energy. • Promoting awareness on energy conservation.		✓
51.	Training to the staff on methods of energy conservation.		✓

Annexure-XI

Leather / Skin / Hide Processing Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Spent chrome liquor should be segregated at the tannery premises and collected separately and processed for recovery and reuse of chromium in the tanneries. The process adopted should be the one involving precipitation of chromium with the help of a suitable alkali. Design of the proposed continuous Chrome Recovery plant should be submitted for approval.	✓	
2.	The individual tanneries should adopt State of the Art technology recommended by CLRI. The technology should include recovery and reuse of chrome/Alutan BCS/Alecrotan combined tanning process to ensure maximum chromium recovery and minimum chromium discharge in the effluent.	✓	
3.	The chromium concentration in the wastewater discharged into ETP should not exceed 2 ppm. The effluent quality for ETP (both inlet and outlet should meet the norms stipulated in schedule I of the Environment (Protection) act Rules, 1991. The wastewater after primary treatment should be discharged into the ETP through a closed pipeline.	✓	
4.	At 100% utilisation of the processing capacity, the total effluent generated from the leather complex should not exceed stipulated limit. All tanneries located in the area should install pre-treatment facilities in their tannery. The entire effluent generated (except chrome liquor) after pre-treatment, should be treated in the CETP. Copy of the final CETP design and recommended standards should be submitted to the Ministry for approval.	✓	
5.	Adequate method shall be adopted to control odour and a report submitted to the Ministry's Regional Office.	✓	
6.	Adequate number of influent and effluent quality monitoring stations shall be set up. Regular effluent quality monitoring shall be carried out for relevant parameters and the monitored data alongwith the statistical analysis and interpretation shall be submitted at stipulated intervals.	✓	
7.	Dry salting for reduction of TDS in wastewater, counter current soaking to reduce wastewater quantity, pretreatment and segregation of wastes etc. shall be practiced to reduce TDS	✓	

	concentration in the primary effluent. Soaked liquor shall be segregated and evaporated in the solar evaporation ponds.		
8.	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued should be followed.		✓
9.	Ground water monitoring around the solid waste disposal site/secured landfill (SLF), if any, should be carried out regularly.	✓	
10.	In-plant control measures for controlling fugitive emissions from raw materials handling shall be provided.	✓	
11.	No Chromium or any other chemical shall be used in the process as proposed. The effluent quality of both inlet and outlet shall meet the norms stipulated in schedule-I of the Environment (Protection) Rules, 1991.	✓	
12.	Risk & Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office as stipulated.		✓
13.	The company shall dispose off solid waste in the secured double lined landfill site. The fleshings from the tannery shall be supplied to the manufacturers of dog chew and glue or properly disposed off in environment-friendly manner.	✓	
14.	The Company shall provide stacks of adequate height to the D.G. Sets along with acoustic enclosures for noise control as per guidelines. The DG Sets should comply with the norms notified.		✓
15.	The spent soak liquor containing high concentration of salt shall be discharged into the Solar Evaporation Pond (SEP) only.	✓	
16.	Total water requirement shall not exceed the stipulated quantity and prior permission shall be obtained from the concerned authorities. Ground water shall not be utilized for any construction or industrial purposes. Domestic wastewater shall be treated in septic tank followed by soak pit and used for gardening.	✓	
17.	Vehicular pollution due to transportation of raw material and finished product shall be controlled, regularly monitored and records kept.		✓

Annexure-XII

Chemical Fertilizer Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The gaseous emissions (SO_2, NO_X, Acid Mist, Fluorine, Ammonia and HC) and particulate matters, from various process units/storages should conform to the standards. The unit should provide:- (1) Tail gas alkali scrubbing system for control of SO_2 emission during start up and upset conditions in the sulphuric acid plant. (2) Fume scrubber to scrub off fluorine gases and hydroflurosilic acid. A fluorine recovery system in the phosphoric acid plant. (3) Dual mode scrubbing system for removal of both dust and volatiles (ammonia, hydrofluric acid) and. (4) Pollution control devices should be provided with interlocking facilities with manufacturing process.	✓	
2.	The hazardous solid waste (gypsum and sulphur sludge) should be disposed off in a scientifically designed landfill site with impervious lining and leachate collection facility. The supernatant from the gypsum pond should be recycled back to the phosphoric acid plant. The design details of the landfill site and long term plan for utilization of gypsum should be firmed up and report submitted to the Ministry for review as stipulated.	✓	
3.	There will be no generation of process effluent from SAP, PAP and DAP plants. The effluent generated from utilities, spillage, washing and domestic should be treated to conform to MINAS and used for greenbelt development. The unit should aim at achieving zero discharge practice from the fertilizer complex. In case zero discharge can not be achieved due to upset conditions or monsoon, the treated effluent should be discharged into the sea.		✓
4.	A scientific study should be commissioned to study impact on ground water or leachate from the gypsum pond area. The ground water quality should also be regularly monitored and record maintained. A study shall also be carried out indicating impact of drawl of groundwater on the salinity of water due to ingress of saline water.	✓	

Annexure-XIII

Pesticides Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The process effluent generation per day shall not exceed the stipulated quantity. The effluent shall be segregated into high COD / TDS and low COD / TDS stream. The high COD stream shall be evaporated in the Multiple Effect Evaporator (MEE) after recovering the solvents and low COD shall be treated in effluent treatment plant and treated effluent shall be sent to CETP for further treatment.	✓	
2.	SPCB shall not permit any new discharge from new industries or expansion of existing industries in the area that lead to CETP until the said CETP meet the required standards and meet the hydraulic capacity.		✓
3.	To control the process emissions two stage water and caustic scrubber shall be installed and emissions shall be dispersed through the stack of adequate height as per standards.	✓	
4.	Monitoring of chlorine shall be carried and data should be submitted to the Ministry/State Pollution Control Board. The company shall install chlorine detectors.	✓	
5.	Standards notified for pesticides unit under the Environment (Protection) Act, 1986 and amended time to time shall be followed by the Unit.	✓	
6.	The company shall undertake following Waste Minimization measures :- • Metering and control of quantities of active ingredients to minimize waste. • Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. • Use of automated filling to minimize spillage. • Use of Close Feed system into batch reactors. • Venting equipment through vapour recovery system. • Use of high pressure hoses for equipment clearing to reduce wastewater generation.	✓	

7.	Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by PCB.	✓	
8.	Solvent management shall be as follows : • Reactor shall be connected to chilled brine condenser system • Reactor and solvent handling pump shall have mechanical seals to prevent leakages. • The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery • Solvents shall be stored in a separate space specified with all safety measures. • Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. • Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.	✓	
9.	All the storage tanks shall be under negative pressure to avoid any leakages. Breathers, N_2 blanketing and condensers will be provided for all the storage tanks. Closed handling systems for chemicals and solvents will be provided. Magnetic seals will be provided for pumps/agitators for reactors for reduction of fugitive emissions. Chilled Brine based condensers shall be used to prevent VOC emissions. Solvent traps shall be installed wherever necessary.	✓	
10.	All venting equipment shall have vapour recovery system. All the pumps and other equipments where there is a likelihood of HC leakages shall be provided with Leak Detection and Repair (LDAR) system and LEL indicators and Hydrocarbon detectors. Provision for immediate isolation of such equipment, in case of a leakage will also be made. The company shall provide a well defined Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions. The detectors sensitivity will be in ppm levels.	✓	
11.	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.		✓
12.	The company shall make adequate arrangement for control of odour nuisance from the plant premises.	✓	

Annexure-XIV

Synthetic Organic Chemical (Drug and Pharma including Dye & Dye Intermediates) Industries

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Process residues containing mainly organic material (as liquid, Semi-solid or solid) or even aqueous streams containing very high COD values (>1,00,000 mg/l) due to organic material other than solvent should go for co-processing in cement plant or for incineration either in a common or captive incinerator meeting prescribed norms.	✓	
2.	The industrial effluent generation shall not exceed the stipulated limit. The effluent shall be forced evaporated in the Multiple effect evaporator. The condensate from the evaporator shall be recycled. Domestic effluent generation shall be within stipulated limit and shall be sent to septic tank/soak pit.	✓	
3.	The process emissions in the form of HCl, CO2 and SO2 shall be scrubbed with water and caustic scrubber respectively. The particulate emissions from the boiler shall be controlled by cyclone and emissions shall be dispersed through stack of adequate height as per standard.	✓	

