BEFORE THE NATIONAL GREEN TRIBUNAL SOUTH ZONE AT CHENNAI

Appeal No. 46 of 2024

Praveena & 6 Ors. …Appellant

Vs

State Environment Impact Assessment Authority & Anr. …Respondent

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(Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii)
MINISTRY OF ENVIRONMENT AND FORESTS

New Delhi 14th September, 2006

Notification

S.O. 1533 Whereas, a draft notification **under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 for imposing** certain restrictions and prohibitions on new projects or activities, or on the expansion or modernization of existing projects or activities based on their potential environmental impacts as indicated in the Schedule to the notification, being undertaken in any part of India[1], unless prior environmental clearance has been accorded in accordance with the objectives of National Environment Policy **as approved by the Union Cabinet on 18th May, 2006** and the procedure specified in the notification, by the Central Government or the State or Union territory Level Environment Impact Assessment Authority (SEIAA), to be constituted by the Central Government in consultation with the State Government or the Union territory Administration concerned under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 for the purpose of this notification, was published in the Gazette of India ,Extraordinary, Part II, section 3, sub-section (ii) vide number S.O. 1324 (E) dated the 15th September ,2005 inviting objections and suggestions from all persons likely to be affected thereby within a period of sixty days from the date on which copies of Gazette containing the said notification were made available to the public;

And whereas, copies of the said notification were made available to the public on 15th September, 2005;

And whereas, all objections and suggestions received in response to the above mentioned draft notification have been duly considered by the Central Government;

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, read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 and in supersession of the notification number S.O. 60 (E) dated the 27th January, 1994, except in respect of things done or omitted to be done before such supersession, the Central Government hereby directs that on and from the date of its publication the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified hereinafter in this notification.

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[1]Includes the territorial waters

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

(i) All new projects or activities listed in the Schedule to this notification;

(ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;

(iii) Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.

3. State Level Environment Impact Assessment Authority:- (1) A State Level Environment Impact Assessment Authority hereinafter referred to as the SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member – Secretary to be nominated by the State Government or the Union territory Administration concerned.

(2) The Member-Secretary shall be a serving officer of the concerned State Government or Union territory administration familiar with environmental laws.

(3) The other two Members shall be either a professional or expert fulfilling the eligibility criteria given in Appendix VI to this notification.

(4) One of the specified Members in sub-paragraph (3) above who is an expert in the Environmental Impact Assessment process shall be the Chairman of the SEIAA.

(5) The State Government or Union territory Administration shall forward the names of the Members and the Chairman referred in sub- paragraph 3 to 4 above to the Central Government and the Central Government shall constitute the SEIAA as an authority for the purposes of this notification within thirty days of the date of receipt of the names.

(6) The non-official Member and the Chairman shall have a fixed term of three years (from the date of the publication of the notification by the Central Government constituting the authority).

(7) All decisions of the SEIAA shall be unanimous and taken in a meeting.

4. Categorization of projects and activities:-

(i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources.

(ii) All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;

(iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, *will* require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In the absence of a duly constituted SEIAA or SEAC, a Category 'B' project shall be treated as a Category 'A' project;

5. Screening, Scoping and Appraisal Committees:-

The same Expert Appraisal Committees (EACs) at the Central Government and SEACs (hereinafter referred to as the (EAC) and (SEAC) at the State or the Union territory level shall screen, scope and appraise projects or activities in Category 'A' and Category 'B' respectively. EAC and SEAC's shall meet at least once every month.

(a) The composition of the EAC shall be as given in Appendix VI. The SEAC at the State or the Union territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union territory Administration with identical composition;

(b) The Central Government may, with the prior concurrence of the concerned State Governments or the Union territory Administrations, constitutes one SEAC for more than one State or Union territory for reasons of administrative convenience and cost;

(c) The EAC and SEAC shall be reconstituted after every three years;

(d) The authorised members of the EAC and SEAC, concerned, may inspect any site(s) connected with the project or activity in respect of which the prior environmental clearance is sought, for the purposes of screening or scoping or appraisal, with prior notice of at least seven days to the applicant, who shall provide necessary facilities for the inspection;

(e) The EAC and SEACs shall function on the principle of collective responsibility. The Chairperson shall endeavour to reach a consensus in each case, and if consensus cannot be reached, the view of the majority shall prevail.

6. Application for Prior Environmental Clearance (EC):-

An application seeking prior environmental clearance in all cases shall be made in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II, after the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, or preparation of land, at the site by the applicant. The applicant shall furnish, along with the application, a copy of the pre-feasibility project report except that, in case of construction projects or activities (item 8 of the Schedule) in addition to Form 1 and the Supplementary Form 1A, a copy of the conceptual plan shall be provided, instead of the pre-feasibility report.

7. Stages in the Prior Environmental Clearance (EC) Process for New Projects:-

7(i) The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in this notification. These four stages in sequential order are:-

- Stage (1) Screening (Only for Category 'B' projects and activities)
- Stage (2) Scoping
- Stage (3) Public Consultation
- Stage (4) Appraisal

I. **Stage (1) - Screening**:

In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending up on the nature and location specificity of the project . The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

II. **Stage (2) - Scoping**:

(i) "Scoping": refers to the process by which the Expert Appraisal Committee in the case of Category 'A' projects or activities, and State level Expert Appraisal Committee in the case of Category 'B1' projects or activities, including applications for expansion and/or modernization and/or change in product mix of existing projects or activities, determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought. The Expert Appraisal Committee or State level Expert Appraisal Committee concerned shall determine the Terms of Reference on the basis of the information furnished in the prescribed application Form1/Form 1A including Terns of Reference proposed by the applicant, a site visit by a sub- group of Expert Appraisal Committee or State level Expert Appraisal Committee concerned only if considered necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, Terms of Reference suggested by the applicant if furnished and other information that may be available with the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. All projects and activities listed as Category 'B' in Item 8 of the Schedule (Construction/Township/Commercial Complexes /Housing) shall not require Scoping and will be appraised on the basis of Form 1/ Form 1A and the conceptual plan.

(ii) The Terms of Reference (TOR) shall be conveyed to the applicant by the Expert Appraisal Committee or State Level Expert Appraisal Committee as concerned within sixty days of the receipt of Form 1. In the case of Category A Hydroelectric projects Item 1(c) (i) of the Schedule the Terms of Reference shall be conveyed along with the clearance for pre-construction activities .If the Terms of Reference are not finalized and conveyed to the applicant within sixty days of the receipt of Form 1, the Terms of Reference suggested by the applicant shall be deemed as the final Terms of Reference approved for the EIA studies**.** The approved Terms of

Reference shall be displayed on the website of the Ministry of Environment and Forests and the concerned State Level Environment Impact Assessment Authority.

(iii) Applications for prior environmental clearance may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned at this stage itself. In case of such rejection, the decision together with reasons for the same shall be communicated to the applicant in writing within sixty days of the receipt of the application.

III. **Stage (3) - Public Consultation**:

(i) "Public Consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following:-

(a) modernization of irrigation projects (item 1(c) (ii) of the Schedule).

(b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.

(c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.

(d) all Building /Construction projects/Area Development projects and Townships (item 8).

(e) all Category 'B2' projects and activities.

(f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government.

(ii) The Public Consultation shall ordinarily have two components comprising of:-

(a) a public hearing at the site or in its close proximity- district wise, to be carried out in the manner prescribed in Appendix IV, for ascertaining concerns of local affected persons;

(b) obtain responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity.

(iii) the public hearing at, or in close proximity to, the site(s) in all cases shall be conducted by the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) concerned in the specified manner and forward the proceedings to the regulatory authority concerned within 45(forty five) of a request to the effect from the applicant.

(iv) in case the State Pollution Control Board or the Union territory Pollution Control Committee concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period

directly to the regulatory authority concerned as above, the regulatory authority shall engage another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days,.

(v) If the public agency or authority nominated under the sub paragraph (iii) above reports to the regulatory authority concerned that owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed, it shall report the facts in detail to the concerned regulatory authority, which may, after due consideration of the report and other reliable information that it may have, decide that the public consultation in the case need not include the public hearing.

(vi) For obtaining responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity, the concerned regulatory authority and the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) shall invite responses from such concerned persons by placing on their website the Summary EIA report prepared in the format given in Appendix IIIA by the applicant along with a copy of the application in the prescribed form , within seven days of the receipt of a written request for arranging the public hearing . Confidential information including non-disclosable or legally privileged information involving Intellectual Property Right, source specified in the application shall not be placed on the web site**.** The regulatory authority concerned may also use other appropriate media for ensuring wide publicity about the project or activity. The regulatory authority shall, however, make available on a written request from any concerned person the Draft EIA report for inspection at a notified place during normal office hours till the date of the public hearing. All the responses received as part of this public consultation process shall be forwarded to the applicant through the quickest available means.

(vii) After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.

IV. Stage (4) - Appraisal:

(i) Appraisal means the detailed scrutiny by the Expert Appraisal Committee or State Level Expert Appraisal Committee of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of environmental clearance. This appraisal shall be made by Expert Appraisal Committee or State Level Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. On conclusion of this proceeding, the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior environmental clearance on stipulated terms and conditions, or rejection of the application for prior environmental clearance, together with reasons for the same.

(ii) The appraisal of all projects or activities which are not required to undergo public consultation, or submit an Environment Impact Assessment report, shall be carried out on the basis of the prescribed application Form 1 and Form 1A as applicable, any other relevant

validated information available and the site visit wherever the same is considered as necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

(iii) The appraisal of an application be shall be completed by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within sixty days of the receipt of the final Environment Impact Assessment report and other documents or the receipt of Form 1 and Form 1 A, where public consultation is not necessary and the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee shall be placed before the competent authority for a final decision within the next fifteen days .The prescribed procedure for appraisal is given in Appendix V ;

7(ii). Prior Environmental Clearance (EC) process for Expansion or Modernization or Change of product mix in existing projects:

All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of EIA and public consultations and the application shall be appraised accordingly for grant of environmental clearance.

8.Grant or Rejection of Prior Environmental Clearance (EC):

(i) The regulatory authority shall consider the recommendations of the EAC or SEAC concerned and convey its decision to the applicant within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned or in other words within one hundred and five days of the receipt of the final Environment Impact Assessment Report, and where Environment Impact Assessment is not required, within one hundred and five days of the receipt of the complete application with requisite documents, except as provided below.

(ii) The regulatory authority shall normally accept the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. In cases where it disagrees with the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, the regulatory authority shall request reconsideration by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned while stating the reasons for the disagreement. An intimation of this decision shall be simultaneously conveyed to the applicant. The Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, in turn, shall consider the observations of the regulatory authority and furnish its views on the same within a further period of sixty days. The decision of the regulatory authority after considering the views of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be final and conveyed to the applicant by the regulatory authority concerned within the next thirty days.

(iii) In the event that the decision of the regulatory authority is not communicated to the applicant within the period specified in sub-paragraphs (i) or (ii) above, as applicable, the

applicant may proceed as if the environment clearance sought for has been granted or denied by the regulatory authority in terms of the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

(iv) On expiry of the period specified for decision by the regulatory authority under paragraph (i) and (ii) above, as applicable, the decision of the regulatory authority, and the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be public documents.

