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CHAPTER 1

INTRODUCTION

Sachkhand Gurudwara at Nanded perpetuates the memory of Guru Gobind Singh. After Amritsar and its Golden Temple, Nanded is the most holy place for the valiant Sikh community, whose members from all corners of the world arrive, constantly in large numbers throughout the year for darshan. Huge conglomeration of pilgrims is expected to arrive in the city on the occasion of tercentenary of the establishment of the Guru Granth Sahib as the ultimate preceptor of Sikhism by the 10th Guru, Shri Gobind Singh.

CHAPTER 2

DESCRIPTION OF THE PROJECT

The proposed project involves widening and strengthening the existing roads, identifying and developing new links, construction of ROBs/ river bridges etc. IL & FS has appointed M/s Consulting Engineering Services (I) Pvt. Ltd., as Design and Supervision Consultants (DSC) to prepare detailed engineering reports for widening and improvement of about 65 km of road stretches, including carrying out the necessary design and plannings for the ROBs and river bridges.

This large scale development will have significant environmental effects before, during and after implementation of the project. This report covers the environmental impacts due to the proposed development and the mitigation measures needed to ameliorate the same. The EIA notification of Ministry of Environment and Forests (MoEF), GoI is enclosed as **Annexure I**.

CHAPTER 3

ENVIRONMENTAL SETTING OF THE PROJECT

3.1 Location:

Nanded city is situated on the banks of river Godavari at an altitude 489 m above mean sea level. It is located approximately at the intersection of 18°30' N latitude and 77°10' E longitude, is the largest urban center in the district covering a total area of 51.76 sq km. It is also the second largest urban center in Marathwada Region, after Aurangabad. The river Godavari in Nanded almost bisects the city and it runs in a west to east direction. There are numerous ghats like Nagina Ghat, Banda Ghat, Govardhan Ghat, Bhim Ghat, Shikar Ghat, Nav ghat, Dhobi ghat and Monda Ghat, situated on the left side of the river. Some of the Ghats have religious significance due to the presence of Gurudwaras and Temples – Nagina Ghat, Banda Ghat and Shikar Ghats are associated with Gurudwara located on the left bank of the Godavari river.

3.2 Climate of Nanded

Seasons:

The climate of this district is generally dry except during the south-west monsoon season. The year may be divided into four seasons viz., the cold season, the hot season, the south-west monsoon season and the hot monsoon season. The cold season is from November to the end of February. This is followed by the hot season which extends up to the first week of June. The south-west monsoon season which follows thereafter, lasts till about the first week of October. The rest of October and the first half of November constitute the post-monsoon season.

Rainfall:

Records of rainfall in the district are available for only two stations, Nanded and Basal. The average annual rainfall in the district is 897.8 mm (35.34"). About 88 per cent of the annual rainfall is received during the south-west monsoon season. The July is the rainiest month in the year. Considering the general pattern of rainfall in the surrounding districts, it is seen that the rainfall increases from west to east in the district. The variation of rainfall from year to year in the district is large. In the fifty year's period from 1901 to 1950 the highest annual rainfall in the district which was 187 per cent of the normal occurred in 1910. The lowest annual rainfall which was 49 per cent of the normal occurred in 1920. Rainfall less

than 80 per cent of the normal occurred in 12 years out of fifty, two of them being consecutive. It will be seen from rainfall record that the rainfall in the district was between 600 and 1100 mm (23.62 and 43.31") in 39 years out of fifty. On an average there are 47 rainy days (i.e., days with rainfall of 2.5 mm-10 cents-or more) in a year. This number varies from 43 at Basal to 51 at Nanded. The heaviest rainfall in 24 hours recorded in the district was 254.0 mm (10.0") at Nanded on August 20, 1903.

Temperature

There is no meteorological observatory in the district. The description, which follows, is based on the records of the observatories in the neighbouring districts, which have a similar climate. The cold weather commences by about the end of November when temperatures begin to fall. December is the coldest month. with the mean daily minimum temperature at about 13°C (55.4°F) and the mean daily maximum at about 29°C (84.2° F). In the cold season the district is sometimes affected by cold waves which are associated with the eastward passage of western disturbances across north India. On such occasions the minimum temperature may go down to about 5°C (41.0°F). The period from March to May is one of continuous rise in both day and night temperatures. May is the hottest month of the year with the mean daily maximum temperature at about 42°C (107.6°F). On individual days the temperature sometimes goes up to 45 to 46°C (113.0 to 114.8°F). With the advance of the south-west monsoon into the district by about the second week of June, temperatures go down appreciably and the weather is pleasant throughout the south-west monsoon season. By about the first week of October the monsoon withdraws from the district and the day temperatures show a slight increase, a secondary maximum being recorded in October. Thereafter both day and night temperatures decrease.

Humidity

The relative humidities are high during the south-west monsoon season when they are between about 60 and 80 per cent. With the withdrawal of the south-west monsoon, humidities gradually decrease and in the cold and summer seasons the air is generally dry. The summer season is the driest part of the year when the relative humidities in the afternoons are generally less than 30 per cent.