4.	High COD, high TDS steams. The steps involved for treatment should be: • Neutralization followed by clarification • Clear liquor for stream stripping followed by evaporation in multiple effect evaporator (MEE). The condensate from stream stripping to be further processed to recover solvent mixture by distillation which may be sent either to an authorised recycler for recovery or to a cement plant for co-processing • The condensate from MEE and aqueous stream for distillation to be mixed with other low COD effluent and sent to biological treatment plant • The concentrated solution from MEE to go to spray drier / ATFD to get the salt to be disposed off. Presently, the salt is to be disposed to TSDF till a more environment friendly mode of treatment and use is developed	✓	
5.	Low TDS and low COD stream. The steps involved for treatment should be: • This effluent to be sent for biological treatment alongwith condensate from MEE as indicated above • After biological treatment the effluent to be sent to RO. The permeate from RO can be recycled in the process either for cooling tower makeup or for boiler (may be after one more step of RO) and reject to be fed to MEE. • The domestic effluent may also be sent to biological treatment plant along with the low TDS and low COD industrial effluent Stream	✓	
6.	Industry should install full fledge solvent recovery plants for recovery of solvents. The solvent management shall be as per the stipulated conditions and subsequent guidelines of clearance.	✓	
7.	Salt recovered from dryer should have organic content less than 1% by improving the MEE/Dryer system and recovered salt should go to TSDF (Industry should also explore the possibility of using the salt for other use).	✓	
8.	The company shall obtain authorization for collection, storage and disposal of hazardous waste under Hazardous Waste (Management, Handling and transboundary movement) rules, 2008 for management of hazardous waste.	✓	
9.	The process emission of HCl and other pollutant should be controlled by installing properly designed scrubber to meet the prescribed standard.	✓	

10.	VOC should be monitored at MEE/Dryer area and also at ETP and specific solvents like hexane, tolune, methylene dichloride, methanol should be monitored.		✓
11.	The company shall undertake following waste minimization measures : • Metering and control of quantities of active ingredient to minimize waste. • Reuse of by-products from the process as raw material or as raw material substitutes in other processes. • Use of automated filling to minimize spillage. • Use of Close Feed system into batch reactors. • Venting equipment through vapor recovery system. • Use of high pressure hoses for equipment cleaning to reduce wastewater generation	✓	
12.	Storage facilities for all solvents and auxiliary liquid fuel shall be made in the plant area in consultation with Department of Explosives, Nagpur. Disaster Management Plan, Risk Assessment and Consequence Analysis shall be prepared to meet any eventuality in case of an accident taking place.	✓	

Annexure-XV

Distillery & Sugar Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The industry shall ensure that the treated effluent and stack emissions from the unit are within the norms stipulated under the EPA rules or SPCB whichever is more stringent. In case of process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.	✓	
2.	The particulate emissions from the boilers shall be controlled by installation of bag filter and emissions shall be dispersed through stack height as per the guidelines. The particulate emissions shall conform to the prescribed standards.	✓	
3.	The spent wash generation shall not exceed the stipulated quantity. The spent wash after concentration in the multiple effect evaporator shall be incinerated in the boiler to achieve zero discharge incase of stand alone distillery. The treated water from the waste water treatment plant shall be recycled. In case of distillery attached with sugar industry, bio-methanation followed by bio-compositing may be followed	✓	
4.	The spent wash shall be stored in impervious pucca lagoons. The spent wash lagoons shall have proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. Storage shall not exceed stipulated capacity.	✓	
5.	Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis.	✓	
6.	Green belt of stipulated area shall be provided to mitigate the effects of fugitive emissions all around the plant as per	✓	

	guidelines.		
7.	Company shall adopt rainwater harvesting measures to recharge the ground water.		✓
8.	Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employee shall be maintained separately.		✓
9.	The company shall adopt continuous fermentation technology and spent wash generation from the molasses based process and from the cane juice process shall not exceed prescribed limit. The spent wash after concentration in the multiple effect evaporator shall be incinerated in concentrated spent wash fired boiler in the molasses based process in case of standalone unit. The spent wash from the distillery attached with sugar industry should follow the treatment i.e. bio-methanation followed by composting with press mud. The effluent from the sugar and power plant shall be treated in ETP and treated effluent after conforming to the prescribed standards shall be used for land irrigation. The land requirement for the compost yard shall be as per the CPCB guidelines.	✓	
10.	The spent wash shall be stored in impervious pucca lagoons. The spent wash lagoons shall have proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. As per the CPCB recommendation, storage for the concentrated spent wash shall not exceed 5 days capacity and storage for treated effluent from the sugar unit shall not be more than 15 days.	✓	

Annexure-XVI

Paint Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The project authorities shall ensure periodical monitoring of the solvents like Xylene and Toluene. No Benzene shall be used in the process.	✓	
2.	The project authorities shall provide vents with condensers to control solvent emissions and recover the same. The recovery of the solvents shall not be less than 98%.	✓	
3.	The gaseous emissions (SO_2, NO_X, HCl, Tolune, xylene, butane) and particulate matters from various process units shall conform to the standards prescribed.	✓	
4.	Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by SPCB. For control of fugitive emission and VOCs following steps shall be followed : A. Closed handling system shall be provided for chemicals. B. Reflux condenser shall be provided over reactor. C. Chemical handling pump shall be provided with mechanical seals to prevent leakages. D. System of leak detection and repair of pump/pipeline based on preventive maintenance. E. Chemicals shall be taken to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.	✓	
5.	A full fledged treatment plant shall be installed for treatment of the wastewater to achieve the standards prescribed. The treated wastewater shall be reused and zero discharge condition shall be maintained.	✓	

6.	ETP sludge shall be partly incinerated and partly disposed to TSDF. Distillation Residue shall be either incinerated or sold to authorized vendors. Incinerator ash shall be stored in Secured Land Fill (SLF) at the site and then sent to the TSDF. Waste paint and oil shall be sold to authorized vendors.	✓	
7.	The project authorities shall store hazardous wastes in leachate proof storage facility at site and shall be disposed of to TSDF.	✓	
8.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.		✓
9.	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	✓	
10.	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.		✓

Annexure-XVII

Pulp and Paper Industry

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The company shall install high volume, low concentration NCG collection & destruction system to mitigate all malodorous gases emitted and to submit compliance report.	✓	
2.	The project authority shall install multi cyclones, wet scrubbers with the boilers to achieve the particulate emission below 50 mg/Nm^3. The emissions from Fluidised Bed Reactor (FBR) in chemical recovery section shall be controlled to meet prescribed standard.	✓	
3.	The company shall install dust collection system to reduce fugitive dust from all the units operations and vehicular movement. Efficiency of all the ESP (Electrostatic Precipitator) to be regularly monitored, both in Chemical Recovery Boilers & Power Boilers and all parameters to be met as per norms.	✓	
4.	The proponent shall follow International Standards of safety for ClO_2 generation and storage system, and ozone plant, and certification on regular basis may be submitted. Provision for adequate safety for personnel in case of any accidental leakage should be in place.	✓	
5.	The water requirement shall not exceed the stipulated quantity. No ground water shall be withdrawn. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the EPA rules or SPCB whichever is more stringent. The company shall make efforts to limit the water consumption as stipulated per tonne of product. Mill should adopt modern RO/UF or any other compatible technology to reduce both water consumption and ultimate discharge to the river.	✓	
6.	Continuous and regular monitoring of ETP performance and waste water discharged from all the process operations of the		✓

	mill (for all the relevant pollution parameters), should be carried out.		
7.	The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production.	✓	
8.	ECF technology shall be used and lime kiln shall be installed to manage lime sludge	✓	