(v) Clearances from other regulatory bodies or authorities shall not be required prior to receipt of applications for prior environmental clearance of projects or activities, or screening, or scoping, or appraisal, or decision by the regulatory authority concerned, unless any of these is sequentially dependent on such clearance either due to a requirement of law, or for necessary technical reasons.

(vi) Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection, and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance already granted, on such ground, shall be decided by the regulatory authority, after giving a personal hearing to the applicant, and following the principles of natural justice.

9. Validity of Environmental Clearance (EC):

The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the Schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects and five years in the case of all other projects and activities. However, in the case of Area Development projects and Townships [item 8(b)], the validity period shall be limited only to such activities as may be the responsibility of the applicant as a developer. This period of validity may be extended by the regulatory authority concerned by a maximum period of five years provided an application is made to the regulatory authority by the applicant within the validity period, together with an updated Form 1, and Supplementary Form 1A, for Construction projects or activities (item 8 of the Schedule). In this regard the regulatory authority may also consult the Expert Appraisal Committee or State Level Expert Appraisal Committee as the case may be.

10. Post Environmental Clearance Monitoring:

(i) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

(ii) All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

11. Transferability of Environmental Clearance (EC):

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor, or by the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period. No reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned is necessary in such cases.

12. Operation of EIA Notification, 1994, till disposal of pending cases:

From the date of final publication of this notification the Environment Impact Assessment (EIA) notification number S.O.60 (E) dated 27th January, 1994 is hereby superseded, except in suppression of the things done or omitted to be done before such suppression to the extent that in case of all or some types of applications made for prior environmental clearance and pending on the date of final publication of this notification, the Central Government may relax any one or all provisions of this notification except the list of the projects or activities requiring prior environmental clearance in Schedule I , or continue operation of some or all provisions of the said notification, for a period not exceeding one year from the date of issue of this notification.

[No. J-11013/56/2004-IA-II (I)]

(R.CHANDRAMOHAN)
JOINT SECRETARY TO THE GOVERNMENT OF INDIA

SCHEDULE

(See paragraph 2 and 7)

LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE

Project or Activity		**Category with threshold limit**		**Conditions if any**
		A	**B**	
1		**Mining, extraction of natural resources and power generation (for a specified production capacity)**		
(1)	(2)	(3)	(4)	(5)
1(a)	Mining of minerals	≥ 50 ha. of mining lease area Asbestos mining irrespective of mining area	<50 ha ≥ 5 ha .of mining lease area.	General Condition shall apply Note Mineral prospecting (not involving drilling) are exempted provided the concession areas have got previous clearance for physical survey
1(b)	Offshore and onshore oil and gas exploration, development & production	All projects		Note Exploration Surveys (not involving drilling) are exempted provided the concession areas have got previous clearance for physical survey
1(c)	River Valley projects	(i) ≥ 50 MW hydroelectric power generation; (ii) ≥ 10,000 ha. of culturable command area	(i) < 50 MW ≥ 25 MW hydroelectric power generation; (ii) < 10,000 ha. of culturable command area	General Condition shall apply
1(d)	Thermal Power Plants	≥ 500 MW (coal/lignite/naphta & gas based); ≥ 50 MW (Pet coke diesel and all other fuels -)	< 500 MW (coal/lignite/naptha & gas based); <50 MW ≥ 5MW (Pet coke ,diesel and all other fuels)	General Condition shall apply

(1)	(2)	(3)	(4)	(5)
1(e)	Nuclear power projects and processing of nuclear fuel	All projects	-	
2		**Primary Processing**		
2(a)	Coal washeries	≥ 1 million ton/annum throughput of coal	<1million ton/annum throughput of coal	General Condition shall apply (If located within mining area the proposal shall be appraised together with the mining proposal)
2 (b)	Mineral beneficiation	≥ 0.1million ton/annum mineral throughput	< 0.1million ton/annum mineral throughput	General Condition shall apply (Mining proposal with Mineral beneficiation shall be appraised together for grant of clearance)

3		**Materials Production**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**
3(a)	Metallurgical industries (ferrous & non ferrous)	a)Primary metallurgical industry All projects b) Sponge iron manufacturing ≥ 200TPD c)Secondary metallurgical processing industry All toxic and heavy metal producing units ≥ 20,000 tonnes /annum -	Sponge iron manufacturing <200TPD Secondary metallurgical processing industry i.)All toxic andheavymetal producing units <20,000 tonnes /annum ii.)All other non –toxic secondary metallurgical processing industries >5000 tonnes/annum	General Condition shall apply for Sponge iron manufacturing
3(b)	Cement plants	≥ 1.0 million tonnes/annum production capacity	<1.0 million tonnes/annum production capacity. All Stand alone grinding units	General Condition shall apply

4		**Materials Processing**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**
4(a)	Petroleum refining industry	All projects	-	-
4(b)	Coke oven plants	≥2,50,000 tonnes/annum -	<2,50,000 & ≥25,000 tonnes/annum	-
4(c)	Asbestos milling and asbestos based products	All projects	-	-
4(d)	Chlor-alkali industry	≥300 TPD production capacityor a unit located out side the notified industrial area/ estate	<300 TPD production capacity and located within a notified industrial area/ estate	Specific Condition shall apply No new Mercury Cell based plants will be permitted and existing units converting to membrane cell technology are exempted from this Notification
4(e)	Soda ash Industry	All projects	-	-
4(f)	Leather/skin/hide processing industry	New projects outside the industrial area or expansion of existing units out side the industrial area	All new or expansion of projects located within a notified industrial area/ estate	Specific condition shall apply
5		**Manufacturing/Fabrication**		
5(a)	Chemical fertilizers	All projects	-	-
5(b)	Pesticides industry and pesticide specific intermediates (excluding formulations)	All units producing technical grade pesticides	-	-

(1)	(2)	(3)	(4)	(5)
5(c)	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	All projects -	-	-
5(d)	Manmade fibres manufacturing	Rayon	Others	General Condition shall apply
5(e)	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	Located out side the notified industrial area/ estate -	Located in a notified industrial area/ estate	Specific Condition shall apply
5(f)	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	Located out side the notified industrial area/ estate	Located in a notified industrial area/ estate	Specific Condition shall apply
5(g)	Distilleries	(i)All Molasses based distilleries (ii) All Cane juice/ non-molasses based distilleries ≥30 KLD	All Cane juice/non-molasses based distilleries – <30 KLD	General Condition shall apply
5(h)	Integrated paint industry	-	All projects	General Condition shall apply

(1)	(2)	(3)	(4)	(5)
5(i)	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp with out bleaching	Pulp manufacturing and Pulp& Paper manufacturing industry -	Paper manufacturing industry without pulp manufacturing	General Condition shall apply
5(j)	Sugar Industry	- -	≥ 5000 tcd cane crushing capacity	General Condition shall apply
5(k)	Induction/arc furnaces/cupola furnaces 5TPH or more	- -	All projects	General Condition shall apply
6		**Service Sectors**		
6(a)	Oil & gas transportation pipe line (crude and refinery/ petrochemical products)**,** passing through national parks /sanctuaries/coral reefs /ecologically sensitive areas including LNG Terminal	All projects -		-

(1)	(2)	(3)	(4)	(5)
6(b)	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	-	All projects	General Condition shall apply
7		**Physical Infrastructure including Environmental Services**		
7(a)	Air ports	All projects	-	-
7(b)	All ship breaking yards including ship breaking units	All projects	-	-
7(c)	Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes.	If at least one industry in the proposed industrial estate falls under the Category A, entire industrial area shall be treated as Category A, irrespective of the area. Industrial estates with area greater than 500 ha. and housing at least one Category B industry.	-Industrial estates housing at least one Category B industry and area <500 ha. Industrial estates of area> 500 ha. and not housing any industry belonging to Category A or B.	Special condition shall apply Note: Industrial Estate of area below 500 ha. and not housing any industry of category A or B does not require clearance.
7(d)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration &landfill or incineration alone	All facilities having land fill only	General Condition shall apply

(1)	(2)	(3)	(4)	(5)
7(e)	Ports, Harbours	≥ 5 million TPA of cargo handling capacity (excluding fishing harbours)	< 5 million TPA of cargo handling capacity and/or ports/ harbours ≥10,000 TPA of fish handling capacity	General Condition shall apply
7(f)	Highways	i) New National High ways; and ii) Expansion of National High ways greater than 30 KM, involving additional right of way greater than 20m involving land acquisition and passing through more than one State.	i) New State High ways; and ii) Expansion of National / State Highways greater than 30 km involving additional right of way greater than 20m involving land acquisition.	General Condition shall apply
7(g)	Aerial ropeways		All projects	General Condition shall apply
7(h)	Common Effluent Treatment Plants (CETPs)		All projects	General Condition shall apply
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)		All projects	General Condition shall apply

(1)	(2)	~~(3)~~	(4)	(5)
8		**Building /Construction projects/Area Development projects and Townships**		
8(a)	Building and Construction projects		≥20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area#	#(built up area for covered construction; in the case of facilities open to the sky, it will be the activity area)
8(b)	Townships and Area Development projects.		Covering an area ≥ 50 ha and or built up area ≥1,50,000 sq .mtrs ++	++All projects under Item 8(b) shall be appraised as Category B1

Note:-

General Condition (GC):

Any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries.

Specific Condition (SC):

If any Industrial Estate/Complex / Export processing Zones /Special Economic Zones/Biotech Parks / Leather Complex with homogeneous type of industries such as Items 4(d), 4(f), 5(e), 5(f), or those Industrial estates with pre –defined set of activities (not necessarily homogeneous, obtains prior environmental clearance, individual industries including proposed industrial housing within such estates /complexes will not be required to take prior environmental clearance, so long as the Terms and Conditions for the industrial estate/complex are complied with (Such estates/complexes must have a clearly identified management with the legal responsibility of ensuring adherence to the Terms and Conditions of prior environmental clearance, who may be held responsible for violation of the same throughout the life of the complex/estate).

जहाँ है हरियाली ।
वहाँ है खुशहाली ॥

Ministry of Environment & Forests
GOVERNMENT OF INDIA, NEW DELHI

Environmental Impact Assessment Guidance Manual for BUILDING, CONSTRUCTION, TOWNSHIPS and AREA DEVELOPMENT PROJECTS

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Section B
TOWNSHIP
AND
AREA DEVELOPMENT PROJECTS

1

INTRODUCTION

1.0 Preamble

This section of the manual provides information and guidance on Environmental Impact Assessment (EIA) in townships and area development projects. It is intended as a resource for those who are involved in EIA practice. Particular emphasis is given to concepts, procedures and tools that are used currently or are potentially relevant in preparing environmental impact assessment reports for clearance from regulatory agencies. EIA is a technical exercise, to predict environmental impacts, assess their significance, and provide recommendations for their mitigation. The assessment covers construction and operation of the development and can consider site decommissioning. EIA report covers a wide range of technical disciplines and covers areas such as noise and vibration, air quality, ecology, contamination, water quality & hydrology, archaeology & cultural heritage, landscape & visual character, sustainability and socio-economics. The EIA report will describe how the project has been improved through the EIA process and what alternatives were considered.