Cloudiness

Skies are heavily clouded to overcast in the south-west monsoon season. The cloud amount decreases rapidly in the post-monsoon months. In the rest of the year skies are clear or lightly clouded.

Climate Winds

Winds are generally light during. October to March. They gain in strength in the later half of the summer and south-west monsoon seasons. During the south-west monsoon season winds are predominantly from the west or south-west. In the post-monsoon and winter months they are mainly from directions between east and north. From about the beginning of summer, winds from directions between south-west and north-west appear and these predominate by May and continue till the onset of the south-west monsoon.

Special Weather Phenomena

Thunderstorms occur in the summer and monsoon months, their frequency being higher in June and September. Dust raising winds are common in the summer afternoons. Storms and depressions from the Bay of Bengal or the Arabian Sea seldom affect the district.

3.3 Demography

Population

The population of Nanded city, as per 2001 census was 430,733. The population of the city has grown from 126,518 in 1971 to the 2001 level of 430,733 at a CAGR of about 4.17 per cent. Key demographic data of Nanded city as per 2001 census is presented in **Table 3.1**

Table 3.1 - Demographic Data of Nanded City as per Census of India 2001

Total Number of Households	72,733
Total Population	430,733
Male	224843
Female	205890
Population density	183.05 persons/ha
Literacy Rate	81.50%
Male Literacy	89%
Female Literacy	73%
Average House Hold Size	5.92

CHAPTER 4

ENVIRONMENTAL ISSUES OF CONCERN

Following issues of environmental concern have been identified and discussed in detail in the subsequent sections

1. Land Use
2. Terrain and Geology
3. Drainage
4. Traffic Management
5. Accident Hazards & Safety
6. Water Pollution
7. Ambient Air Pollution
8. Ambient Noise Levels
9. Ecology
10. Impacts due to “Construction and Labour Camps”
11. Impacts due to Citing of Borrow and Quarry Material Areas
12. Resettlement and Rehabilitation

4.1 Land use

During the construction period, the land use activity in the Gurudwara area might get impacted adversely as it is located very close to the project road.

Induced impacts during operation stage on land use pattern are expected to occur. As the roads become wider and improved, the land values are bound to go up in short duration. In addition the landscaping and beautification of these roads will increase commercial activity along the roads. This will lead to exploitation of vacant land area/ space available along the project corridor. Specifically, the induced impacts during operation phase might include:

- Proliferation of slum dwellings along the improved road
- Increased commercial activities and the road side land use will be altered to commercial land use

Mitigation Measures

During pre-construction and construction phase of the project, construction related activities shall be preferably restricted within project RoW.

During operation phase of the project, the service roads, footpaths, junctions/ intersections shall not be allowed to be encroached once again with commercial squatter settlements.

4.2 Terrain & Geology

Insignificant adverse impact is anticipated on the geological environment of the project corridor during construction phase of the project and no impact is anticipated during operation phase of the project.

Significant adverse impact on geological resources is anticipated to occur at quarry sites and borrow areas identified for the project, given in separate report. The quarrying material shall be exclusively procured by the Contractor from licensed quarries. Since as per the license conditions, the quarry sites will have an quarry site management and closure plan, the environmental issues pertaining to quarry site will be addressed and impacts, if any, will be mitigated.

During construction phase, it is recommended that the opening up of new borrow pits shall be in accordance with the IRC: 10-1961 specifications. Top soil (up to 150 mm) to be preserved, where plantation / grasses will be developed and reused as resurfacing material for the berms, over the slopes and central verge of the road.

4.3 Drainage

Storm water drains, if not properly designed and maintained may cause flooding in the low lying area and disturbance to traffic and may damage the road crust.

Mitigation measures

- Roadside drains have been proposed on either side of the road to drain out the rainwater from the road surface.
- The design of storm water drainage system is to be carried out based on the guidelines given by IRC SP – 42.
- Drainage of water from road surface & lands along the alignment is to be planned to avoid flooding & high velocity flows be properly connected to natural streams at appropriate locations.
- Earthwork carried out during construction of road may lead to erosion. This might occur especially during monsoon season. Therefore excavated soil should be disposed off properly so that it should not block the flow of water.
- Construction material containing fine particles shall be stored in an enclosure such that sediment-laden water does not drain into nearby storm water drains and underground sewage pipes.

- Contractor shall ensure that after construction is over or prior to monsoon season, the new drains and old drains existing along the road are maintained clean of construction debris to avoid clogging of drains.

4.4 Traffic Management

During project initiation phase, significant adverse impact on traffic and transport scenario is anticipated to occur for short-term duration. The impact would be felt adversely especially in the congested area near Gurudwara where roads are congested and where more area has to be cleared for the project.

Mitigation Measures

To mitigate this adverse impact, site clearance activities must be carried out swiftly and in well-planned manner. (As per SP-6, SP-7 and SP-10 of the Technical Specification)

During construction phase, significant adverse impact for temporary duration is anticipated. Proper traffic management plan during construction phase shall be prepared in consultation with traffic police.