Annexure-XVIII

Airport Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	The Wastewater be treated and reused within the airport to the maximum extent including land irrigation.		✓
2.	The Airport Authority of India shall ensure architectural assimilation of the cultural and heritage motifs in the design of the airport.		✓
3.	Necessary steps for noise mitigation shall be included such as appropriate acoustic panels or other measures including installing diffuser in the main run way to mitigate the noise levels especially along the interface with surrounding habitations.		✓
4.	The terminal building shall be designed taking into account the National Building Code guidelines and local heritage values.		✓
5.	No additional groundwater shall be tapped to meet the water requirement of the project.	✓	
6.	On-site emergency plan including fire fighting measures should be submitted to the Ministry. All recommendations listed in the DMP reports shall be implemented.	✓	
7.	Construction of the proposed structure should be undertaken meticulously conforming to the existing Central/ local rules.	✓	
8.	The quarrying material required for the construction purpose shall be obtained only from the approval quarries/ borrow areas. Adequate safeguard measures shall be taken to ensure that the overburden and rocks at the quarry site do not find their way into water bodies.		✓
9.	The entire hydrological system shall be studied as one composite system with appropriate boundary conditions to reflect the worst conditions and compliance ensured such as - flooding, surface runoff not only from the airport but also from	✓	

	surrounding areas as well, normal flow, tidal flow due to tidal surge having a long return period, possible obstructions to flow, tributaries joining the main river etc so as to take appropriate protection and remedial measures. A Comprehensive Master Plan for Surface drainage and Flood protection should be prepared.		
10.	Systemic and periodic monitoring mechanism need to be put in place by Project to assess the impact on sub-surface flow/ impact on aquifers as well as surface water bodies in different seasons. Necessary additional environmental protection measures to be adopted to address the impact of proposed development in coastal sub-subsurface flow as well as impact on aquifers.	✓	
11.	Project shall prepare a Management Plan to handle the runoff from the airport and to ensure that runoff associated risks/ impacts such as siltation in receiving water body are avoided and are taken care within airport area during monsoons.	✓	
12.	The water quality of the River, Creek and the ground water is to be monitored.		✓
13.	The waste water generated from the aircraft maintenance hangers may contain hazardous materials like lead, chromium, Sulphates, Phenolic compounds, V.O.C's etc. The surface runoff from the airport area shall also contain oils, grease, Sulphates etc, which cannot be sent directly to sewage treatment plant for the treatment. A separate treatment plant for managing the waste water shall be specified and adopted.		✓
14.	Based on the geological profile underneath the proposed airport, suitable consolidation factor shall be arrived to assess the additional noise/ vibration levels that would be produced during impact of landing & take off the air crafts simultaneously on both the runways. Further, the partially quarried hills in the vicinity will become a rebound shell for noise. Project shall examine the details of noise/ vibration levels those are likely to be increased both during day and night time and the mitigative measures shall be installed to reduce the (noise/ vibration levels) impacts.	✓	
15.	Standard instrument arrival and departure procedure shall be designed to minimise the noise levels within the permissible limits for the area falling in the funnel near the airport on		✓

	either side.		
16.	Project shall prepare a detailed traffic management plan to take care of increased vehicular traffic which should also cover/ clearly delineate widening/ increasing the existing roads and associated road infrastructure approving/ installation of road safety features/ pedestrian facility/FOB/under passes etc (that can be done by carrying out road safety audits). Measures shall be taken to prevent encroachment along/within the ROWs on connecting/ main arterial roads.		✓
17.	Necessary road (National and State Highways) and rail connectivity shall also be upgraded to handle the increased passenger and cargo traffic, in addition to metro for transition of passengers.		✓
18.	The measures should be taken to improve public transportation including dedicated road MRTS corridors to access to Airport, may also be considered for the same. Energy Efficient dedicated rail based public transport facility; suburban metro train in particular, may be created.		✓
19.	Traffic Management during construction phase should be clearly planned so that the traffic situation is not further worsened on the existing connecting roads. Installations of Noise barrier/ Green Belts should be clearly indicated in the plan (After identifying critical locations).		✓
20.	Baseline survey of avian fauna be conducted before the start of construction and the details shall be put up as stipulated.	✓	
21.	Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should have acoustic enclosure and conform to rules made under the Environment (Protection) Act, 1986.		✓
22.	Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels.		✓
23.	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.		✓

Annexure-XIX

TSDF Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	It should be ensured that the TSDF fulfills all the provisions of Hazardous Wastes (Management, Handling and Transboundary) Rules, 2008 and the design of landfill is as per the guidelines with proper Leachate collection arrangement	✓	
2.	The transportation of the Hazardous wastes to the TSDF should conform to the norms laid down in the Hazardous Wastes (MHT) Rules, 2008	✓	
3.	The incineration of the Hazardous wastes conforms to the norms laid down in the Hazardous Wastes (MHT) Rules, 2008.	✓	
4.	The TSDF should only handle the waste generated from the member units.		✓
5.	The rainwater harvesting pits and leachate tanks should be at sufficient distance to avoid contamination of ground water.	✓	
6.	Forced Evaporation/ME should be provided to treat the effluent / Leachate generated from the landfill.	✓	
7.	The depth of the land fill should be decided based on the ground water level/hydrological studies at the site.	✓	
8.	It should be ensured that wastes with organic content > 5% of degradable organic matters are not disposed in to the landfill. However, required arrangement for collection, treatment and disposal of gases from the Landfill if any, should be provided.		✓
9.	An On Site Emergency Management Plan should prepared and implemented.	✓	
10.	Periodical ground water/soil monitoring in and around the site to check the contamination including TCLP test for heavy metals should be carried out.	✓	
11.	Project proponent should carryout periodical air quality monitoring in and around the site including VOC, HC.		✓
12.	Necessary facility for onsite testing of wastes should be set up to decide the requirement of treatment if any, before disposal.	✓	
13.	Assessment should be made on the functioning of the landfill site, through a third party. Constitution of such independent body shall be informed to authorities.	✓	

Annexure-XX

Port and Harbour Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation area.	✓	
2.	All the conditions stipulated by the Coastal Zone Management Authority shall be strictly complied with.		✓
3.	Dredging operations, if any, should be undertaken in consultation with expert organization to ensure that dredging operations do not cause adverse impact on water quality and marine productivity in the vicinity. Dredging operation as far as possible should be kept to the minimum for avoiding any adverse impact on marine life.		✓
4.	Fitting of Deflectors in the dredgers to prevent harm to marine species should be ensured.	✓	
5.	Disposal sites for excavated material should be so designed that the revised land use after dumping and changes in the land use pattern do not interfere with the natural drainage.		✓
6.	To meet with any emergency situation, adequate foam containers should be kept ready with supporting fire fighting system and water pipeline.	✓	
7.	The domestic sewage shall be properly treated before disposal.		✓
8.	Staff posted in sensitive areas should be trained in implementation of the Crisis Management Plan already drawn by the authorities. Mock drill(s) for this purpose should be conducted on a regular basis. Provisions of Dock Safety Act and the guidelines issued by the DG, FASLI/CLI, Mumbai for the safety and health of the workers should be followed.	✓	
9.	The stack height of the DG sets shall be equivalent to the combined capacity of all the DG sets.	✓	
10.	To prevent discharge of sewage and other liquid wastes including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided.	✓	
11.	Adequate noise control measure must be provided to control		✓

	noise level at various work places within the standard prescribed. Ear plugs and ear muffs should be provided to the workers in the project area.		
12.	The quality of treated effluents, solid wastes and emission must conform to the standards laid down by the competent authority. There shall be no disposal of solid and liquid waste into the coastal area.	✓	
13.	Necessary leakage detection devices with early warning system must be provided at strategic locations.	✓	
14.	Standby DG Sets must be provided to ensure uninterrupted power supply of the pump house and the fire fighting system.		✓
15.	Third party inspection should be ensured during construction and operational phases with adequate insurance cover.		✓
16.	Long-term scientific study should be undertaken to find out the impact of proposed project on Mangrove vegetation and recommendations suggested shall be implemented.		
17.	All lights should be dark sky friendly and should not create glare. Glare created by light can disturb/ disorient hatchlings of Olive Ridley turtles. Light may be so designed that they do not create glare through spillage by following best practices adopted globally.	✓	
18.	Undertaking of awareness campaigns amongst fishermen and villagers to minimize harm to species as stipulated.		✓
19.	No beach sand shall be used for construction activities.	✓	
20.	The hydro-dynamic studies shall be undertaken to ascertain the impact to the shoreline in the stretch and ecologically sensitive areas.	✓	
21.	Oil spills, if any, shall be properly collected and disposed as per the Rules.	✓	
22.	The approach channel shall be properly demarcated with lighted buoys for safe navigation and adequate traffic control guidelines shall be framed.	✓	
23.	No ice plants shall be installed in CRZ area.	✓	
24.	The height of the buildings other than the lighthouse tower should not exceed 9 meters, and the constructions should be in accordance with the existing FSI/FAR norms in accordance with Coastal Regulation Zone Notification, 1991/2011.		