1.1 General Information on Township and Area Development Projects

Township in general, is self contained and integrated in the social infrastructure needs, services, shopping, entertainment and waste management. Infrastructure and services include road network, water supply and management, electricity supply and management and proper communication services. Social infrastructure includes schools, medicare, recreation and community centre. Shopping centre with adequate facilities should be housed in the township itself.

Proper waste management including garbage collection, segregation, treatment and disposal with the township should be provided. Maintenance of infrastructure and proper security and safety of the residents is to be ensured.

1.2Environmental Clearance Process

The objective of the EIA Notification, 2006 is to set procedures of environmental clearance before establishment of identified nature and size. The suitability of site proposed for a proposed development is one of primary concerns in according environmental clearance to a project.

The applicant will have to furnish, along with the application, in addition to Form 1 and the supplementary Form 1A, a copy of the conceptual plan. The details of the categories mentioned in the given schedule are as follows:

Project or Activity		Category with threshold limit - B Category	General Conditions
8.	**Building /Construction Projects/Area Development Projects and Townships**		
8(a)	Building and Construction projects	≥20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area#	"Any project or activity specified in Category 'B' will be treated as Category 'A' if located in whole or in part within 10 km from the boundary of: (i) Protected areas notified under the Wildlife
8(b)	Townships and Area Development	Covering an area ha and or built up area ≥ 1,50,000 sq. mtrs. ++	(Protection) Act, 1972; (ii) Critically polluted areas as identified by theCentral Pollution Control Board from time to time; (iii) Eco-sensitive areas as notified under section 3 of the Environment (Protection) Act, 1986, such as, Mahabaleswar Panchangi, Matheran, Pachmarhi, Dahanu, Doon Valley and (iv) inter-state boundaries and international boundaries. Provided that the requirement regarding distance of 10km of the inter-state boundaries can be educed or completely done away with by an agreement between he respective states or U.Ts haring the common boundary in the case the activity does not fall within 10 kilometers of the areas mentioned at item (i), (ii) and (iii) above
# (built up area for covered construction; in the case of facilities open to the sky, it will be the activity area)			
++All projects under Item 8(b) shall be appraised as Category B1			

This manual addresses the important issues to be discussed in the environmental impact assessment of building construction, townships and area development projects. Fig.1 shows the EIA clearance process for the building construction, townships and area development projects.

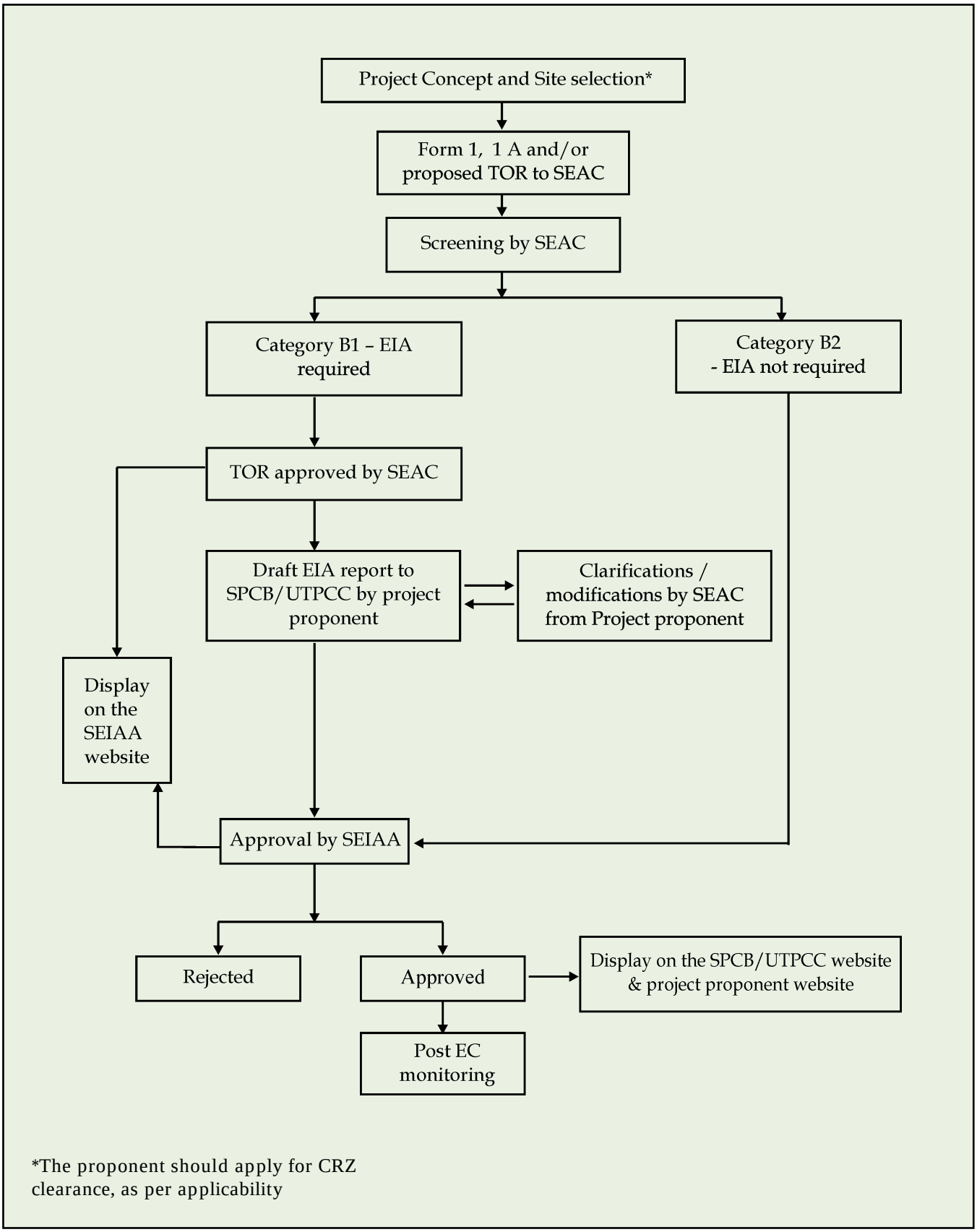


Figure 1.1: Prior Environmental Clearance Process for Category B Projects

The projects requiring an Environmental Impact Assessment report termed Category 'B1' and remaining projects termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests should issue appropriate guidelines from time to time. All projects and activities listed as Category 'B' in Item 8 of the Schedule (Construction / Township / Commercial Complexes / Housing) shall not require scoping and will be appraised on the basis of Form 1/ Form 1A and the conceptual plan.

- The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a CRZ map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be take to obtain the requisite clearance under the provisions of the CRZ notification, 1991 for the activities to be located in the CRZ
- The projects to be located within 10km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory corridors of wild animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC)
- All correspondence with the Ministry of Environment & Forests including submission "of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project"

Ref:- EIA notification - Amendment 2009

1.3 Terms of Reference (TOR)

The terms of reference (TOR) pertinent to preparation of EIA study reports for building construction, township and area development projects is attached as Annexure 1 to this EIA guidance Manual. TOR relevant to individual projects is to be added by the proponent and should be submitted with the application along with 'Form 1' and 'Form 1A' and the State Level Expert Appraisal Committee. The issues are addressed separately for building construction projects and townships and area development projects.

1.4 Validity of Environmental Clearance

The prior environmental clearance granted is valid for a period of five years. The regulatory authority concerned may extend this validity period by a maximum period of five years provided an application is made to the regulatory authority by the applicant within the validity period, together with an updated Form 1, and Supplementary Form 1A, for construction projects or activities (item 8 of the schedule)

1.5 Post Environmental Clearance Monitoring

For category B projects, irrespective of its clearance by MoEF/SEIAA, the project proponent shall prominently advertise in the newspapers indicating that the project has been accorded environmental clearance and the details of MoEF website where it is displayed.

The Project management shall submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions on 1st June and 1st December of each calendar year. All such reports shall be public documents.

1.6 Transferability of Environmental Clearance

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor or the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period.

1.7 Generic Structure of Environmental Impact Assessment Document

In terms of the EIA notification of the MoEF dated 14th September 2006, the generic structure of the EIA document should be as under:

- Introduction
- Project Description
- Description of the Environment
- Anticipated Environmental Impacts & Mitigation Measures
- Analysis of Alternatives (Technology and site)
- Environmental Monitoring Programme
- Additional Studies
- Project Benefits
- Environmental Management Plan
- Summary & Conclusion
- Disclosure of Consultants engaged

1.8 Identification of Project Proponent

Profile of the project proponent, contact address with e-mail, fax, phone number etc should be furnished. All correspondence with MoEF shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project

1.9 Brief Description of Project

In this section details of the project nature, size, location and its importance to the country and the region are to be included. Project site description; survey / khasra nos, village, tehsil, district, state & extent of the land, latitude & longitude of the boundaries are to be furnished.

Description of existing national and international environmental laws / regulations on the proposed activity is to be brought out clearly. If there are any notified restrictions / limitations from environmental angle, issued by the district administration, State or Central government, the same should be furnished. Details of litigation(s) pending against the project / proposed site and or any direction passed by the court of law against the project, if any, should be stated.

In case of expansion / modernization of the project, the environmental compliance status for the existing project should be furnished for the following:

- Status of Environmental Clearance and compliance for the terms & conditions for the existing project
- Validity of the Air & Water Consent orders, and Hazardous Waste Authorization (HWA) from SPCB / PCC for existing project
- Notices / directions issued by the regulatory agencies under section 33(A) of the Water Act, 1974 as amended, under section 31(A) of the Air Act 1981 as amended and any directions issued under the provisions of the E (P) Act, 1986 during the last one year

2

PROJECT DESCRIPTION

2

2.0 General

The description of the project to be given in this chapter of the EIA study report should be reasonably adequate to understand the likely overall impact of the project construction and operational phases on various facets of environment.

2.1 Description of the Project

Location (use maps showing general location, specific location, project boundary and project site layout).

Essential Toposheets / Maps to be Provided with TOR application

A map of the study area 2 km from the boundary of the project area, delineating the major topographical features such as land use, drainage, locations of habitats, major constructions including roads, railways, pipelines, industries if any in the area are to be mentioned.

A map covering aerial distance of 15 kms from the boundary of the proposed project area delineating environmental sensitive areas as specified in Form I of EIA notification dated 14th Sept. 2006. In the same map the details of environmental sensitive areas present within a radial distance of 1 Km from the project boundary should be specifically shown.

Remote Sensing Satellite Imagery

Land use map of the study area in 1:10,000 scale based on high resolution satellite imagery delineating the forest, agricultural land, water bodies, settlements, and other cultural features.

Digital Elevation Model / Contour Map

Contour map on 1:10000 scale for the study area showing the various proposed break-up of the land.