During operation phase, the roads proposed in phases will smoothen out the traffic movement reducing the conflict between local traffic movements. This would also increase pedestrian safety. The footpaths on either side should be maintained free of hawkers and encroachers.

4.5 Accident Hazards and safety

During construction phase, various construction activities will cause hindrance to the flow of existing traffic increasing the possibility for occurrence of accident hazards. Minor adverse impact is anticipated due to this reason. The local traffic management plan needs to take into account this issue of safety to pedestrians and local inhabitants.

Mitigation measures

During site clearance activity especially near the Gurudwara area, building demolition and debris removal must be carried out swiftly and in well-planned manner. Possibly debris removal can be carried out during non-peak hours and with deployment of more vehicles for the purpose.

During pre-construction and construction phase of the project, adequate traffic management scheme will be prepared in integration with construction program

envisaged, which shall be adhered. PMC shall periodically review the plan with respect to site conditions.

The contractor shall take all necessary measures for the safety of traffic during demolition and site clearing activities. He shall provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as may be required by the engineer for the information and protection of traffic.

Special consideration shall be given in the local traffic management to the safety of pedestrians. The temporary traffic arrangement within RoW should be kept free of encroachments/ commercial activities.

During operation phase of the project, traffic control measures including speed limits to be enforced strictly.

Accident Safety

During construction phase, the following mitigation measures are recommended for implementation.

- Contractor shall ensure that the transport vehicles used to ferry materials and dispose debris does not create hazardous conditions for general traffic using the roadway.
- The construction site should be barricaded at all time in a day with adequate marking, flags, reflectors etc., for the safety of general traffic movement and pedestrians.

4.6 Water Pollution

No significant impacts are expected on the water quality due to the proposed project. However, during construction phase of bridge across River Godavari, water quality might get deteriorated due to increase in turbidity and suspended solids to some extent expected to occur due to loose and disturbed soil layer, erosion and rutting. The impact will be insignificant; however adequate mitigation measures are required to be taken during construction phase.

4.7 Ambient Air Pollution

Impact on AAQ during construction stage of roads is anticipated. The adverse impact will be primarily due to transportation of construction debris, road construction activities, loading and unloading of construction materials, and plying of construction vehicles along unpaved shoulders.

It is expected that with the project road widening, the pollution levels are expected to lower down. The project, therefore, will have moderate impact on ambient air quality in terms of pollution.

Mitigation measures

During project initiation and construction period, the adverse impacts on ambient air quality are anticipated to occur mainly due to site clearance activities, construction material movement, and during various road construction activities.

a) For mobile source emissions

- i) Dust covers should be provided on the vehicles to be used for transportation of materials prone to fugitive dust emissions.
- ii) Construction requiring street closings should be carried out during non-peak hours.
- iii) Idling of delivery trucks or other equipment should not be permitted during periods when they are being unloaded or are not in active use.
- iv) Construction site should be sprinkled with water to minimise the fugitive dust.
- v) Trucks carrying cement, gravel, sand will have to travel to site and may cause dust emission. Therefore ready mix concrete carried in enclosed container may be better option as compared to on site batch mixing.

b) For stationary source emissions

- i) All stationary equipment should be located as far away as possible from sensitive receptor locations in order to allow dispersion of emitted pollutants.
- ii) Areas prone to fugitive dust emissions due to activities such as demolition, excavation, grading sites and routes of delivery vehicles across patches of exposed earth, should be frequently watered to suppress re-entrained dust.
- iii) Apart from these, the equipment/ machines and vehicles should be always kept in good state of repairs to minimise emissions. Low emission construction vehicles/ equipment should be used wherever feasible. Construction areas should be enclosed, wherever possible.
- iv) Exhaust and noise emissions of construction equipments shall adhere to emission norms as laid out by MoEF/CPCB.
- v) The contractor shall ensure that the batching plant is located away from the residential areas and shall be licensed and authorised for operation by the concerned authorities.

- vi) Periodic inspection of the site shall be carried out to ensure removal of construction debris to the landfill sites.

Operation Phase

- i) The beautification including planting of trees and landscaping, wherever possible along the roads, will mitigate air/noise pollution effects.
- ii) Continuous maintenance and upkeep of roads will maintain traffic flow and will help to reduce air pollution effects.
- iii) Specific measures for improved traffic flow at junctions are suggested below:
 - Plan for & provide only minimum numbers of signals.
 - Provide signal time indicators, so as to eliminate unnecessary idling, at intersections.

In addition to the above mitigation measures, further technical improvement in form of superior engine design in order to meet the stringent Government regulations will also reduce emissions in the years to come. As a mitigation plan, competent authority shall enforce vehicular emission norms of the day.

4.8 Ambient Noise Levels

The main sources of noise during construction are construction equipment and the vehicles used for transporting various materials at the construction site.

Operation of construction machinery e.g. hot-mixer, bulldozer, loader, backhoes, concrete mixer, etc will lead to rise in noise level to the range between 80-95 dB (A). The magnitude of impact from noise will depend upon types of equipment to be used, construction methods and also on work scheduling. Effect of increase in noise levels will be significant during night time near the residential area located close to the site.