25.	The construction waste should be disposed off in designated dumping grounds outside the port area after obtaining necessary permissions from the local Authorities.	✓	
26.	During transportation of the construction material, it may be ensured that all safety norms are followed and no spillage takes place in the city roads.	✓	
27.	The project activities should not disturb the movement of fishing vessels or fishermen.		✓
28.	The project should not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/Electricity Department.		✓
29.	No product other than those permissible in the Coastal Regulation Zone Notification, should be stored in the Coastal Regulation Zone area.	✓	
30.	All construction design/ drawings relating to construction activities must have the approval of the concerned Departments/ Agencies. Ground water should not be tapped for construction activities as the drawl of ground water for industrial use from the CRZ area is a prohibited activity. It should also be ensured that as a result of the proposed constructions, ingress of saline water into ground water does not take place.	✓	
31.	Necessary permission may be obtained from the concerned authorities for cutting of trees, if any, for the project. The project proponent shall take up mangrove plantation / green belt in the project area, on the landward side of the designated area to minimize noise and air pollution and wherever possible.		✓
32.	Putrefied and discarded parts of fishes shall be removed from the Fish Landing Centre and disposed off in the approved landfill / used as manure / poultry feed.		✓
33.	The Fisheries Department shall take up the matter of adequate road facilities for transporting fishes for inclusion in the Regional Plan of the area.		✓
34.	The relocation of the fishermen community should be done strictly in accordance with the norms prescribed by the State Government. The relocated fishermen community, if any, will be provided with all facilities including health care, education, sanitation and livelihood.		✓

Annexure-XXI

Highway Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	A large quantity of solid waste debris due to demolition of pavement bitumen surface and residual soil are generated during construction of road. The location of land fill site where this solid waste proposed to be dumped along with mitigative measures taken to prevent the contamination of soil and ground water by leaching action should be furnished.	✓	
2.	Adequate number of culverts shall be provided in the project. Wherever bifurcation of land is taking place as a result of construction of the project, additional culvert which may also act as an under passes to provide connectivity on both sides of the road shall be provided.		✓
3.	Adequate number of fly-overs, underpasses should be provided in the inhabited areas. The underpasses shall be suitably designed to prevent water-logging in the rainy season.		✓
4.	Adequate road safety measures like service roads, bus bays, inter-section improvements, pedestrian crossings will be provided as per the IRC guidelines.		✓
5.	The road should be raised by 1 m above the flood line to prevent flooding of the road.	✓	
6.	An effective monitoring mechanism shall be evolved to ensure that the environmental safeguard measures have been implemented properly.	✓	
7.	Detailed plan for use of fly ash in the project may be made and submitted.		✓
8.	Felling of trees will be restricted to the barest minimum. The trees which need to be removed shall be relocated to the extent possible. Where it is not possible to avoid felling of trees, thrice the number of trees felled shall be planted. The		✓

	cost in this regard shall be included in the project cost. Necessary permission for tree felling from the concerned department shall be obtained before commencement of the project work.		
9.	Large quantity of fill materials and blue metal are required for the construction of the road. The location and details of the quarries and borrow pits should be provided to the Ministry.	✓	
10.	Noise barriers will be provided at appropriate locations particularly in the areas where the alignment passes through inhabited area so as to ensure that the noise levels do not exceed the prescribed standards.	✓	
11.	The cultural and religious places, schools and hospitals affected by the project should be rehabilitated without affecting the sentiments of local people.		✓
12.	The details of improvements proposed to avoid accidents at accident prone locations should be furnished.		✓
13.	The embankments slopes and the slopes left after cutting will be provided with vegetative turfing to avoid soil erosion.	✓	
14.	The hot mix plant will be located at least 500 m away from the habitation and on the barren land.	✓	
15.	The ponds and other water bodies along the road should not be disturbed. No solid waste should be dumped in these areas.	✓	
16.	The project proponent shall submit monitoring data/information on noise, land environment, water quality including ground water quality before and after use of fly ash, risk management, quarry area details, flood inundation area, pond relocation etc. at the start of the project and after one year with a view to undertake comparison with the base line information available at the beginning of the project.		✓
17.	For providing safety to the crossing animals and avoid road accidents speed breakers/rumbled strips shall be constructed at the identified locations of the animal movements. Enough hoardings and signage shall also be put up for the public and vehicles convenience.	✓	

Annexure-XXII

CETP Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Construction of the proposed CETP shall be undertaken meticulously confirming to the existing Central/local rules and regulations. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Department/Agencies.	✓	
2.	The authority as stipulated shall be responsible for operation & maintenance of the CETP. Separate fund should be earmarked for this purpose.		✓
3.	Detailed MOU among the generator units shall be worked out with the partner unit to ensure that the units comply with the agreement and send their effluents as per the agreement. The effluent generator units shall provide the effluents as per the agreed norms.		✓
4.	Consent to Establish from the State Pollution Control Board shall be obtained before initiating the project.	✓	
5.	The project proponent shall ensure that chemicals solvents, and other toxic solvents are not allowed to enter the CETP	✓	
6.	There shall be no disposal untreated effluents into the water bodies or anywhere outside the project premises.	✓	
7.	The CETP units shall maintain Zero discharge throughout the year. Necessary provisions/facilities shall be provided to take care of additional water in rainy season.		✓
8.	In the event of the CETPs not functioning as proposed/breakdown of the CETP the units will close down immediately and stop discharging the effluents.	✓	
9.	The units and the CETP will maintain daily log book of the quantity and quality of discharge, quantity of inflow into the CETP, details of the treatment at each stage of the CETP including the raw materials used, quantity of the treated water proposed to recycled, reused within the textile park/units,	✓	

	quantity of the treated effluent discharged. All the above information shall be provided on-line of the web site exclusively prepared for the purpose by the CETP owner. The website shall be accessible by the public.		
10.	The CETP shall have adequate power back up facility, to meet the energy requirement in case of power failure from the grid.	✓	
11.	The CETP owner shall study the water quality of the nallah/river where the units were earlier discharging the effluents. The CETP owner shall also monitor the nallah/river water quality on daily basis.		✓
12.	The CETP shall be accessible by the public to monitor the functioning of the CETP.		✓
13.	The solid waste from CETP/units will be disposed off as per the norms laid down.		✓
14.	Ground water will also be monitored and information made available on the above web site of the company.	✓	
15.	To meet any emergency situation, appropriate fire-fighting system shall be installed. Appropriate arrangements for uninterrupted power supply to the environment protection equipment and continuous water supply for the fire fighting system shall be made.	✓	
16.	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.		✓
17.	Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.		✓
18.	Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.	✓	
19.	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	✓	
20.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes. Authorization from the PCB shall be obtained for collection/treatment /storage/disposal of hazardous wastes.		✓

Annexure-XXIII

Building/Construction Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
	Part- A Construction Phase:		
1.	Project proponent to set up an environment management cell and ensure that the cell manages/maintains all the environmental aspects such as sewage treatment, solid waste disposal, maintenance of green belt areas, etc, and in case the commercial space is sold/leased, then enter into an agreement with prospective buyers to ensure that they maintain the cell and take care of all environment concerns during the operation phase of the project. In addition, sufficient fees should be levied so as to raise a corpus fund to maintain the environment cell.		✓
2.	Appoint an Environment and safety engineer during the construction phase to take care of environment and safety aspects		✓
3.	During the construction phase utmost care is taken to ensure that there is no noise nuisance, no air and water pollution and no disturbance to the nearby inhabitants. In case of violation, the project construction activity may have to be directed to be stopped		✓
4.	The project site should be covered from all sides by raising sufficiently tall barricades with sheets to ensure that pollutants do not spill to the surroundings		✓
5.	Provide at the main entrances bell gates, which are so located inside the boundary of the project to enable smooth flow of traffic on the main road leading to the entrance		✓

6.	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase. Sufficient number of toilets/bathrooms shall be provided with required mobile toilets, mobile STP for construction work force.		✓
7.	A first aid room should be provided in the Project both during construction and operation of the project.		✓
8.	For disinfection of wastewater which is not meant for recycling for toilet flushing use ultra violet radiation and not chlorination. For treated waste water meant for reuse for toilet flushing, disinfect by using chlorination.		✓
9.	All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.	✓	
10.	Disposal of muck, construction debris during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority	✓	
11.	Soil and ground water samples should be tested at the project site during the construction phase to ascertain that there is no threat to ground water quality by leaching of heavy metals and or other toxic contaminants and report submitted to SEIAA		✓
12.	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.		✓
13.	The diesel generator sets to be used during construction phase should be of low sulphur diesel type and should conform to E (P A) Rules prescribed for air and noise emission standards.		✓
14.	Vehicles hired for bringing construction material to the site should be in good condition and should conform to the applicable air and noise emissions standards and should be operated only during non-peak hours.		✓