Description of the project site, geology, topography, climate, transport and connectivity, demographic aspects, socio, cultural and economic aspects, villages, settlements should be given.

Details of environmentally sensitive places, land acquisition, rehabilitation of communities / villages, present status of such activities are to be mentioned. .

Historical data on climate conditions such as wind pattern, history of cyclones, storm surges, earth quake etc., for the last 25 years are to be given. An analysis and interpretation of the data has to be given by the project proponent.

Detailed layout plan of proposed project development, communication facilities, access / approach roads, landscape, sewage disposal facilities, and waste disposal etc; to be given. Layout plan of proposed development of built up areas with covered construction such as buildings, recreational facilities, DG set rooms, water supply installations etc; are to be given. Requirement of natural resources and their sources are to be detailed out.

Litigations if any: In some of the states, there may be some litigation in process between public / State Govt. agencies / other industries and the project proponent or other projects relevant to the project proposed. In such cases, court rulings / directions on the matter may be mentioned. These may be studied and highlighted in the project report to avoid loss of time and money in planning the project.

2.2Site Selection

Apart from the issues addressed in Section A of this manual the following are to be ensured.

Proposed land use must conform to the approved Master Plan / Development plan of the area. If there is no approved Plan, consent from appropriate authority should be taken and should be submitted for Environment clearance. If the area is outside municipal limits / outside planning area, full justification for the proposed development should be provided.

Sites for new townships should conduct an analysis of the cultural and historical conditions, the urban context considerations, availability of water and other critical infrastructures like electricity, roads with adequate width and capacity and environmental considerations including ecosystems and diversity .

The landuse zoning has to be consider with special reference to the natural hazard prone areas identified.

Land Use Zoning in Natural Hazard Prone Areas

Town and country planning has developed regulations for zones identified as natural hazard zones in India. These include earthquake, floods, hilly terrains etc.

The regulations for Land Use Zoning for Natural Hazard Prone Areas are to be notified under section

1) u / s 73(f) of Model Town & Country Planning Act, 1960; OR
2) u / s 143(f) of Model Regional and Town Planning and Development Law; OR
3) u / s 181(f) of Model Urban & Regional Planning and Development Law (Revised) of UDPFI Guidelines

As may be applicable in the states under the existing provisions of Town and Country Planning legislation as and when Master Plan / development Plan of different cities / towns / areas are formulated.

The purpose of the land use zoning is for development of particular area to serve the desired purpose efficiently and to preserve its character.

Identification of Natural Hazard Prone Areas

Earthquake Prone Areas

a. Intensities of VII or more on Modified Mercalli or MSK intensity scale are considered moderate to high. areas under seismic zones III, IV and V as specified in IS 1893. Therefore, all areas in these three zones will be considered prone to earthquake hazards.

b. In these zones the areas which have soil conditions and the level of water table favourable for liquefaction or settlements under earthquake vibrations will have greater risk to buildings and structures which will be of special consideration under Land Use Zoning.

c. Under these zones, those hilly areas which are identified to have poor slope stability conditions and where landslides could be triggered by earthquake or where due to prior saturated conditions, mud flow could be initiated by earthquakes and where avalanches could be triggered by earthquake will be specially risk prone.

d. Whereas, earthquake hazard prone areas defined in 'a' above are identified on the map given in IS 1893 to small scale and more easily identified in the larger scale state wise maps given in the Vulnerability Atlas of India, the special risky areas as defined in 'b' and 'c' above, have to be determined specifically for the planning area under consideration through special studies to be carried out by geologists and geo-technical engineers.

e. If an active fault trace is identified by GSI (Geological Survey of India), a structure for human occupancy should not be placed over the fault trace and must be set back by a minimum of 15 m on either side of fault trace..

Cyclone Prone Areas

a. Areas prone to cyclonic storms are along the sea coast of India where the cyclonic wind velocities of 39 meter per second or more are specified in the Wind Velocity Map given in IS 875 (part 3) to a small scale and easily identified in the Vulnerability Atlas of India where the Maps are drawn state wise on a larger scale.

b. In these cyclone prone areas, those areas which are likely to be subjected to heavy rain induced floods or to flooding by sea-water under the conditions of storm surge, are specially risky due to damage by flood flow and inundation under water.

c. Whereas, areas under 'a' are easily identified, those with special risk as under 'b' have to be identified by special contour survey of the planning area under consideration and study of the past flooding and storm surge history of the area. These studies may have to be carried out through the Survey of India or locally appointed survey teams, and by reference to the Central Water Commission, Government of India and the department of the State or U.T dealing with the floods.

Flood Prone Areas

a. The flood prone areas in river plains (unprotected and protected by bunds) are indicated in the Flood Atlas of India prepared by the Central Water Commission and reproduced on larger scale in the statewise maps in the Vulnerability Atlas of India.

b. Besides the above areas, other areas can be flooded under conditions of heavy intensity rains, inundation in depressions, backflow in drains, inadequate drainage, failure of protection works, etc.

c. Whereas, the flood prone areas under 'a' are identified on the available maps as indicated, the areas under 'b' have to be identified through local contour survey and study of the flood history of the planning area. Such studies may be carried out through Survey of India or local survey teams, and by reference to the Central Water Commission and the departments of the state or U.T dealing with the floods.

Land Slide Prone Areas

a. While it is known that most hilly areas are prone to landslides / landslips, the susceptibility of the various areas to landslide varies from very low to very high. Landslide zoning naturally requires mapping on large scale. Normally medium scale of 1:25000 is at least chosen.

In preparation of the landslide zone map, two types of factors are considered important as listed here below:

1. *Geological/Topographic Factors/Parameters*
   - Lithology
   - Geological Structures / Lineaments
   - Slope-dip (bedding, joint) relation
   - Geomorphology
   - Drainage
   - Slope angle, slope aspect and slope morphology
   - Land use
   - Soil texture and depth
   - Rock weathering

2. *Triggering Factors*
   - Rainfall
   - Earthquake
   - Anthropogeny

b. Whereas the factors listed under geological / topographic parameters have been considered as basic inputs for the landslide potential model, the three triggering factors namely, rainfall, earthquake and anthropogeny were considered external factors which trigger the occurrence of a landslide.

c. Whereas, the landslide prone areas under 'a' are available for some parts of the country on the maps given in Landslide Hazard Zonation Mapping in the Himalayas of Uttranchal and Himachal Pradesh States using Remote Sensing and GIS Techniques, pub. By National Remote Sensing Agency, Department of Space, Government of India, Hyderabad and Landslide Hazard Zonation Atlas of India – Landslide Hazard Maps and Cases Studies prepared by Building Materials & Technology Promotion Council, Ministry of Urban Development & Poverty Alleviation, Govt. of India, the risky areas in other parts of the country have to be determined specially for the planning areas under consideration through special studies to be carried out by the State / UT governments and the concerned Competent Authorities.

Land Use Zoning of Flood Prone Areas :

(a) Preparation of Flood Contour Maps

The following actions should be taken to prepare the flood contour maps by taking up special studies / surveys as found necessary in the Development Area:

i. Prepare detailed contour plan of the area liable to flood on a scale of 1 in 15000 or larger scale showing contours at interval of 0.3 to 0.5 metre;

ii. Fix reference river gauges or maximum flood levels due to heavy rains with respect to which the areas are likely to be inundated; Demarcate areas liable to flooding by *floods in rivers* of return periods of 5, 25, 50 and 100 years or by *excessive rainfall* of return period of 5, 10, 25, and 50 years;

iii. Mark on the maps the submersion contours for these flood stages.

(b) Regulation for Land Use Zoning

i. Installations and Buildings of Priority 1 should be located in such a fashion that the area is above the levels corresponding to a 100 year flood or the maximum observed flood levels whichever higher. Similarly they should also be above the levels corresponding to a 50-year rainfall flooding and the likely submersion due to drainage congestion;

ii. Buildings of Priority 2 should be located outside the 25 year flood or a 10 year rainfall contour, provided that the buildings if constructed between the 10 and 25 year contours should have either high plinth level above 25 year flood mark or constructed on columns or stilts, with ground area left for the unimportant uses;

iii. Activities of Priority 3 viz. play grounds, gardens and parks etc. can be located in areas vulnerable to frequent floods.

Planning in Hill Areas

In order to ensure environmentally sound development of hill towns, the following restrictions and conditions may be proposed for future activities.

An integrated development plan should be prepared taking into consideration environmental and other relevant factors including ecologically sensitive areas, hazard prone areas, drainage channels, steep slopes and fertile land.

Water bodies including underground water bodies in water scares areas should be protected. Where cutting of hill slope in an area causes ecological damage and slope instability in adjacent areas, such cuttings shall not be undertaken unless appropriate measures are taken to avoid or prevent such damages.

No construction should be ordinarily undertaken in areas having slope above 30^0 or areas which fall in landslide hazard zones or areas falling on the spring lines and first order streams identified by the State Government on the basis of available scientific evidence.

Construction may be permitted in areas with slope between 10º to 30º or spring recharge areas or old landslide zones with such restrictions as the competent authority may decide.

These criteria are to be taken into consideration for a specific site and wherever applicable.

2.3 Manpower Requirement

The proponent should indicate the requirement of various categories of manpower such as skilled, semi-skilled, unskilled workers, technicians, engineers, managers during the construction phase.

The proponent should give the details of compliance of Acts related to employees' service and their welfare measure as per the provisions of government of India. This is because the building and other construction works is characterized by its casual nature, temporary relationship between employer and employee, uncertain working hours, lack of basic amenities and inadequacy of welfare facilities.

The following are the Acts for compliance by proponent regarding Manpower employment. The proponent should follow any later modification or Revisions for these Acts automatically

- Minimum Wages Act 1948,
- Contract Labour (Regulation & Abolition) Act1970
- Inter-State Migrant Workmen (Regulation of Employment & Conditions of Services) Act 1979
- The Building and other construction workers (Regulation and Employment of Service) Act, 1996
- The Building and other construction workers Welfare Cess Act 1996.

2.4 Project Implementation Schedule

The proponent should also submit the detailed project implementation schedule bar chart, CPM / PERT chart etc., duly bringing out interrelationship of major activities.

3

DESCRIPTION OF THE ENVIRONMENT

3.0 General

Environment facets to be considered in relation to townships and area development are: (a) land (b) air (c) noise (d) water (e) biological (f) socio-economic and (g) solid waste management. Hence it is necessary to ascertain the baseline data of these environmental facets.

Study Area

In the case of townships projects, EIA guidelines are specifically mentioned in Form 1A of EIA notification 2006. The following details are to be given:

1. Site development area
2. Area with angular distance of 2kms surrounding the site.

The project study area comprises the site earmarked for building construction with specified surrounding area. The baseline data collection / monitoring should be from primary and secondary sources and field monitoring studies. When secondary data is used source of data is to be mentioned clearly. The period of study for collecting primary data would be one season other than the monsoon season.