The noise level generated from a source will decrease with distance as per the following empirical formula (inverse square law).

$$SPL_2 = SPL_1 - 20\log_{10}(r_2/r_1)$$

Where, SPL_1 and SPL_2 are the sound pressure levels at distance r_1 and r_2 respectively.

Considering the stationary construction equipment as a point source generating 90 dB(A) at a reference distance of 2 m, computed distance require to meet the permissible limits during day time for different land use categories are given below:

Table 4.1 Minimum distance of operation from Stationary Source required for Meeting Standards

Category	Permissible limits in day time (CPCB)	Distance required (m)
Silence zone	50 dB(A)	200
Residential	55 dB(A)	113
Commercial	65 dB(A)	36
Industrial	75 dB(A)	11

Assumptions: While calculating the distance it is assumed that there are no barriers in the form of building or trees.

From the above table it may be noted that residence within 113m from the road will be exposed to a noise higher than the permissible limit. The impacts will be significant on construction workers, working close to the machinery.

During operation stage of the road, ambient noise levels might increase along the road. The increase in noise levels will be due to the increase in vehicles plying on the road.

Mitigation measures

The following mitigation measures are being recommended to control noise level during construction and operation phase.

Construction Phase

Site Control

Stationary equipment shall be placed beyond the distance indicated in the **Table 4.1**.

Source Control

- All construction equipment shall be fitted with exhaust silencer. Damaged silencer to be promptly replaced by the contractor.
- Proper maintenance of equipment shall be undertaken with the provision of enclosures and intake silencers.
- DG sets, if used, shall adhere to the noise standards of MoEF.

Scheduling of Project Activities

- Construction activities involving generation of high noise shall be avoided between 10 p.m. and 6 a.m. in the residential and sensitive areas.

- Provision of protection devices (ear plug) to be provided to the workers in the vicinity of high noise generating machinery.

Operational Phase

During operation stage, increase in noise levels is anticipated due to the increase in traffic along the road. Following mitigation measure are recommended during the operation phase:

- Near sensitive receptors, like Gurudwara, “No Honking” zones shall be announced by placing adequate number of signboards. Road section along Schools and all residential areas shall be declared as “No honking zones”.

With the implementation of the above mentioned mitigative measures the noise level can be attenuated to acceptable limits.

4.9 Ecology

The widening of existing roads may require felling of some trees. Thus during construction phase of the project, significant adverse impact is anticipated on the ecological environment of the project corridor.

As for terrestrial fauna, the project roads do not pass through any habitat of terrestrial fauna. Hence the issue of impact on terrestrial fauna does not arise.

During operation stage, the vehicular traffic on the road will not have major impact on the ecological environment.

Mitigation measures

During pre-construction phase, the widening of existing roads will require felling of trees essentially from the roadside plantations. Trees falling within the alignment which are to be removed before commencement of construction shall be identified and approved by Program Manager. Prior permission from concerned authorities/Nanded Municipal Corporation shall be obtained as laid out in the Tree act.

4.10 Impacts due to “Construction and Labour Camps”

Construction camps include workers’ residential areas and the grounds where equipment is stored and serviced and where materials are stockpiled. Careless construction camp design and management can lead to serious environmental degradation including

- sewage and garbage pollution;
- infrastructure overloading- health services,
- sewage treatment,
- schooling
- law enforcement; and
- Spills from construction equipment operation and servicing.

Mitigation Measures:

It would be contractor's responsibility to locate a site suitable for his work under the general conditions of contract and as per MRTTH specifications for road and bridge works (MRTTH specifications will form part of the contract). However it is suggested that the construction and labour camp should be located at least 1000 m away from the Godavari River. It would be contractor's responsibility to ensure that he complies with the local laws, if any, pertaining to construction camps siting and the area identified for siting construction camps are approved and authorised by competent authorities. The Program Manager/ PMC will approve the area selected/ identified by the contractor.

4.11 Impacts due to Siting of Borrow and Quarry Material Areas

Significant impact on geological resources is anticipated to occur at quarry sites and borrow area. Program Manager shall ask the contractors to ensure that sand, aggregates and other quarry material be procured from licensed quarries. Quarry and borrow areas identification will be responsibility of the contractor.

The Program Manager / PMC will approve the area selected / identified by the contractor before he actually procures materials from them. It would be contractor's responsibility to ensure that borrow and quarry areas that he has identified are approved and authorized to operate by competent authorities.

Also, during construction phase, it is recommended that the opening up of new borrow pits shall be in accordance with the IRC: 10-1961 specifications. Top soil (upto 150 mm) to be preserved and reused as the resurfacing material for the berms, slopes and central verge of the road where plantation / grasses will be developed.

Mitigation Measures

- i) Quarries should be opened from the rear end to keep its un-aesthetic, noisy and pollution oriented activities away from the roads and the surrounding communities from where it can be seen.