15.	Ambient noise levels should conform to the residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.		✓
16.	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of 14-09-1999 and amended as on 27-08-2003	✓	
17.	Ready Mixed concrete must be used in building construction		✓
18.	Storm water control and its re-use as per CGWB and BIS standards for various applications.		✓
19.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices and only tertiary treated water shall be used for construction.		✓
20.	No ground water is to be drawn without permission from the Central Ground Water Authority	✓	
21.	Use of glass shall not exceed 40% of exposed area to reduce the electricity consumption and load on air conditioning. If necessary use high quality double glass with special reflective coating in windows.		✓
22.	The provision of Energy conservation Building code, 2007 shall be fully complied with.		✓
23.	Roof should meet prescriptive requirement as per Energy conservation Building Code 2007 by using appropriate thermal insulation material.		✓
24.	Opaque wall should meet prescriptive requirement as per Energy conservation Building Code, 2007 which is proposed to be mandatory for all air conditioned spaces while it is optional for non air conditioned spaces by use of appropriate thermal insulation material to fulfil requirement	✓	✓
25.	The Sewage Treatment Plant (STP) should be installed of required capacity and the plants shall be got certified by an independent expert and a report submitted. Discharge of treated sewage shall conform to the norms & standards.	✓	

	Treated sewage should be used for flushing gardening etc.		
26.	Ensure that the excess runoff rainwater from the greenbelt area, which is irrigated by treated water, does not get into infiltration pits and contaminate the groundwater. Such excess flow should be safely let into the storm water drains.		✓
27.	The solid waste generated should be properly collected and segregated insitu. The biodegradable organic waste be composted by installing bio converter in site and used. The non-biodegradable waste to be disposed to the authorized recyclers.		✓
28.	Any hazardous waste including biomedical waste should be disposed off as per the applicable rules and norms with necessary approvals.	✓	
29.	Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for the complex should be provided.		✓
30.	A report on the energy conservation measures confirming to energy conservation norms finalized by the Bureau of Energy Efficiency should be prepared incorporating details about building materials and technology R & U factors etc.		✓
31.	All toilets should have dual plumbing line and no wastewater is discharged from the unit.	✓	
32.	The Environment Management plan including the human health and safety management plan and fire safety and protection plan proposed by the proponent shall be strictly implemented.		✓
33.	The proposed project shall have DG sets as an alternate power supply source as proposed.		✓
	Part- B Operational Phase:		
34.	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water. Treatment of 100% grey water by decentralized treatment should be done ensuring that the re-circulated water should have BOD as proposed and the recycled water will be used for	✓	

	flushing, gardening and HVAC make up and DG set cooling. The borewell for rainwater recharging should be kept at least 5 meters above the highest ground water table.		
35.	Treatment of 100% grey water by decentralized treatment should be done.	✓	
36.	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.		✓
37.	Diesel generator sets proposed as back up power for lifts and common area should be of enclosed type and conform to E(P)A Rules prescribed for air and noise emission standards. Exhaust should be raised to 4 meters above the roof top.	✓	
38.	Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed Commercial Complex.		✓
39.	Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.		✓
40.	There should be no traffic congestion near the entry and exit points from the roads adjoining the proposed project site. Parking should be fully internalized and no public space should be utilized.		✓
41.	The solar energy shall be used for water heating as well as lighting common areas and verifiable measures shall be adopted for energy conservation and water conservation.		✓

Annexure-XXIV

Thermal Power Projects

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Status report for implementation of 100% utilization of Fly Ash generated shall be submitted.	✓	
2.	Stacks of prescribed height shall be provided with continuous online monitoring equipments for SOx, NOx and Particulate matter. Exit velocity of flue gases shall not be less than prescribed limit. Mercury emissions from stack shall also be monitored on periodic basis.	✓	
3.	Regular monitoring of ground level concentration of SO_2, NOx, RSPM and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately.		✓
4.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission does not exceed stipulated standard.	✓	
5.	Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas, and conveyer belts to control fugitive emission.	✓	
6.	Space provision be made for Flue gas De-sulphurisation (FGD) unit, if required at a later stage to control SO_2.	✓	
7.	Low NOx burner shall be provided to reduce the NOx emission.	✓	
8.	Noise levels emanating from turbines shall be controlled to ensure compliance to standards for workzone. People working in the high noise area, should be provided with requisite personal protective equipment like earplugs/ear muffs etc.. Workers engaged in noisy areas shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.		✓

9.	Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Fly Ash Utilization. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	✓	
10.	Base line health data within study area shall be collected and prepared. Mitigation measures should be taken for control of endemic diseases.		✓
11.	Ash pond shall be lined with impervious lining as per the soil conditions. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	✓	
12.	Impact on agricultural crops (as applicable) due to operation of the power plant shall be studied from an institute of repute within six months. The study shall also include impact due to heavy metals associated with emission from power plant.		✓
13.	Regular monitoring of ground water in and around the ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out. The data so obtained should be compared with the baseline data so as to ensure that the ground water and surface water quality is not adversely affected due to the project.		✓
14.	A conservation plan for wildlife as stipulated, shall be prepared in consultation with an expert organization and duly approved by State Wildlife Department.	✓	
15.	The industry should comply with the general effluent standards.	✓	
16.	CFBC Technology with lime injection for removal of SO_2 up to 70% shall be provided.	✓	
17.	The total water drawal from River for all units should not exceed the requirement as stipulaed.	✓	
18.	Hot water coming from the condenser should be properly cooled so as to ensure to keep the temperature of the receiving surface water as per the standards.		✓

19.	Ash pond shall be lined with impervious lining as per the soil conditions. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	✓	
20.	Plant should be designed for zero discharge. The treated effluents emanating from the different plants such as DM plant, boiler blow down, ash pond/dyke, sewage etc conforming to the prescribed standards shall be re-circulated and reused.	✓	
21.	Closed cycle cooling (COC) system with cooling tower shall be provided. Prescribed COC should be adopted.	✓	
22.	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as per EC conditions.		✓
23.	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur Content in the liquid fuel will not exceed 0.5%.	✓	
24.	First Aid and sanitation arrangements shall be made for the drivers and other contract Workers during construction phase.	✓	

Natural Gas based Combined Cycle Power Plant

1.	Dry Low NOx burners shall be provided and it shall be ensured that NOx emissions from individual stack shall be limited to 50 ppm.	✓	
2.	Closed cycle cooling system with cooling towers shall be provided. COC of at least 9 shall be adopted and the effluent treated as per the prescribed norms.	✓	
3.	Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.	✓	
4.	Regular mock drills for the on-site emergency management plan specially pertaining to fire and explosion hazards due to use of natural gas shall be carried out.	✓	

Annexure-XXV

General Conditions

Sl. No.	EC Conditions	Non compliance of EC Conditions	
		Serious	Not so serious
1.	Any changes in the scope of the project would require a fresh appraisal by this authority. No further expansion or modifications in the plant shall be carried out without prior approval of MoEF / SEIAA.	✓	
2.	Compliance to all the specific and general conditions stipulated for the existing plant shall be ensured.	✓	
3.	The height of the stack shall be as per the standards prescribed under Environment (Protection) Rules with continuous online monitoring equipments for SO_2, NOx and Particulate matter.	✓	
4.	AAQ monitoring stations shall be setup on the basis of mathematical modeling to represent short-term ground level concentration, human settlements, sensitive targets etc. The instruments used for AAQ monitoring shall be calibrated time to time. Ambient air quality monitoring station should be set up in the down wind direction as well as where maximum ground level concentration of SPM, SO2, fluorine, ammonia and HC are anticipated		✓
5.	The treatment facility and the treated effluent shall meet the prescribed standards.		
6.	Sewage treatment plant shall be provided and the treated water shall be used for raising greenbelt/plantation.		✓
7.	The gaseous emissions from the various process units shall conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent. At no time, the emission level shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.		✓
8.	Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM particularly in mine area and other vulnerable areas.	✓	
9.	Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. Secondary emissions from the drilling, blasting, excavation, loading and transportation operations shall be controlled by water	✓	