3.1 Land Environment

Existing status of baseline conditions of land use can be determined by studying the changes in the land use pattern in the past 10yrs by collecting data from secondary sources such as census records, agricultural census and land records. The land use pattern covering forest land, total irrigated land, non-irrigated land, cultivable waste, are to be calculated and given as a map (Annexure 2).

Soil formation is influenced mainly by climate, geology, relief and other biotic interactions. The soil characteristics in the project area which would affect the agricultural and afforestation potential of the area need to be studied. Particle size scale is to be given based on the texture analysis. Soil porosity and SAR ratios are important and are to be assessed for all locations. The samples are to be collected and analyzed as per CPCB norms (Annexure 3). The hydraulic conductivities in soil are important for building construction activities and are given in Annexure 4. The rating chart for the soil test values for primary nutrients is given in Annexure 4. The physical and chemical properties of soil are to be analysed and presented as given in Table 3.1 and 3.2

3.2 Water Environment

The physiography of the land will control the drainage pattern in the region. The drainage pattern in the area is to be drawn. Hydro-geological settings and the ground water levels are to be examined and presented. Ground water, surface water and waste water generated in the study area is to be collected as per CPCB norms (Annexure 3) and examined for physico- chemical, heavy metals and bacteriological parameters. The drinking water and fresh water standards are given in Annexure 5. These projects crate a continuous demand on the water resources. The format for

ground water quality data presentation is given in Table 3.3 and Table 3.4. The amount of water demand can be calculated based on the occupancy of the building and the per capita consumption (Annexure 6) as given by BIS for different categories.

Total quantity of water used= Occupancy x Quantity (LPCD)

Similarly the format in which the data for surface water quality is to be presented is shown in Table 3.5 and Table 3.6.

3.3 Air Environment

The climatic data procured from secondary sources is very important for identifying the season and period of monitoring primary data. The climatic data can help in using suitable building technologies and energy conservation measures.

The methodology to be adopted for collection of climatic data specific to the site is to compile the mean monthly normals of atmospheric parameters, form previous 10yrs data recorded by the nearest IMD station. Wind Roses for each month giving the wind direction speed are to be collected and presented. Most probable wind speed class and wind direction at the nearest IMD site is to be estimated from this.

Baseline data of air pollutant parameters extending an area of 2 Km from the project should be monitored at a number of locations. Description of baseline data of ambient air parameters namely RSPM, nitrogen dioxide, sulphur dioxide, and carbon monoxide are to be collected. One season data is to be monitored other than monsoon as per the CPCB Norms. Sampling locations are to be located as per CPCB norms. The ambient air quality standards are given in Annexure 7. Number and locations of Ambient Air quality monitoring (AAQM) stations are decided based on the nature of project, meteorological conditions, Topography, selected pollution pockets in the area and likely impact areas. The parameters measured, frequencies of sampling, technique to be as prescribed by CPCB are given in Annexure 3. The monitoring locations for air quality are to be given as shown in Table 3.7 and data should be represented as shown in Table 3.8. The monitoring locations are also to be shown on the area map.

3.4 Noise Environment

Construction equipment and road traffic are the major sources of noise. Baseline data of noise at the project area and the neighbourhood habitat areas is to be ascertained. Daytime and nighttime data should be collected and presented as shown in Table 3.9 the parameters, frequencies of sampling are shown in Annexure 3 and the standards for noise are given in Annexure 8.

3.5 Biological Environment

Baseline data from field observations for various terrestrial and aquatic systems are to be generated. Wild life sanctuaries and National parks location within 10km radius from project boundary are identified based on secondary data. Primary data on survey of the wild animals and birds in the study area is collected and identified with the classification into various schedules taken from secondary data.

3.6 Socio-economic Environment

Baseline data on the socio economic environment in the study area is to be collected. The issues to be focused include demographic structure, economic activity, education, literacy profile, land use, health status and infrastructure resources. Primary data through designed questionnaires from the house hold survey within the study area is collected and from secondary sources and represented as shown in Table 3.10 and 3.11. The demographic details consisting of population distribution, Average household size, population density, sex ratio, social structure and literacy levels within project study area are concluded from this data collected.

3.7 Solid Waste

Present data available on solid waste generated in the area are to be collected. If possible the present quantities of wastes – hazardous household wastes, electronic wastes, biomedical and non-hazardous generated in the study are to be collected and presented.

4

ANTICIPATED IMPACT AND MITTIGATION MEASURES

4.0 Introduction

Impacts can be classified in the presentation as direct, indirect and cumulative impacts. These can be further subdivided for convenience and clarity to positive and negative impacts, random and predictable impacts, local and widespread impacts, temporary and permanent impacts, long term and short term impacts. The report should preferable cover the impacts as discussed above. Suitable avoidance / mitigation methods can be given for each of the alternatives provided. The most feasible one can be chosen by the project proponent.

Prediction of Impact during Construction Phases

The activities that take place during construction phases of the project are leveling of site, construction and erection of buildings etc., and associated equipments in operation. The potential primary and secondary impacts on the environment, their prediction, significance and mitigation are to be discussed.

Prediction of Impact During Operational Phases

The potential significant impacts are on topography, land use, soil quality, ambient air quality, noise levels, traffic densities, water resources, water quality, biological environment, demography and socio- economics. During construction and operational phase of the project, various activities may have impact on some or other environmental parameters. Various environmental attributes are to be studied during these phases for their overall impact on the surrounding environment. The guidance for assessment and impact is given in Annexure 9.

4.1 Land Environment

Anticipated Impact

Impacts due to activity have to be identified that are caused. Some of the impacts could be

- Compaction of soils by earth moving equipment
- Erosion and modification of surface
- Over exploitation of agricultural soils due to future development in a zone sensitive to erosion
- Irreversible salinization and acidification of mangrove swamp soils

Mitigation Measures

Soil erosion is an important parameter which needs to be addressed during the construction phase. Some of the mitigation measures include:

- The environmental impact of soil erosion can best be mitigated by removing vegetative cover only from the specific site on which construction is to take place and by disturbing the vegetation in adjacent areas as little as possible. Land clearing activities should be kept to the absolute minimum and use crushed stone rather than asphalt or concrete for surfacing parking areas should be attempted.

- Evolve strategies to stockpile top soil and reuse later for landscaping purpose
- Adopt measures such as temporary and permanent seeing, mulching, early dikes, silt fencing, sediment traps and sediment basins.
- Open areas can be landscaped
- Paved areas can be installed with permeable paving.
- Impermeable surfaces direct all runoff towards storm water collection pits.
- Disturbing the existing vegetation and natural contour of the land as little as possible can mitigate increases in surface runoff. Vegetation along watercourses should not be cleared indiscriminately. Neither should potholes or swamps be drained unless absolutely necessary for successful completion of the activity.
- Construction, land management, or mining activities that result in the soil being laid bare could be scheduled in such a way that some type of vegetative cover appropriate to the site could be established prior to the onset of intense rain or windstorms. If grass is to be seeded, mulch of straw will help to protect the soil from less extreme erosive forces until vegetative and root development begins.
- Natural drainage patterns can often be maintained by preparing sodden waterways or installing culverts.
- Steep slopes can be terraced, thereby effectively reducing the length of slope.
- Check dams built near construction sites can reduce the quantity of eroded soil particles reaching free-flowing streams or lakes.
- Use of “floating” foundations and height restrictions in earthquake zones and increased foundation height, wall strength, and roof support in areas periodically subject to cyclones can reduce the hazards.
- All forms of temporary structures should be avoided from the flood plain, and all permanent structures should be raised to a height above the level which flood waters can be expected to reach once every 100 years (100-year flood).
- Installation of underground drainage structures helps to reduce sediment loads
- Engineering plans can be drawn to reduce the area of earth cuts on fills below what might otherwise be acceptable, provide physical support for exposed soil or rock faces, concentrate or distribute – as appropriate the weight loading of foundations to areas or state better able to support that weight,
- restricting the number, frequency and area of movement of heavy machinery
- Compatibility between adjacent land uses can best be assured by providing a green belt between the proposed activity and nearby properties where any significant degree of incompatibility is likely to result.

Natural Topography

It is essential to avoid disturbance to the site by retaining the natural topography of the site or design the landscape with at least 15% to 25% of the site area. For credit purposes it should be noted that the parking areas, walkways etc landscaping over built structures such as roofs, basement etc will not be considered. Similarly potted plants also will not be considered.

- turf design on site so as to conserve water

- design landscape to ensure minimum consumption of water – i.e. drought tolerant species
- reduce the demand for irrigation water through water efficient management techniques
- turf and each type of bedding area may be segregated into independent zones based on watering needs.

4.2 Water Environment

Construction Phase

The construction phase would involve water requirements for the following activities

- site preparation: Involves levelling for infrastructure development and removal of vegetation. Water is required for dust settlement, consolidation, compaction and curing.
- Construction of building infrastructure involves water for construction activities and domestic and other water requirements for labour and staff onsite.
- The period of this activity is the be mentioned

Impact Prediction

- Use of large quantities of water in curing
- Use during the operational phase by residence for routine activities

Mitigation Measures

Measures for reducing water demand during construction

To avoid wastage of curing water, following guidelines are to be followed:

- Curing water should be sprayed on concrete structures; free flow of water should not be allowed for curing.
- After liberal curing on the first day, all concrete structures should be painted with curing chemical to save water. This will stop daily water curing hence save water.
- Concrete structures should be covered with thick cloth / gunny bags and then water should be sprayed on them. This would avoid water rebound and will ensure sustained and complete curing.
- Ponds should be made using cement and sand mortar to avoid water flowing away from the flat surface while curing.
- Water ponding should be done on all sunken slabs, this would also highlight the importance of having an impervious formwork.

Some of the common practices and devices that can save water are:

Monitoring water use: Use of water meter conforming to ISO standards should be installed at the inlet point of water uptake and at the discharge point to monitor the daily water consumption.

Use of water saving devices / fixtures: About 40% of all water used indoors is in the bathroom and toilets and more than 10% of that used is in the kitchen. The conventional fixtures used in toilets use water at the rate of 12-15 litres per flush. The opportunity to lower the consumption through Low flow flushing systems, Sensor based fixtures, Waterless urinals, Tap aerators etc can be encouraged to reduce the water usage.

Installation of dual pipe plumbing for using recycled water / rain water can reduce usage of potable water considerably. There can be two lines, one supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal conditioning etc.

The quantity of ground water usage and waste water generated during both the phases is to be estimated based on the population, reuse and recycle activities planned. Based on the quantification of waste water, the treatment plants should be suitably designed.

In townships and area development projects, it is expected that all the buildings are connected by sewers. Treatment plants normally used for building sewage are based on biological processes. In addition, artificial wetlands or reed bed systems for waste water treatment based on the use of deep – rooted plants can also be used at decentralized level. Aerobic treatment systems, anaerobic treatment systems, Root zone treatment system, Decentralized Wastewater Treatment Systems" which includes Primary treatment: sedimentation and floatation, Secondary anaerobic treatment in fixed-bed reactors: baffled upstream reactors or anaerobic filters, Tertiary aerobic treatment in sub-surface flow filters and Tertiary aerobic treatment in polishing ponds are some of the methods for treatment of the waste waters generated in the township. The effluent discharge standards are shown in Annexure 10.