- ii) Quarrying should not be carried out with a vertical sheet 90° slope, due to damage of collapsing of heavy rocks and boulders. Such a slope is also unstable.
- iii) Quarrying should not be done up to ground floor level, as it results in prevent flooding and letting the surrounding water into the quarry-pits. It is also unsafe for the population in the surrounding area who might meet with accidents and may accidentally drown in the collected water.
- iv) Quarrying should be done in benches i.e. at an angle and at regular angles. A bench of 5 m should provided before the next higher up slope is cut.
- v) The sequence should be from the rear to front from aesthetic point of view.
- vi) After the work is over, the quarry site should be planted with shrubs and trees of indigenous variety to merge within the existing landscape.
- vii) Huge amount of debris will be generated due to dressing of stones. This material should be used to fill hollows and scars created in the process of quarrying. The material is also ideally suitable as fill material for embankment and can be used for the purpose.
- viii) Quarries should be carefully levelled to avoid de-stabilisation of slope and the general landscaping will be easier due to rock and soil content.

4.12 Resettlement and Rehabilitation

The proposed project of widening and improving the city roads would need resettlement and rehabilitation of the structures falling within the RoW. These will be suitably compensated as per the policy of the GoM/NWMC.

4.13 Conclusion

The proposed project consists of widening and improving of the city roads and some new roads are to be constructed. The proposed project will have significant impact on the environment during construction, which can be mitigated by the measures as suggested above. However, it will have positive impacts during operation stage. Thus overall the proposed project would be a beneficial and will help in improving the environment and aesthetics of the Nanded City.

MINISTRY OF ENVIRONMENT AND FORESTS

**ENVIRONMENT IMPACT ASSESSMENT NOTIFICATION S.O.60(E), dated
27/01/1994**

(incorporating amendments vide S.O. 356(E) dated 4/5/1994, S.O. 318(E) dated 10/4/1997, S.O. 319 dated 10/4/1997, S.O. 73(E) dated 27/1/2000, S.O. 1119(E) dated 13/12/2000, S.O. 737(E) dated 1/8/2001, S.O. 1148(E) dated 21/11/2001, S.O. 632(E) dated 13/06/2002)

- 1) **S.O. 60 (E)**- Whereas a notification under clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 inviting objections from the public within sixty days from the date of publication of the said notification, against the intention of the Central Government to impose restrictions and prohibitions on the expansion and modernization of any activity or new projects being undertaken in any part of India unless environmental clearance has been accorded by the Central Government or the State Government in accordance with the procedure specified in that notification was published as SO No. 80(E) dated 28th January, 1993;

And whereas all objections received have been duly considered;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby directs that on and from the date of publication of this notification in the Official Gazette, expansion or modernization of any activity (if pollution load is to exceed the existing one, or new project listed in Schedule I to this notification, shall not be undertaken in any part of India unless it has been accorded environmental clearance by the Central Government in accordance with the procedure hereinafter specified in this notification;

- 2) Requirements and procedure for seeking environmental clearance of projects:

- I.(a) Any person who desires to undertake any new project in any part of India or the expansion or modernization of any existing industry or project listed in the Schedule-I shall submit an application to the Secretary, Ministry of Environment and Forests, New Delhi.

The application shall be made in the proforma specified in Schedule-II of this notification and shall be accompanied by a project report which shall, inter alia, include an Environmental Impact Assessment Report, Environment Management Plan and details of public hearing as specified in Schedule-IV prepared in accordance with the guidelines issued by the Central Government in the Ministry of

Environment and Forests from time to time. However, Public Hearing is not required in respect of (i) small scale industrial undertakings located in (a) notified/designated industrial areas/industrial estates or (b) areas earmarked for industries under the jurisdiction of industrial development authorities; (ii) widening and strengthening of highways; (iii) mining projects (major minerals) with lease area up to twenty five hectares, (iv) units located in Export Processing Zones, Special Economic Zones and (v) modernisation of existing irrigation projects.

Provided that for pipeline projects, Environmental Impact Assessment report will not be required:

Provided further, that for pipeline and highway projects, public hearing shall be conducted in each district through which the pipeline or highway passes through.

(b) Cases rejected due to submission of insufficient or inadequate data and Plan may be reviewed as and when submitted with complete data and Plan. Submission of incomplete data or plans for the second time would itself be a sufficient reason for the Impact assessment Agency to reject the case summarily.

II. In case of the following site specific projects:

- a. mining;
- b. pit-head thermal power stations;
- c. hydro-power, major irrigation projects and/or their combination including flood control;
- d. ports and harbours (excluding minor ports);
- e. prospecting and exploration of major minerals in areas above 500 hectares;

The project authorities will intimate the location of the project site to the Central Government in the Ministry of Environment and Forests while initiating any investigation and surveys. The Central Government in the Ministry of Environment and Forests will convey a decision regarding suitability or otherwise of the proposed site within a maximum period of thirty days. The said site clearance shall be granted for a sanctioned capacity and shall be valid for a period of five years for commencing the construction, operation or mining.