	sprinkling and other dust suppression methods.		
10.	Risk & Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office.	✓	
11.	Safety standards as per National Building Code (NBC) should be ensured.	✓	
12.	The company shall undertake eco-development measures including community welfare measures in the project area.		✓
13.	The project authorities shall meet water requirement of nearby village (s) in case the village wells go dry due to dewatering of mine.		✓
14.	The project proponent should undertake activities to improve the quality of life of the local people living along the project site. The activities should include supply of drinking water, providing rainwater harvesting structures.		✓
15.	For employing unskilled, semi-skilled and skilled workers for the project, preference shall be given to local people.		✓
16.	The responses/commitments made during public hearing should be complied with letter and spirit.	✓	
17.	Adequate free fuel arrangement shall be made for the labour engaged in the construction work at project cost so that indiscriminate felling of trees is prevented. Fuel depots/may be opened at the site to provide the fuel (kerosene/LPG)		✓
18.	Pre-placement medical examination for the workers engaged in the project shall be carried out and records maintained. Medical facilities as well as recreational facilities should also be provided to the labourers.		✓
19.	The labourers to be engaged for construction works should be thoroughly examined by health personal & adequately treated before issuing them work permit.		✓
20.	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. The safe disposal of waste water and solid wastes generated during the construction phase should be ensured.		✓
21.	Provision shall be made for the housing of construction laborers within the site with all necessary infrastructures. The housing may be in the form of temporary structures to be removed after the completion of the project. The facilities shall include the crèche.		✓
22.	All necessary clearances from the concerned Authorities shall be obtained before initiating the project.	✓	
23.	A detailed report on the implementation of rehabilitation action plan should be furnished to Ministry of Environment and Forests, Regional Office. Rehabilitation and payment of compensation to the project affected people (PAPs) shall be made as per the policy of the State Government.	✓	
24.	The details of the land holding of project affected persons whose land is being acquired shall be submitted to this Ministry. The R&R benefits for the land losing households will	✓	

	be as per the National Rehabilitation and Resettlement Policy, whichever is higher. Adequate publicity of the compensation package of NRRP 2007/State Policy shall be given in the affected villages.		
25.	All the recommendations made in the Charter of Corporate Responsibility for Environmental Protection (CREP) issued by CPCB should be implemented.		✓
26.	Green belt and plantation as stipulated in the condition shall be raised. Project proponent should develop green belt with plant species that are significant and used for the pollution abatement.		✓
27.	The project proponent shall take all precautionary measures during project operation for conservation and protection of endangered fauna. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost.	✓	
28.	Necessary clearance under the FC Act, 1980 for diversion of the forest land involved shall be obtained from the Competent Authority. No activity in the forest area shall be undertaken till the requisite clearance is obtained for the same.	✓	
29.	Project should obtain PLI policy under Public Liability Insurance Act.	✓	
30.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act 1980 and Wildlife (Protection) Act 1972 etc shall be obtained as applicable by project proponents from the competent authorities.	✓	✓
31.	No additional land shall be acquired for any facility relating to the proposed expansion project.		✓
32.	Base line health data within study area shall be collected and prepared within stipulated period. Mitigation measures for control of endemic diseases for implementation in the study area shall be prepared and submitted along with the base line data.		✓
33.	Necessary provision shall be made for fire fighting facilities within the complex.	✓	
34.	The project authorities will recycle liquid effluent to the maximum extent possible either as process water or for afforestation. The liquid effluent coming out of the complex must conform to the standards prescribed by the CPCB/SPCB. Continuous monitoring facilities should be provided by the project authority. If the effluent quality exceeds the standard prescribed at any time, the corresponding units of the plant which are contributing to the excessive pollutant loads shall be stopped from operation till the quality of the effluents		✓

	discharged from those units conformed to the standards stipulated.		
35.	Guard ponds of sufficient holding capacity should be provided to cope with the effluent discharge during the process disturbances. In the event of failure or non-functioning of the primary treatment facilities, the respective units should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency.	✓	
36.	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same six monthly basis. The criteria pollutant namely; PM10, SO2, NOx (ambient levels as well as stack emissions) shall be monitored.		✓
37.	The company shall submit the comprehensive water management plan along with monitoring plan for the ground water quality and the level, within three months from date of issue of this letter.		✓
38.	The ash generated from the plant shall be disposed of in accordance with the provisions of the Fly Ash Notification, 2009.		✓
39.	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	✓	
40.	Project shall ensure that all the risks (such as fire, hazardous material waste handling, oil spills, waste, both liquid/solid wastes) associated/ resultant risk during various stages of development (like planning, construction, operation) are managed within the project area. In case of any unforeseen event the liability, environmental and social will rest with the developer/project.		✓
41.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.	✓	
42.	All the solid/hazardous waste including ETP sludge and waste oil shall properly stored at the site as per CPCB guideline and disposed off to nearby authorized TSDF and recycler/re-processors respectively.	✓	
43.	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date. Prior permission from SPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. High calorific value waste shall be sent to cement plant. Membership shall be obtained for TSDF/CHWI for the disposal of solid/hazardous waste.	✓	
44.	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and		✓

	routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.		
45.	The company shall adopt waste minimization /cleaner production techniques to reduce the pollution load and action plan in this regard submitted to the Ministry.	✓	
46.	Regular monitoring of ground water level and quality shall be carried out in and around the project by establishing a network of existing wells and constructing new Piezometers. The monitoring should be carried out as stipulated and the data thus collected shall be sent regularly to the Ministry of Environment and Forests and reported to concerned authority.	✓	
47.	Rain water harvesting measures shall be adopted for the augmentation of ground water. The project must also harvest the rainwater from the rooftops and storm water drains to recharge the ground water. The project must also collect rainwater and use the same water for the various activities of the project to conserve fresh water.		✓
48.	Regular (Quarterly) monitoring of Ground water quality near the areas where effluent is used for irrigation as well as upstream and downstream water quality assessment of River where part of mill effluent is discharged.	✓	
49.	Total ground water requirement shall not exceed the stipulated limit with prior permission shall be obtained from concerned authorities.	✓	
50.	Possibilities shall be explored for reuse of the treated sewage water instead of disposal into river/Sea.		✓
51.	There shall be no ground water drawl in CRZ area for the project.	✓	
52.	It shall be ensured that due to the project, there is no adverse impact on the drainage of the area and recharge of groundwater.	✓	
53.	The recommendations made in the Environment Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk Analysis Reports of the project shall be effectively implemented.	✓	
54.	Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.		✓
55.	The top soil removed shall be stacked separately for reuse during restoration process.	✓	
56.	Construction shall be carried out strictly as per the provisions of CRZ Notification, 1991. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	✓	
57.	Mangroves shall not be destroyed during construction and operation of the project.	✓	
58.	Used oil and batteries shall be sold to registered recyclers/reprocessors only.	✓	

59.	A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of Senior Executive.		✓
60.	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.		✓
61.	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.		✓
62.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.		✓
63.	Six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.		✓
64.	The project proponent should display the conditions prominently at the entrance of the project on a suitable size board for the information of the public		✓
65.	The requisite amount shall be earmarked towards capital cost and recurring cost/annum for implementing environment pollution control measures respectively and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and an implementation schedule for implementing all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.	✓	
66.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and at the Website at http:/envfor.nic.in. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned.		✓
67.	Under the provisions of Environmental (Protections) Act,1986, Legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining Environmental Clearance.	✓	

Appendix-I

No. J-11013/30/2009-IA.II (I)
Government of India
Ministry of Environment and Forests

Paryavaran Bhawan
CGO Complex, Lodi Road,
New Delhi-110003

Dated 19th May, 2011

ORDER

Sub: Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious – Constitution of Committee regarding.

Pursuant to the recommendations made in the report of the Committee constituted to examine the issues relating to Monitoring of Projects, it has been decided to constitute a Committee to develop a criteria and formulate guidelines for categorization of non compliances into the category of 'serious' and 'not so serious'. The composition of the Committee will be as under:-

(i)	Dr. B. Sengupta, Former Member Secretary, CPCB	-	Chairman
(ii)	Dr. A.B. Harpanahalli, Director, Regional Office, Bangalore	-	Member
(iii)	Dr. K.K. Garg, Director, Regional Office, Lucknow	-	Member
(iv)	Representative of CBCB	-	Member
(v)	Dr. V.P. Upadhyay, Director, Regional Office, Bhubaneswar	-	Member Secretary

2. The terms of reference of the Committee will be as under:

(i) To develop a criteria and formulate guidelines for categorization of non compliances of the conditions stipulated while granting environmental clearance into the category of 'serious' and 'not so serious'.