Rainwater Harvesting

It is essential to provide rain water harvesting or storage systems to capture atleast 50% of the runoff volumes from the roof surfaces. In coastal areas where the groundwater table is shallow and water percolation is limited collection tanks may be provided. Given below are some details of run off coefficients from different surfaces.

Run off Coefficients for Typical Surface Types

Surface Type	Runoff Coefficient
Roofs conventional	0.70 to 0.80
Roofs inclined	0.85 to 0.95
Concrete / Kota Paving	0.60 to 0.70
Gravel	0.50 to 0.60
Brick Paving	0.75
Vegetation	
1%–3%	0.20
3%–10%	0.15
> 10%	(more the vegetation cover – less the runoff coefficient) 0.10
Turf slopes 0%–1%	0.25
1%–3%	0.35
3%–10%	0.40
> 10%	0.45

- The rainwater harvesting structure is to be designed based on the sub-surface characteristics. The factors to be considered include weathering, fractures and joints for rocky sites and thickness of aquifer for sedimentary sites.
    - Rainwater harvesting structures must be kept a safe height above the highest level of ground water table in order that the ground water quality is safeguarded. Depending on the certainty of information about the highest level of ground water table and the trend of rise of ground water table, this gap may be from 3 to 5 metres.
    - The intensity of peak hourly rainfall and peak daily rainfall should be based on observations made by Indian Meteorological Department rather than inferred from annual rainfall.
    - The peak hourly rainfall should be adopted for calculating the components for recharging groundwater, and peak daily rainfall should be adopted for calculating the capacity of storage tank.
    - Only the terrace runoff may be considered for storage and reuse after pre-treatment and disinfection.

Types of Structures Include :

- Recharge pits, Recharge trenches, Recharge shaft
- Trench with recharge well, Shaft with recharge well
- Recharge through abandoned hand pumps, abandoned tube well
- Recharge well
- Percolation tank
- Check dam
- Sub-surface dyke
- Roof top rain water harvesting

It is important that roof top structures to capture rainwater include in their design flushing arrangements so as to let out impurities such as paper wastes, leaves, bird droppings etc. The runoff from rainwater harvesting structures is to be treated depending upon its source. For example:

a. The runoff from terrace and ground surface should always be segregated and given appropriate pre-treatment before recharging ground water.

b. Runoff from parking areas must also be treated for removal of oil and grease.

c. Activated carbon filter should be included in the pre-treatment of runoff from lawns and landscaped areas for arresting pesticides.

In designing the ground water recharge structures following points should be taken into consideration:

1. Annual rainfall, peak intensity and duration of each storm
2. Type of soil and subsoil conditions and their permeability factor : Infiltration rates of soil and hydraulic conductivities of water transmission are required to be considered while

constructing recharge systems. Normally hydraulic conductivities (K- values) of various soils in m / day , which can serve the purpose of assessing the final infiltration rates of soils These can be used in the absence of measured values of soils under recharge. K values need to be measured for a particular site for efficient results. As mentioned earlier the specific yields for different formations and porosities of soil are given in Annexure 4.2 and 4.3 respectively.

The main site conditions to be assessed in case of (surface / subsurface) storage structures are:

- Availability of suitable catchments (Rooftops are usually recommended as against surface catchments in this case as quality control measures can be relatively easier to apply and monitor).
- Foundation characteristics of soil near the house
- Location of trees
- Estimated runoff to be captured per unit of the catchment
- Availability and location of construction material (MoRD, GoI, 2004)

4.3 Air Environment

Anticipated Impact

Construction phase would involve site clearances and preparation, infrastructure development, building construction and other related activities and

Operational phase would involve emission from vehicular movement and diesel generators, and negligible emissions from sewage and solid waste handling and disposal.

The building material carrying vehicles as well as the construction machinery generate emissions and pollute the environment. Dusts include brick and silica dusts, wood dust from joinery and other woodworking and from earthmoving and other vehicle movements within the site. Asbestos-containing dust especially during the demolition of buildings is very harmful. It is a difficult task to separate these wastes. Construction machineries pose a special threat to air quality. It is estimated that construction machineries emit toxic pollutants and are sources of fine particulate matter (PM2.5, which lodges deeply in the human lung) and oxides of nitrogen (NOx), a key ingredient in the formation of ground-level ozone and urban smog.

Mitigation Measures

The mains concerns during demolition activities are the emissions generated by the vehicles and the machineries. Air Pollution may be caused by areas or point sources such as cities, industrial areas, factories or by linear sources such as highways. Vegetation buffers can minimize the build–up of pollution levels in urban areas by acting as pollution sinks.

- Wind erosion is a serious problem in areas where the ground is virtually bare and devoid of vegetation. Vegetation methods are found to be most effective in the form of windbreaks and shelterbelts.
- A dense belt provides greater shelter immediately to leeward but the sheltered area is not as extensive as when a more permeable zone of vegetation is provided.
- Plants are good absorbers of sulphur dioxide. Parks with trees have an SO_2 level lower than city streets.

- Heavy roadside planting in the form of shelterbelts can result in reduction in airborne lead
- Complete dust interception can be achieved by a 30 m belt of trees. Even a single row of trees may bring about 25 percent reductions in airborne particulate.
- Evergreen trees are found to be more effective.
- The species chosen must be resistant to pollutants, particularly in the early stages of their growth (Annexure 11).

Mitigation Measures for Dust Control

Adopting techniques like, air extraction equipment, and covering scaffolding, hosing down road surfaces and cleaning of vehicles can reduce dust and vapour emissions. Measures include appropriate containment around bulk storage tanks and materials stores to prevent spillages entering watercourses.

The other measures to reduce the air pollution on site are:

- On-Road- Inspection should be done for black smoke generating machinery.
- Promotion of use of cleaner fuel should be done.
- All DG sets should comply emission norms notified by MoEF/ CPCB.
- Vehicles having pollution under control certificate may be allowed to ply.
- Use of covering sheet to prevent dust dispersion at buildings and infrastructure sites, which are being constructed.
- Use of covering sheets should be done for trucks to prevent dust dispersion from the trucks, implemented by district offices.
- Paving is a more permanent solution to dust control, suitable for longer duration projects. High cost is the major drawback to paving.
- Locally found gravel may be applied to access roads as it adds a protective layer over the exposed soil and helps control dust generation in some situations. It is important that gravel contain a minimal percentage of fines and clean gravel be added periodically, as the fines migrate to the surface and create dust.
- Reducing the speed of a vehicle to 20 kmph can reduce emissions by a large extent. Speed bumps are commonly used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, it may be necessary to divert traffic to nearby paved areas.

Material storages / warehouses – Care should be taken to keep all material storages adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust / particulate emissions. Fabrics and plastics for covering piles of soils and debris is an effective means to reduce fugitive dust. However, these materials can be costly and are subject to degradation from the sun, weather, and human contact. Straw and hay can also be used to cover exposed soil areas, although they can be disturbed by wind and vehicles.

4.4 Noise Environment

Anticipated Impact

During the construction phase of the site, the following source of noise pollution is expected:

- Construction equipment

During operational phase the following sources of noise pollution is expected:

- Diesel generator operations
- Increase in transport noise from within the site from near by roads.

Mitigation Measures

There are two ways of applying controls or measures. The first is to plan so as to keep the noise at a distance. Under this aspect comes the separation of housing from traffic noise by interposing buffer zones, and the protection of schools and hospitals by green belts, public gardens, etc. The second is the principle of shading or screening. This consists of deliberately interposing a less vulnerable building to screen a more vulnerable one or by providing a solid barrier such as a wall between the source and the location to be protected.

Setting up the barriers: National Building Code 2005 suggests that design solutions such as barrier blocks should be used to reduce external LA10 noise levels to at least 60-70dB(A) at any point 1.0 m from any inward looking façade. Green belts and landscaping could act as an effective means to control noise pollution. In case of railway tracks, a minimum distance of 50m to 70m may be provided between the buildings and the tracks. Thick belts of planting greater than 30 meters are useful for cutting the noise levels from road traffic. Strong leafy trees may be planted to act as noise baffles. Shrubs and creepers may also be planted for additional protection between tree trunks; artificial mounds and banks should be formed where practicable. As little hard paving and as much grass as possible may be used. The creation of green belt is particularly advisable on the perimeter of aerodromes, along railway lines and arterial roads, through or past built up areas and adjoining industrial zones.

Control of noise from road traffic: Trees with heavy foliage planted on both sides of carriage way help slightly muffle the noise provided; the foliage extends for a considerable distance of 30m or above. The codes to be referred for noise control and maintaining minimum standards are given in Annexure 8.

4.5 Biological Environment

The mitigation measures should be suggested that will help in reducing the impact on terrestrial ecology and aquatic ecology. Massive plantation, landscaping are to be ensured in the new construction areas. Also trees, plants should be identified for specific areas so that the plants survive in these conditions. The details of the drought resistant species are given in Annexure 11.

4.6 Socio- economic

Anticipated Impacts

The impact on the socio-economic status of the people in the area is to be studied and detailed out. Positive impacts could include job creation, preservation of environment, infrastructure development and benefits to local population by way of job opportunities. Long term impacts include aspects of demography, aesthetics, and archeological sites. Negative impacts include impacts on cultural aspects and well being.

Township and area development projects could create a severe social impact. Some of these could include increase in noise and interference with existing access to habitation, storm water drainage and enjoyment of open space. Unhygienic site sanitation facilities cause damage to environment and to health of the construction workers.

Mitigation Measures

The objective is to ensure health and safety of the workers during construction, with effective provisions for the basic facilities of sanitation, drinking water, safety of equipments or machinery etc. Following are some of the recommendations to be followed:

- Comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 Constructional practices and safety, 2005, National Building code of India, Bureau of Indian Standards
- Provide clean drinking water to all workers
- Provide adequate number of decentralized latrines and urinals to construction workers.
- Guarding all parts of dangerous machinery.
- Precautions for working on machinery.
- Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
- Durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
- Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
- Provide measures to prevent fires. Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere.
- Provide sufficient and suitable light for working during night time.

4.7 Solid Waste

The construction phase waste will comprise of excavated and demolition material while operational phase waste may comprise of domestic, commercial and biomedical wastes, depending upon the type of the project. The different types of wastes need to be handled as per their needs and regulatory requirements. It is not possible to dispose off all type of wastes onto the land and has to be dealt with depending upon their type and characteristics. Building construction leads to generation of sand, gravel, concrete, stone, bricks, wood, metal, glass, polythene sheets plastic, paper etc. as waste.

Type of wastes, which are generated, can be classified into four categories.

1. Construction or demolition waste, i.e., massive and inert waste
2. Municipal waste, i.e., biodegradable and recyclable waste
3. Hazardous waste,
4. E-waste

The waste characterization in constructional stage should be estimated by reviewing other similar already existing projects and given in tabular form. Similarly wastes generated in operational phase should be estimated and classified as

- biodegradable

- recyclable
- inert
- hazardous

and quantified for percentage composition estimation.