III. (a) The reports submitted with the application shall be evaluated and assessed by the Impact Assessment Agency, and if deemed necessary it may consult a committee of Experts, having a composition as specified in Schedule-III of this Notification. The Impact Assessment Agency (IAA) would be the Union Ministry of Environment and Forests. The Committee of Experts mentioned above shall be constituted by the Impact Assessment Agency or such other

body under the Central Government authorised by the Impact Assessment Agency in this regard.

- (b) The said Committee of Experts shall have full right of entry and inspection of the site or, as the case may be, factory premises at any time prior to, during or after the commencement of the operations relating to the project.
- (c) The Impact Assessment Agency shall prepare a set of recommendations based on technical assessment of documents and data, furnished by the project authorities supplemented by data collected during visits to sites or factories, if undertaken and details of the public hearing.

The assessment shall be completed within a period of ninety days from receipt of the requisite documents and data from the project authorities and completion of public hearing and decision conveyed within thirty days thereafter.

The clearance granted shall be valid for a period of five years for commencement of the construction or operation of the project.

IV. In order to enable the Impact Assessment Agency to monitor effectively the implementation of the recommendations and conditions subject to which the environmental clearance has been given, the project authorities concerned shall submit a half yearly report to the Impact Assessment Agency. Subject to the public interest, the Impact Assessment Agency shall make compliance reports publicly available.

V. If no comments from the Impact Assessment Agency are received within the time limit, the project would be deemed to have been approved as proposed by project authorities.

3) Nothing contained in this Notification shall apply to:

- a. any item falling under entry Nos. 3, 18 and 20 of the Schedule-I to be located or proposed to be located in the areas covered by the Notifications S.O. No.102 (E) dated 1st February, 1989, S.O. 114 (E) dated 20th February, 1991; S.O. No. 416 (E) dated 20th June, 1991 and S.O. No.319 (E) dated 7th May, 1992.
- b. any item falling under entry no.1,2,3,4,5,7,9,10,13,14,16,17,19,21,25,27 of Schedule-I if the investment is less than Rs.100 crores for new projects and less than Rs. 50 crores for expansion / modernization projects.
- c. any item reserved for Small Scale Industrial Sector with investment less than Rs. 1 crore.
- d. defence related road construction projects in border areas.
- e. any item falling under entry no. 8 of Schedule-I, if that product is covered by the notification G.S.R. 1037(E) dated 5th December 1989.

- f. Modernization projects in irrigation sector if additional command area is less than 10,000 hectares or project cost is less than Rs. 100 crores.
- 4) Concealing factual data or submission of false, misleading data/reports, decisions or recommendations would lead to the project being rejected. Approval, if granted earlier on the basis of false data, would also be revoked. Misleading and wrong information will cover the following:
- o False information
 - o False data
 - o Engineered reports
 - o Concealing of factual data
 - o False recommendations or decisions

SCHEDULE-I

(See paras 1 and 2)

LIST OF PROJECTS REQUIRING ENVIRONMENTAL CLEARANCE FROM THE CENTRAL GOVERNMENT

1. Nuclear Power and related projects such as Heavy Water Plants, nuclear fuel complex, Rare Earths.
2. River Valley projects including hydel power, major Irrigation and their combination including flood control.
3. Ports, Harbours, Airports (except minor ports and harbours).
4. Petroleum Refineries including crude and product pipelines.
5. Chemical Fertilizers (Nitrogenous and Phosphatic other than single superphosphate).
6. Pesticides (Technical).
7. Petrochemical complexes (Both Olefinic and Aromatic) and Petro-chemical intermediates such as DMT, Caprolactam, LAB etc. and production of basic plastics such as LLDPE, HDPE, PP, PVC.
8. Bulk drugs and pharmaceuticals.
9. Exploration for oil and gas and their production, transportation and storage.
10. Synthetic Rubber.
11. Asbestos and Asbestos products.
12. Hydrocyanic acid and its derivatives.
- 13 (a) Primary metallurgical industries (such as production of Iron and Steel, Aluminium, Copper, Zinc, Lead and Ferro Alloys).
(b) Electric arc furnaces (Mini Steel Plants).
14. Chlor alkali industry.
15. Integrated paint complex including manufacture of resins and basic raw materials required in the manufacture of paints.
16. Viscose Staple fibre and filament yarn.
17. Storage batteries integrated with manufacture of oxides of lead and lead antimony alloys.

18. All tourism projects between 200m—500 metres of High Water Line and at locations with an elevation of more than 1000 metres with investment of more than Rs.5 crores.
19. Thermal Power Plants.
20. Mining projects (major minerals) with leases more than 5 hectares.
21. Highway Projects except projects relating to improvement work including widening and strengthening of roads with marginal land acquisition along the existing alignments provided it does not pass through ecologically sensitive areas such as National Parks, Sanctuaries, Tiger Reserves, Reserve Forests
22. Tarred Roads in the Himalayas and or Forest areas.
23. Distilleries.
24. Raw Skins and Hides
25. Pulp, paper and newsprint.
26. Dyes.
27. Cement.
28. Foundries (individual)
29. Electroplating
30. Meta amino phenol

SCHEDULE-II

[See Sub-para I (a) of para 2]

Procedure for seeking environment clearance of projects.