3. The tenure of the Committee will be for 3 months or till the Committee submits its report / recommendations whichever is earlier.

4. The Chairman of the Committee may co-opt / invite any other Expert for any meeting of the Committee as it may deem appropriate, with prior approval of MoEF.

5. The Committee may hold its meetings in Delhi or in any of the Regional Offices of MoEF, as it may deem appropriate. The TA/DA and sitting fee to the non-official member(s) will be paid as per Rules.

This issues with the approval of the competent authority and with the concurrence of IFD vide their diary no. 872/IFD/E/2011 dated 13.05.2011.

(Dr. S.K. Aggarwal)
Director

To

1. All the Members of the Committee
2. Chairman, CPCB with a request to nominate a suitably senior officer on this Committee.
3. All PCCFs of Regional Offices of MoEF.

Copy for information to:-

1. PS to SS (JMM)
2. Advisor (NB)
3. Website of MoEF

No. J-11013/30/2009-IA.II (I)

Government of India

Ministry of Environment and Forests

Paryavaran Bhawan

CGO Complex, Lodi Road,

New Delhi-110003

Dated 5th September, 2011

ORDER

Sub: Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious – Extension of tenure of the Committee regarding.

In continuation to this Ministry's earlier order of even No. dated 19. 5. 2011 constituting a committee under the Chairmanship of Dr. B. Sengupta, Former Member Secretary, CPCB regarding the above mentioned subject, the tenure of the said committee is hereby extended up to 30th September, 2011. All other terms and conditions of the committee shall remain unchanged.

This issued with the approval of the Secretary (E&F).

(Dr. S.K. Aggarwal)

Director

To

4. All the Members of the Committee
5. Chairman, CPCB.
6. All PCCFs of Regional Offices of MoEF.

Copy for information to:-

4. PS to SS (JMM)
5. Advisor (NB)
6. Website of MoEF

Appendix-II

Minutes of the meeting held on 24-06-2011 on "Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious-constitution of committee".

The venue: CGO Complex, Paryavaran Bhawan, Conference Room No.623

The Ministry of Environment and Forests constituted a committee vide order No.J-11013/30/2009-IA.II(I) dated 19th May, 2011 to develop a criteria and formulate guidelines for categorization of non-compliances into the category of serious and not so serious with Dr. B. Sengupta as Chairman of the Committee. The meeting was held on 24-06-2011 and list of members along with invited experts is attached. The members discussed on the conditions and safeguards being stipulated while according environmental clearance and decided to work on following format for developing the criteria:

1. General conditions stipulated in all the projects while according environmental clearance will be taken up for categorization in prescribed format.

2. Project specific conditions will also be categorized in a prescribed format by broadly dividing the 30 sub categories under EIA violation 2006 of projects in 8 categories.

It was also decided that one project category will be given to a member who will take up categorization of conditions in consultation with other scientists of the Regional Office and submit to the committee for discussion by the members in the next meeting. The distribution of the work as agreed by members during the meeting is as follows:

Sl No.	Project category	Regional Office
1.	Mining	Bhubaneswar Regional office with input from Lucknow Regional Office
2.	Industries	RO, Bhopal with input from CPCB Delhi
3.	Thermal	RO, Bangalore
4.	Airport/Highway	RO, Chandigarh with input from RO, Bhubaneswar
5.	TSDF	CPCB Delhi
6.	Building projects	RO Bangalore with inputs from RO Bhopal and RO Lucknow

7.	Nuclear projects	RO Bangalore
8.	River valley projects	RO Chandigarh

The members can submit information in the following format to the Member Secretary of the Committee and the same can be circulated by email to each member for their input to be given before the next meeting:

Sl No.	Condition	Categorization		Remark	Comment by other ROs
		Serious	Not so serious		
1.					

It was also agreed that the sectoral Environmental Guidelines available on the Ministry's website will also be looked into by the members while working on categorization and also to provide suggestions for modifications of environmental conditions being presently stipulated while according clearances to various projects:

i. 9 sector guidelines
ii. 12 sector guidelines

The members took up the work in respect of categorization of general conditions on the basis of a few environmental clearance letters. The General conditions selected by the members for categorization are as follows:

Sl. No	Conditions	Categorization		Remarks
		Serious	Not so serious	
1.	Change in scope of work			
2.	AAQ monitoring station locations			
3.	Occupational health			
4.	Labourers and sanitation			
5.	Environmental Management Cell and Laboratories			

6.	Funds for EMP			
7.	Copy of letter to NGO			
8.	Six monthly reports			
9.	CGWB conditions/ clearance			
10.	Environmental statements			
11.	Paper advertisement			
12.	Financial closure, date of start			
13.	Public liability insurance			
14.	On site/off site emergency plan/DMP approval/			
15.	No response from project authorities			

The members while deliberating on the non compliance issues observed that there are ambiguities in certain conditions stipulated in the clearance letters. It was decided to cover this aspect also and provide suggestions for modifying/changing the conditions so that the conditions are easily classified as "Serious" and "Not so serious" and are practical for implementation.

Suggestions:

1. The conditions relating to AAQ monitoring stations and specific parameters to be monitored should be explicit. The monitoring guidelines may be made in this regard for smaller, medium and large projects.

2. AAQ monitoring may be done by pollution control boards instead of industries and monitoring should be done on cluster area basis. Individual project base monitoring does not reflect real AAQ quality.

3. Effluent quality monitoring related conditions should explicitly stipulate number and name of stations to be covered in both influent and effluent discharge points.

4. Ambient noise level monitoring should also be done by pollution control boards instead of individual industries and condition accordingly should stipulate in the clearance letter.

5. Regarding occupational health surveillance related conditions it was agreed that Ministry should stipulate specific parameters of occupational health to be monitored.

6. The conditions like eco development, community development, peripheral development and socio-economic development stipulated in clearance letters are very subjective in nature. It is suggested that village/area specific quantified targets should be stipulated which will be easy to monitor.

7. The condition relating to news paper advertisement within 7 days of issue of clearance letter is most of the time violated. It is suggested that the condition may be changed to "Within 15 days of the receipt of the clearance letter".

8. There are sometimes same conditions stipulated under "Specific Conditions" as well as "General Conditions". Such repetitions should be avoided.

9. CREP stipulations should not be made part of EC conditions as these are not statutory in nature and are only the guidelines.

The members agreed that the conditions in various clearance letters will also be reviewed while preparing the report and certain more suggestions may be given. It was decided that the next meeting of the committee will be held in the premises of Northern Regional Office, Chandigarh on 15-07-2011. The members of the other committee who are involved in preparing the format for compliance report may also be invited as their meeting is also proposed at the same time in the same office.

List of Members present during the meeting held on 24.06.2011, Time 10.30 A.M., room No.623, MOEF, CGO Complex, New Delhi.

Sl. No.	Name & Organization	Contact No.	E-mail ID
1.	Dr. B. Sengupta, Chairman	98610043771	bsg161@gmail.com
2.	Surendra Kumar, Director, NRO, MoEF, Chandigarh	09872481118	sk581@yahoo.com
3.	Dr. N.L.N.S. Prasad, Director, ERO, MoEF, Bhubaneswar-23	09437050993	nlnsprasad375@gmail.com
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5.	S. Kerketta, Additional Director, ERO, MoEF, Bhubaneswar-23	09937167512	suna1466@rediffmail.com
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10.	Dr. K.K. Garg, Director, RO Lucknow	09935866388	gkk37@rediffmail.co
11.	Dr. C. Kaliya Perumal, Director, MoEF, RO, Bangalore	09448370304	perumalabi@gmail.com
12.	Dr. V.P. Upadhyay, Director, ERO, MoEF, Bhubaneswar-23, Member Secretary	09437129945	vpupadhyay@gmail.com

Appendix-III

Minutes of the meeting held on 20-07-2011 on "Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious-constitution of committee".