Construction and Demolition Waste Management

The construction and demolition waste includes debris, concrete (often recycled and reused at the site), steel and other metals, pallets, packaging and paper products, fluorescent tubes, wood beams, joists, studs, baseboards, cabinets and cupboards, railings, brick, doors and casings, interior windows, bathroom fixtures, light fixtures, ceiling grid and tile, furnishings, replant trees, shrubs. Orderly deconstruction is the proper measure for reuse of the demolished matter. In contrast to demolition, where buildings are knocked down and materials are either land filled or recycled, deconstruction involves carefully taking apart portions of buildings or removing their contents with the primary goal being reuse. It can be as simple as stripping out cabinetry, fixtures, and windows, or manually taking apart the building frame. Gross segregation of construction and demolition wastes into roadwork materials, structural building material, salvaged building parts and site clearance wastes is necessary. Additional segregation is required to facilitate reuse/ recycling.

Waste recycling plans should be developed for construction and demolition projects, prior to beginning construction activity. The plans should identify wastes to be generated, and designate handling, recycling and disposal method to be followed. Handling of waste material requires special precautions such as personal protective equipment and special procedures to prevent the injury. Developers must operate safe methods for waste collection, storage, and disposal operations in a manner to protect the health and safety of personnel, minimize environmental impact and promote material recovery and recycling.

Solid Waste During Operational Phase

Adequate provision should be made for storage of solid waste and for easy access to the dustbins;

- for labours from source to the place of storage, and
- from the place of storage to a collection point specified by the waste collection authority and/or contractor
- Three colours of wheeled bins: - dark grey for inert waste, green for wood and ply waste and blue for hazardous waste can be used.

A minimum of 4% of the total site area should be allocated for storage and pre treatment of the waste. This storage area should be covered and the pollutants from the waste should not affect the surrounding.

Access To and From Bin Storage Areas

Wheeled bins should be made access with ramps. To ensure this vehicle access, paths should be paved and at least 1.2 metres wide with a maximum gradient of 1 in 10. The surface of the path should be smooth, continuous and hardwearing. Ramped kerbs should be provided where the path meets the highway, and bins should not have to pass across designated parking spaces.

Where collection vehicles have to enter developments, there should be sufficient space on paved roads with turning circles for easy circulation. This ensures the refuse vehicles to enter the vicinity of the site without being prevented from doing so by cars parked close to the entrance. Vehicles should never have to reverse onto or from a highway to make a collection. Roadways used by refuse vehicles must be designed to withstand a laden weight of not less than 28 tonnes.

Municipal Solid Waste Management

Waste generated by users- Domestic wastes food leftovers, vegetable peels, plastic, house sweepings, clothes, ash, etc. commercial waste generally comprises of paper, cardboard, plastic, wastes like batteries, bulbs, tube lights etc.

Three-bin system is a good option for segregation at household level. Storage facilities should be created and established by taking into account quantities of waste generation in a given area and the population densities. A storage facility should be so placed that it is accessible to users, within a radius of 25 meter from the source. Local authorities should provide different coloured bins for different categories of waste. Adequate provision should be made for storage of solid waste.

Three colours of wheeled bins: - dark grey for non-recyclable waste, green for kitchen food / compostable garden waste and blue for paper (generally used for flats, schools, offices etc). In addition, boxes must be provided for the collection of other recyclable materials; a green box is used for paper and a black box is used for cans and plastic collections. Individual properties should be allocated a 20-litter bin although for single-family occupancy. Boxes should have lids. Flats and multi-storeyed buildings should have bulk dustbin type container, with a general guide of one 1100 litre bin being adequate for every 60 units, for smaller blocks. The one to five ratio outlined above could be increased or decreased according to the number or properties with greater or less than two bedrooms per unit. The ratio of approx one paper bin to three residual waste bins is only a guide. Waste and Cleansing Section can advise on individual cases.

Hazardous Waste Management

Products, such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients require special care when you dispose of them. Improper disposal of household hazardous wastes can include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash.

Hazardous wastes from construction and demolition activities are centering oil, formwork oil, tar and tar products (bitumen, felt, waterproofing compounds, etc.), wood dust from treated wood, lead containing products, chemical admixtures, sealants, adhesive solvents, Explosives and related products and equipment used in excavation, acrylics, and silica, etc. The dustbins for these wastes should be made of durable materials like metal or even masonry if the projects spans for more than a year.

List of Hazardous wastes from construction projects

- Asbestos products – insulation, tiles etc
- Fuels and Heating oils and other volatile / flammable liquids such as coolants, grease etc.
- Centering oil, formwork oil
- Tar and Tar products (bitumen, felt, water proofing compounds etc.)

- Wood Dust
- Lead containing products
- Chemicals , admixtures, sealants, adhesives solvents etc.
- Paints, pigments, dyes and primers
- Carbon black
- Pesticides
- Tarpaulin
- Explosives and related products and equipment used in excavations
- Product packaging (cement bags, cartons, containers, plastic covers etc.)
- Plastics, Acrylics, Silica, PVC
- Fluorescent Lamps Intact and Crushed, Halogen Lamps, Arc Lamps, UV Lamps, High Pressure Sodium Lamps, , Neon Lamps, Incandescent Lamps.
- Mercury Containing Lamps and Tubes, Mercury Vapour Lamps, Mercury Containing Devices – Mercury switches, relays, regulators, thermostats, thermometers, manometers and debris containing mercury
- All types of Batteries
- Electronic Ballasts, PCBs, Transformers, capacitors, switchgear, Lead Cable, Oil filled / gel filled cables
- Electronic Waste– computer products, circuit boards, CRTs, electronic parts, solder dross, weld waste.

Due to the characteristics, the wastes generated from the healthcare establishments are also hazardous in nature. Biomedical wastes have to be dealt with as per the Biomedical Wastes (Handling & Management) Rules, 2000.

- Lead based paints and other hazardous materials may be removed from the structure prior to deconstruction or demolition activities to minimize special handling and disposal requirements for the construction and demolition waste. These activities must be conducted by qualified personnel using appropriate health and safety procedures in accordance with the regulatory requirements.
- Isolated storage for hazardous wastes released from the whole site should be provided on site.
- Source segregation of similar wastes is highly recommended.
- Installation of fire extinguisher is mandatory near storage of hazardous wastes.

E-waste Management

Collection and Storage

Various types of electrical and electronic wastes generated in the building, which includes PC in case of offices and homes, Xerox machine components from office and shops, should be collected separately for transportation to the authorized recyclers approved by the state / Central pollution control boards. There should also be provision for storage of these wastes in the building before transportation.

5

ALTERNATIVE TECHNOLOGIES

5.0 General

The use of modern building material, energy conservation methods and transporation methods along with traffic regulations within the area is to be given in this chapter

5.1 Building Materials

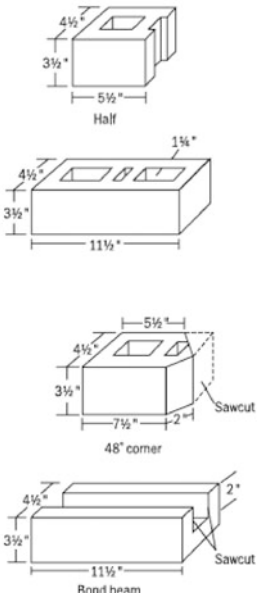
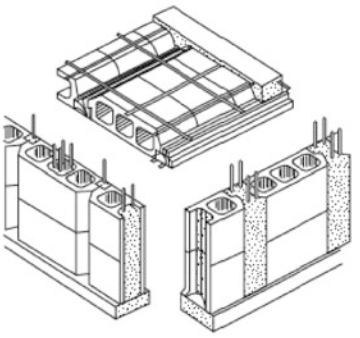
Use of alternative technologies for each component of the buildings of envelope, superstructure, finishes and the road and surrounding areas are discussed in detail (NBCode 2007). Some them are given below:

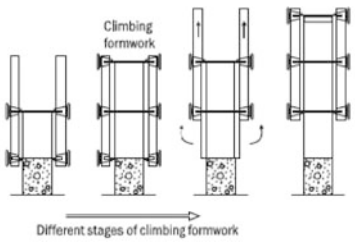
- Brick and block products with waste and recycled contents such as fly ash (waste from coal burning plants), blast furnace slag, sewage sludge, waste wood fibre etc.
- Fly ash based lightweight aerated concrete blocks can be used for walls.
- Perforated bricks can be used for wall structures.
- Brick panel with joists, Filler slab roofing, brick funicular shell roofing, RCC channel units, micro-concrete roofing tiles are some of the alternative techniques for roofing.

Some of the alternate materials for openings in construction are:-

- Use of precast thin lintels, use of ferrocement-sunshade cum lintel etc.
- Use of renewable timber for doors and windows
- Use of steel manufactures from recycled content
- Aluminum from verified recycled content
- Saw dust based doors and window frames
- Ferrocement shutters, PVC doors and windows, Rice husk boards, Natural fibre- reinforced polymer composite door panels
- Bamboo based products, bamboo strips boards.
- Alternatives for finishes include Fly ash, Ceramic tiles, Terrazzo floors

The use of the alternatives for building materials will help reduce the use of non-renewable resources and impact on natural resources. The materials used should be mentioned specifically in the EIA report. Alternative options in building materials are summarized below.

	Conventional Materials	Alternate
Wall 	Clay bricks with cement mortar	*Earth blocks*- Earth blocks stabilized with 5%–15% of cement are good choice for low cost, low-rise construction in hot-humid climates. Brick and block products with waste and recycled contents such as fly ash (waste from coal burning plants), blast furnace slag, sewage sludge, waste wood fibre, rice husk ash, etc. Concrete blocks using lime or waste wood fiber provide reduction of waste and saves energy. Fly ash can be used to replace about 15% to 35% of the total cementitious material. The slag content can be used to replace the same between 20% and 25%. *Fly ash-based lightweight aerated concrete blocks*- Fly ash is a waste product of thermal power plant. Fly ash-based lightweight aerated concrete blocks are manufactured for walling and roofing purposes by mixing fly ash, quick lime, or cement and gypsum with a foaming agent like aluminium powder. *Fal-G (Fly ash, lime, and gypsum)*- Fal-G products are manufactured by binding fly ash, lime, and calcined gypsum (a by-product of phosphogypsum or natural gypsum).
Roof 	The conventional material used for roofing is RCC, as it is suitable for longer spans. The constituents of RCC, i.e, cement, sand, aggregate and steel all are energy intensive materials and high-embodied energy content.	Use of lightweight synthetic aggregate- The example is fly ash based aggregate, which is suitable for manufacture of brick, blocks, and is good substitute for clinker and natural aggregates. Pre-cast / aerated cellular concrete walling blocks and roofing slabs- These are manufactured by the aerated cellular concrete manufacturing process. When used in multi- storied structures, they reduce the weight, resulting in a more economical design. They have high rating to fire resistance and provide better insulation.