1. (1) Any persons who desires to establish a thermal power plant of any category mentioned in Schedule-I, shall submit an application to the Department of the State Government dealing with the subject of environment.

(2) The application shall be made in the Form 'A' specified in Schedule-II annexed to this notification and shall be accompanied by a detailed project report which shall, inter alia, include an Environmental Impact Assessment Report and an Environment Management plan prepared in accordance with the guidelines issued by the State Department of Environment from time to time.

(3) Cases rejected due to submission of insufficient or inadequate data and Action Plans may be reviewed as and when submitted with complete data and Action Plans. Submission of incomplete data for the second time would itself be a sufficient reason for the State Government to reject the case summarily.

5) In case of the pit-head thermal power plants, the applicant shall intimate the location of the project site to the State Government while initiating any investigation and surveys. The State Government will convey a decision regarding suitability or otherwise of the proposed site within a maximum period of thirty days. The said site clearance will be granted for a sanctioned capacity and it will be valid for a period of five years for commencing the construction or operation of the project.

3. (1) The applicant shall obtain No Objection Certificate from the concerned Pollution Control Board. The State Pollution Control Board shall issue No Objection Certificate to establish only after completing public hearing as specified in Schedule-IV annexed to this notification.

(2) The reports submitted with the application and No Objection Certificate from the State Pollution Control Board shall be evaluated and assessed by the State Government, in consultation with a Committee of experts which shall be constituted by the State Government as specified in Schedule-III appended to this notification.

(3) The said Committee of experts shall have full right of entry and inspection of the site or, as the case may be, factory premises at any time prior to, during or after the commencement of the preparations relating to the plant.

(4) The State Government Department dealing with the subject of Environment shall prepare a set of recommendations based on technical assessment of documents and data furnished by the applicant supplemented by data collected during

visits to sites, if undertaken and interaction with affected population and environment groups, if necessary.

(5) The assessment shall be completed within a period of ninety days from receipt of the requisite documents and data from the applicant and decision conveyed within thirty days thereafter.

(6) the environmental clearance granted shall be valid for a period of five years from commencement of the construction or operation of the project.

4. Concealing factual data or submission of false, misleading data reports, decisions or recommendations would lead to the project being rejected. Approval, if granted, earlier on the basis of false data, can also be revoked.

(FORM A)
APPLICATION FORM

1. (a) Name and Address of the project proposed :
 - (b) Location of the project:
 - Name of the Place:
 - District, Tehsil:
 - Latitude/Longitude:
 - Nearest Airport/Railway Station :
 - (c) Alternate sites examined and the reasons for selecting the proposed site:
 - (d) Does the site conform to stipulated land use as per local land use plan:

2. Objectives of the project:

3. (a) Land Requirement:
 - Agriculture Land:
 - Forest land and Density of vegetation.
 - Other (specify):
 - (b) (i) Land use in the Catchment within 10 kms radius of the proposed site:
 - (ii) Topography of the area indicating gradient, aspects and altitude:
 - (iii) Erodibility classification of the proposed land:
 - (c) Pollution sources existing in 10 km radius and their impact on quality of air, water and land:
 - (d) Distance of the nearest National Park/Sanctuary/Biosphere Reserve/Monuments/heritage site/Reserve Forest:
 - (e) Rehabilitation plan for quarries/borrow areas:
 - (f) Green belt plan:
 - (g) Compensatory afforestation plan:

4. Climate and Air Quality:
 - (a) Windrose at site:
 - (b) Max/Min/Mean annual temperature:
 - (c) Frequency of inversion:
 - (d) Frequency of cyclones/tornadoes/cloud burst:
 - (e) Ambient air quality data:

- (f) Nature & concentration of emission of SPM, Gas (CO, CO₂, NO_x, CH_n etc.) from the project:
5. Water balance:
- (a) Water balance at site:
 - (b) Lean season water availability;
Water Requirement:
 - (c) Source to be tapped with competing users (River, Lake, Ground, Public supply):
 - (d) Water quality:
 - (e) Changes observed in quality and quantity of groundwater in the last years and present charging and extraction details:
 - (f) (i) Quantum of waste water to be released with treatment details:
 - (ii) Quantum of quality of water in the receiving body before and after disposal of solid wastes:
 - (iii) Quantum of waste water to be released on land and type of land:
 - (g) (i) Details of reservoir water quality with necessary Catchment Treatment Plan:
 - (ii) Command Area Development Plan:
6. Solid wastes:
- (a) Nature and quantity of solid wastes generated
 - (b) Solid waste disposal method:
7. Noise and Vibrations:
- a. Sources of Noise and Vibrations:
 - b. Ambient noise level:
 - c. Noise and Vibration control measures proposed:
 - d. Subsidence problem, if any, with control measures:
8. Power requirement indicating source of supply: Complete environmental details to be furnished separately, if captive power unit proposed:
9. Peak labour force to be deployed giving details of:
- o Endemic health problems in the area due to waste water/air/soil borne diseases:
 - o Health care system existing and proposed:

10. (a) Number of villages and population to be displaced:
(b) Rehabilitation Master Plan:
11. Risk Assessment Report and Disaster Management Plan:
12. (a) Environmental Impact Assessment
(b) Environment Management Plan:
(c) Detailed Feasibility Report:
(d) Duly filled in questionnaire

Report prepared as per guidelines issued by the Central Government in the MOEF from time to time:

13. Details of Environmental Management Cell:

I hereby give an undertaking that the data and information given above are due to the best of my knowledge and belief and I am aware that if any part of the data/information submitted is found to be false or misleading at any stage, the project be rejected and the clearance given, if any, to the project is likely to be revoked at our risk and cost.

Signature of the applicant
With name and full address

Given under the seal of Organisation
on behalf of Whom the applicant is signing.

Date:

Place:

In respect to item for which data are not required or is not available as per the declaration of project proponent, the project would be considered on that basis.

SCHEDULE-III

[See Sub. Para(2), Para 3 of Schedule- II]

COMPOSITION OF THE EXPERT COMMITTEES FOR ENVIRONMENTAL IMPACT ASSESSMENT

1. The Committees will consist of experts in the following disciplines:
 - i. Eco-system Management
 - ii. Air/Water Pollution Control
 - iii. Water Resource Management
 - iv. Flora/Fauna conservation and management
 - v. Land Use Planning
 - vi. Social Sciences/Rehabilitation
 - vii. Project Appraisal
 - ix. Environmental Health
 - x. Subject Area Specialists
 - xi. Representatives of NGOs/persons concerned with environmental issues.
2. The Chairman will be an outstanding and experienced ecologist or environmentalist or technical professional with wide managerial experience in the relevant development sector.
3. The representative of Impact Assessment Agency will act as a Member-Secretary.
4. Chairman and Members will serve in their individual capacities except those specifically nominated as representatives.
5. The Membership of a Committee shall not exceed 15.

SCHEDULE IV

(See para 3, subparagraph (2) of Schedule- II)

PROCEDURE FOR PUBLIC HEARING

(1) **Process of Public Hearing:** - Whoever apply for environmental clearance of projects, shall submit to the concerned State Pollution Control Board twenty sets of the following documents namely: -

i. An executive summary containing the salient features of the project both in English as well as the local language along with Environmental Impact Assessment (EIA). However, for pipeline project, Environmental Impact Assessment report will not be required. But Environmental Management Plan including risk mitigation measures is required.

ii. Form XIII prescribed under Water (Prevention and Control of Pollution) Rules, 1975 where discharge of sewage, trade effluents, treatment of water in any form, is required.

iii. Form I prescribed under Air (Prevention and Control of Pollution) Union Territory Rules, 1983 where discharge of emissions are involved in any process, operation or industry.

iv. Any other information or document which is necessary in the opinion of the Board for their final disposal of the application.

(2) **Notice of Publics Hearing:** -(i) The State Pollution Control Board shall cause a notice for environmental public hearing which shall be published in at least two newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned. State Pollution Control Board shall mention the date, time and place of public hearing. Suggestions, views, comments and objections of the public shall be invited within thirty days from the date of publication of the notification.

(ii) All persons including bona fide residents, environmental groups and others located at the project site/sites of displacement/sites likely to be affected can participate in the public hearing. They can also make oral/written suggestions to the State Pollution Control Board.

Explanation: - For the purpose of the paragraph person means: -

- a. any person who is likely to be affected by the grant of environmental clearance;
- b. any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance;
- c. any association of persons whether incorporated or not like to be affected by the project and/or functioning in the filed of environment;

- d. any local authority within any part of whose local limits is within the neighbourhood wherein the project is proposed to be located.

(3) **Composition of public hearing panel:** - The composition of Public Hearing Panel may consist of the following, namely: -

- (i) Representative of State Pollution Control Board;
- (ii) District Collector or his nominee;
- (iii) Representative of State Government dealing with the subject;
- (iv) Representative of Department of the State Government dealing with Environment;
- (v) Not more than three representatives of the local bodies such as Municipalities or panchayats;
- (vi) Not more than three senior citizens of the area nominated by the District Collector.

(4) **Access to the Executive Summary and Environmental Impact Assessment report:-** The concerned persons shall be provided access to the Executive Summary and Environmental Impact Assessment report of the project at the following places, namely:-

- (i) District Collector Office;
- (ii) District Industry Centre;
- (iii) In the Office of the Chief Executive Officers of Zila Praishad or Commissioner of the Municipal Corporation/Local body as the case may be;
- (iv) In the head office of the concerned State Pollution Control Board and its concerned Regional Office;
- (v) In the concerned Department of the State Government dealing with the subject of environment.

5. Time period for completion of public hearing:

The public hearing shall be completed within a period of 60 days from the date of receipt of complete documents as required under paragraph 1.