The venue: CGO Complex, Paryavaran Bhawan, Conference Room No.402

The Ministry of Environment and Forests constituted a committee vide order No.J-11013/30/2009-IA.II(I) dated 19th May, 2011 to develop a criteria and formulate guidelines for categorization of non-compliances into the category of serious and not so serious with Dr. B. Sengupta as Chairman of the Committee. The 2nd meeting of the committee was held on 20-07-2011 and list of members along with invited experts is attached. The members discussed on the conditions and safeguards being stipulated for mining, building and construction projects, airports and highway projects. The information provided by the Regional Offices in the prescribed format was discussed and categorization of non-compliances into "serious" and "not so serious" was done. The categorization details of non compliances of these projects will be tabulated and discussed again for finalization during the next meeting. The Members and the Regional Offices may be sending their inputs for remaining categories of projects in the same format. It was decided that the following categories of projects will be taken up for discussion during the next meeting.

Sl No.	Project category	Regional Office
1.	Industries	CPCB Delhi
2.	Thermal	RO, Bangalore, Bhubaneswar
3.	TSDF	CPCB Delhi
4.	Nuclear projects	RO Bangalore

All the members were requested to send their inputs at earliest. The members may also suggest additional conditions to be placed under general conditions on the basis of review of more environmental clearance letters. In addition, suggestions in respect of ambiguities in certain conditions stipulated in the clearance letters as was discussed during the 1st meeting may also be

given for modifying/changing the conditions so that the conditions are easily classified as "Serious" and "Not so serious" and are practical for implementation.

It was decided that the next meeting of the committee will be held in the Paryavaran Bhawan, Room No. 402 on 8th and 9th August, 2011.

List of Members present during the meeting held on 20.07.2011, Time 10.30 A.M., room No.402, MOEF, CGO Complex, New Delhi.

Sl. No.	Name & Organization	Contact No.	E-mail ID
1.	Dr. B. Sengupta, Chairman	98610043771	bsg161@gmail.com
2.	Dr. A. Mehrotra, Director, W.R.O. MoEF, Bhopal	09425602488	rccfbhopal@gmail.com, ajaymehrotra13@gmail.com
3.	S. Kerketta, Additional Director, ERO, MoEF, Bhubaneswar-23	09937167512	suna1466@rediffmail.com
4.	Dr. M.T. Karuppiah, Deputy Director, MoEF, New Delhi	09810528494 011-24699100	mtkaruppiah@gmail.com
5.	Dr. A.B. Harapanahalli, Director, RO Bangalore	09448388815	adavesh2007@hotmail.com
6.	Dr. K.K. Garg, Director, RO Lucknow	09935866388	gkk37@rediffmail.co
7.	Dr. V.P. Upadhyay, Director, ERO, MoEF, Bhubaneswar-23, Member Secretary	09437129945	vpupadhyay@gmail.com

Appendix-IV

Minutes of the meeting held on 08-08-2011 on "Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious-constitution of committee".

The venue: CGO Complex, Paryavaran Bhawan, Conference Room No.402

The Ministry of Environment and Forests constituted a committee vide order No.J-11013/30/2009-IA.II(I) dated 19th May, 2011 to develop a criteria and formulate guidelines for categorization of non-compliances into the category of serious and not so serious with Dr. B. Sengupta as Chairman of the Committee. The 3rd meeting of the committee was held on 08-08-2011 and list of members along with invited experts is attached. The members discussed on the conditions and safeguards being stipulated for River valley, Highway, Nuclear power projects and TSDF projects. In addition the categorisation made by Dr. B. Sengupta for Aluminum plants, Cement Plants, Bulk drug and Pharmaceutical industry and coal based Thermal Power plants were also taken up for categorisation. It was also discussed that conditions of all categories of projects stipulated in a few more recent clearance letters should also be seen and additional conditions if any may be added in the list of each project. The information provided by the CPCB in the prescribed format was also discussed and categorization of non-compliances into "serious" and "not so serious" was done. Thus, substantial work on the categorization of non compliances of mining, ports and Harbours, Building/Infrastructure, Airport, River Valley, Coal Based Thermal Power, Highway, Nuclear Power and TSDF projects has been completed which will be discussed again for finalization during the next meeting in case additional conditions on the basis of screening of new clearance letters have been added. The Members were requested to send their inputs regarding addition of new conditions in discussed categories and for remaining categories of projects in the same format which will be taken up for discussion during the next meeting.

Sl No.	Project category	Regional Office
1.	Industries (Pulp and Paper, Sugar Mills, Distilleries,)	RO, Bangalore
2.	Oil Refinery, Iron and Steel and Sponge Iron Industry	RO, Bhubaneswar
3.	Tanneries	RO Lucknow
4.	On shore oil exploration, drilling, development and operational projects	RO Shillong
5.	Dyes , Pesticides and Bulk Drugs	RO Bhopal

All the members were requested to send their inputs at earliest. The members may also suggest additional conditions to be placed under general conditions on the basis of review of more environmental clearance letters. Any further suggestion in respect of ambiguities in certain

conditions stipulated in the environmental clearance letters may also be given for finalizing the recommendations for modification of the conditions in future environmental clearance letters so that the conditions are easily classified as “Serious” and “Not so serious” and are practical for implementation.

It was decided that the next meeting of the committee for finalizing the report will be held on 8th September, 2011.

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List of Members present during the meeting held on 08.08.2011, Time 10.30 A.M., room No.402, MOEF, CGO Complex, New Delhi.

Sl. No.	Name & Organization	Contact No.	E-mail ID
1.	Dr. B. Sengupta, Chairman	98610043771	bsg161@gmail.com
2.	Dr. A.B. Harapanahalli, Director, RO Bangalore	09448388815	adavesh2007@hotmail.com
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Appendix-V

Minutes of the meeting held on 08-09-2011 on "Development of criteria and formulation of guidelines for categorization of non compliances into the category of serious and not so serious-constitution of committee".

The venue: CGO Complex, Paryavaran Bhawan, Conference Room No.402

The Ministry of Environment and Forests constituted a committee vide order No.J-11013/30/2009-IA.II(I) dated 19th May, 2011 to develop a criteria and formulate guidelines for categorization of non-compliances into the category of serious and not so serious with Dr. B. Sengupta as Chairman of the Committee. The 4th meeting of the committee was held on 08-09-2011 and list of members along with invited experts is attached. The members discussed on the conditions and safeguards being stipulated for Carbon Black, Dyes, Petrochemicals and Oil Refinery, Non-recovery Coke Ovens, Pesticides and Offshore and onshore oil Exploration and Development Projects. In addition, a few more conditions of Mining, Ports and Harbour, Cement, Sugar mills and River valley projects were also discussed. The General Conditions applicable to all projects were discussed again for finalization. It was suggested that in case additional conditions on the basis of screening of new clearance letters are suggested by Regional Offices, the same will be considered for categorisation along with conditions of other new categories of projects. The Members were requested to send their inputs regarding addition of new conditions in discussed categories and for remaining categories of projects in the same format which will be taken up for discussion during the next meeting.

Sl No.	Project category	Regional Office
1.	Industries (Paint and Sponge Iron and Steel) and industrial estates and SEZ	RO, Bangalore
2.	Iron and Steel and Sponge Iron Industry, MSW disposal sites	RO, Bhubaneswar
3.	Non ferrous industries	RO Lucknow
4.	Textile	RO Bhopal

All the members were requested to send their inputs at earliest. The members may still suggest additional conditions to be placed under general conditions on the basis of review of more environmental clearance letters. While discussing the conditions it was suggested that recommendations in respect of ambiguities in certain conditions stipulated in the environmental clearance letters may also be given by Members for finalizing the recommendations for modification of the conditions in future environmental clearance letters so that the conditions are easily classified as "Serious" and "Not so serious" and are practical for implementation. The details of categorisation received from members will be complied and their feedback will be obtained by circulation by email without convening a meeting. The members were requested to provide their feedback on all of the above items by 16th September, 2011 to the Chairman of the Committee.

List of Members present during the meeting held on 08.09.2011, Time 10.30 A.M., room No.402, MOEF, CGO Complex, New Delhi.

Sl. No.	Name & Organization	Contact No.	E-mail ID
1.	Dr. B. Sengupta, Chairman	98610043771	bsg161@gmail.com
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4.	Dr. A. Mehrotra, Director, W.R.O. MoEF, Bhopal	09425602488	rccfbhopal@gmail.com, ajaymehrotra13@gmail.com
5.	Dr. K.K. Garg, Director, RO Lucknow	09935866388	gkk37@rediffmail.co
6.	Dr. Surendra Kumar, Director, RO Chandigarh	09872481118	sk581@yahoo.com
7.	Dr. V.P. Upadhyay, Director, ERO, MoEF, Bhubaneswar-23, Member Secretary	09437129945	vpupadhyay@gmail.com