	Conventional Materials	Alternate
Superstructure  Different stages of climbing formwork	Structural frame of building comprises of footing, columns, beams and lintels, over which the envelope of building is supported.	Ferro cement- The composite Ferro cement system is simple to construct and is made of Ferro cement—a rich mortar reinforced with chicken or / and welded wire mesh. Metals- A variety of metals are used in buildings, but the major building material used structurally is steel. Steel has a high-embodied energy and recyclable content, as well as scrap value. Aluminium forms the second most common material used for roofing sheets, window frames, and cladding systems, which has the highest recyclable content. Use of fly ash and / or blast furnace slag concrete -The amount of cement used in concrete can be reduced by replacing a portion of the cement with coal fly ash (waste material from coal burning power plants) and / or GGBF (ground-granulated blast furnace) slag in conventional mixes. Recycled aggregates Recycled aggregates- Crushed concrete, brick, glass, or other masonry waste can also be used in conventional mixes. Lightweight concrete- Aluminium powder when added to lime reacts and form hydrogen bubbles, and a lightweight cementitious material (high strength to weight ratio and an insulation value of R-10 in a 20.32-cm thick wall) is formed which could be used in conventional mixes.

	Conventional Materials	Alternate
Roads and open spaces	This part of housing units consists of compound walls, grills, roads, sidewalks, parking lots, drains, curbs, landscaped areas, street furniture, tree covers, flowerbeds	Permeable paving- Permeable (porous) paving should be used to control surface water runoff by allowing storm water to infiltrate the soil and return to the ground water. Gravel/crusher fines- Loose aggregate material used to cover pedestrian surfaces. Porous asphalt (bituminous concrete)- A porous asphalt layer constructed with "open- graded" aggregate (small fines removed), which leaves voids between the large particles unfilled by smaller fine. Porous Concrete- A concrete mix without the fine aggregate, and with special additives for strength. Permeable paving is not intended to replace standard impervious paving, but to limit the use of impermeable paving to heavy traffic areas.
Roads and open spaces		Use of grass pavers on the road, parking and pedestrian areas is a solution to reduce the heat island effect.
Use of Bamboo in Road construction		Bamboo has been used for road reinforcements in Orissa, which has proved its credibility.
Use of bamboo fence instead of steel grills		Use of steel in fencing, grills, tree covers, and benches and even in streetlights can be easily replaced by bamboo.

Natural hazard prone areas

Areas likely to have moderate to high intensity of earthquake, or cyclonic storm, or significant flood or inundation, or land slides/ mud flows / avalanches etc are identified as risk zones. The structural design of foundation, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete, and structural steel should conform to the general structural safety of the National Building code (Annexure 12)

Green Buildings

The appearance of a Green Building will be similar to any other building. However, the difference is in the approach, which revolves round a concern for extending the life span of natural resources;

provide human comfort, safety and productivity. This approach results in reduction in operating costs like energy and water, besides several intangible benefits. Some of the salient features of a Green Building are:

- Minimal disturbance to landscapes and site condition
- Use of Recycled and Environmental Friendly Building Materials
- Use of Non-Toxic and recycled / recyclable Materials
- Efficient use of Water and Water Recycling
- Use of Energy Efficient and Eco-Friendly Equipment
- Use of Renewable Energy
- Indoor Air Quality for Human Safety and Comfort
- Effective Controls and Building Management Systems

Issues in Green Building

Energy Efficiency and Renewable Energy

- Building orientation to take advantage of solar access, shading, and natural lighting
- Effects of micro-climate on building
- Thermal efficiency of building envelope and fenestration
- Properly sized and efficient heating, ventilating, and air-conditioning (HVAC) system
- Alternative energy sources
- Minimization of electric loads from lighting, appliances, and equipment
- Utility incentives to offset costs

Direct and Indirect Environmental Impact

- Integrity of site and vegetation during construction
- Use of integrated pest management
- Use of native plants for landscaping
- Minimization of disturbance to the watershed and additional non-point-source pollution
- Effect of materials choice on resource depletion and air and water pollution
- Use of indigenous building materials
- Amount of energy used to produce building materials

Resource Conservation and Recycling

- Use of recyclable products and those with recycled material content
- Reuse of building components, equipment, and furnishings
- Minimization of construction waste and demolition debris through reuse and recycling
- Easy access to recycling facilities for building occupants
- Minimization of sanitary waste through reuse of graywater and water-saving devices
- Use of rainwater for irrigation

- Water conservation in building operations
- Use of alternative wastewater treatment methods

Indoor Environmental Quality

- Volatile organic compound content of building materials
- Minimization of opportunity for microbial growth
- Adequate fresh air supply
- Chemical content and volatility of maintenance and cleaning materials
- Minimization of business-machine and occupant pollution sources
- Adequate acoustic control
- Access to daylight and public amenities

Community issues

- Access to site by mass transit and pedestrian or bicycle paths
- Attention to culture and history of community
- Climatic characteristics as they affect design of building or building materials
- Local incentives, policies, regulations that promote green design
- Infrastructure in community to handle demolition-waste recycling
- Regional availability of environmental products and expertise

Building Green concentrates on one key aspect of the greening process: the use of plants on and around urban buildings. Green buildings and greenspaces together define an integrated approach to plant life in cities that is central to any green programme. Trees and shrubs can help reduce overall energy use in buildings. The amount of energy saved depends on the building type, choice of tree species, positioning around the building and the prevailing climate.

Balconies and small terraces have become standard architectural features for multiple dwelling developments. The balcony garden is a natural development of the balcony's role as a link between interior and exterior environments.

Green walls - Modern cities provide enormous areas of wall space, in many cases stretching high above the street. Not all of this space is appropriate for growing plants, but much of it is – certainly much more than has been utilised in recent years.

Roofs present by far the most significant opportunities for the greening of buildings. Many cities have millions of sqmts of unused and unattractive roofs. They represent enormous wasted opportunities for improving the quality of city life. Some of the advantages for green roof include:-

- protection of roof surface from ultra-violet radiation and mechanical damage
- thermal insulation
- acoustic insulation
- lower maintainance costs for roofing materials
- reduction of stormwater runoff

- gardens for inhabitants of buildings
- masks ugly rooftops
- complements building forms
- absorption of CO_2, some air pollutants and dust

GRIHA, an acronym for Green Rating for Integrated Habitat Assessment, is the National Rating System of India. It is a green building 'design evaluation system', and is suitable for all kinds of buildings in different climatic zones of the country (*www.mnre.gov.in and* www.grihaindia.org). The basics benefits of following GRIHA rating system are

- Up to 30% reduction in energy consumption
- Limited waste generation due to recycling
- Less consumption of water
- Reduced pollution load & liability

The details for developing greening of roofs are given in Annexure 20.

5.2 Energy Conservation

There is a need adopt energy efficient technologies for conservation of energy. This section discusses some important recommendations of the energy conservation building code and the National building code 2005 on energy conservation.

The building form can affect the solar access of the building. The compactness of the building is measured using a ratio of surface area to volume. *Compactness = S/V, wh*ere, S = Surface area and V = volume. The orientation of the building is also an important fact with regard to energy conservation in the building. The building envelope for all air conditioned buildings / spaces are to comply with the ECBC code (www.beeindia@nic.in). Roofs and opaque walls should comply with the maximum assembly U factor or the minimum insulation R-value as given in Table 5.1 and Table 5.2 respectively.

Table 5.1 Roof Assembly U-factor and Insulation R-value Requirements

Climate Zone	24-Hour use buildings Hospitals, Hotels, Call Centers etc.		Daytime use buildings Other Building Types	
	Maximum U-factor of the overall assembly (W/ m2-°C)	Minimum R-value of insulation alone (m2-°C/W)	Maximum U-factor of the overall assembly (W/ m2-°C)	Minimum R-value of insulation alone (m2-°C/W)
	Composite	U-0.261	R-3.5	U-0.409 R-2.1
	Hot and Dry	U-0.261	R-3.5	U-0.409 R-2.1
	Warm and Humid	U-0.261	R-3.5	U-0.409 R-2.1
	Moderate	U-0.409	R-2.1	U-0.409 R-2.1
	Cold	U-0.261	R-3.5	U-0.409 R-2.1

Source: ECBC Code 2005

Table 5.2 Opaque Wall Assembly U-factor and Insulation R-value Requirements

Climate Zone	Hospitals, Hotels, Call Centers (24-Hour)		Other Building Types (Daytime)	
	Maximum U-factor of the overall assembly (W/m2-°C)	Minimum R-value of insulation alone (m2-°C/W)	Maximum U-factor of the overall assembly (W/m2-°C)	Minimum R-value of insulation alone (m2-°C/W)
Composite	U-0.352	R-2.35	U-0.352	R-2.35
Hot and Dry	U-0.369	R-2.20	U-0.352	R-2.35
Warm and Humid	U-0.352	R-2.35	U-0.352	R-2.35
Moderate	U-0.431	R-1.80	U-0.397	R-2.00
Cold	U-0.369	R-2.20	U-0.352	R-2.35

The concept of passive solar design emphasizes architectural design approaches that minimize building energy consumption by integrating conventional energy-efficient devices, such as mechanical and electrical pumps, fans, lighting fixtures, and other equipment, with passive design elements, such as building siting, an efficient envelope, appropriate amounts of fenestration, increased daylighting design, and thermal mass. The basic idea of passive solar design is to allow daylight, heat, and airflow into a building only when beneficial.

Passive building design starts with consideration of siting and daylighting opportunities and the building envelope; then building systems are considered. Almost every element of a passive solar design serves more than one purpose. Landscaping can be aesthetic while also providing critical shading or direct air flow. Window shades are both a shading device and part of the interior design scheme. Masonry floors store heat and also provide a durable walking surface. Sunlight bounced around a room provides a bright space and task light.

Components of Solar Techniques

	Advanced Solar Passive Techniques	
	Passive heating : Heat storage modulates the excess and deficit in solar gain over the daily cycle	Spontaneous warming effect resulting from the absorption of solar radiation. The temperature rise this induces leads to heat flow from the affected surface to other surfaces and indoor air, as well as to heat storage within the building structure.
	Passive heating *Direct gain method*:	Glazed windows are located to face the south (in the northern hemisphere) to receive maximum sunlight in winter. To reduce heat losses during the night these windows are often double-glazed and have insulating curtains. Some examples of thermal storage materials are concrete, bricks, stone, and water.
	Passive heating : *Indirect gain :*	thermal storage wall is placed between the glazing and habitable space. This prevents solar radiation from directly entering the living space.

	Passive heating : *Trombe wall* :	A trombe wall is a thick solid wall with vents at its lower and upper ends.
	Passive heating : Solar chimneys :	This system is a kind of modified trombe wall that is incorporated into the roof. A solar chimney is essentially a collector panel with minimum thermal inertia on the south face (in the northern hemisphere) of the building.
	Passive heating: Sunspaces / solaria :	It essentially consists of a greenhouse constructed on the south side of the building with a thick mass wall linking the two.
	Passive Cooling: Evaporative cooling :	Passive cooling systems rely on natural heat sinks to remove heat from a building. They derive cooling directly from evaporation, convection radiation without using any intermediate electrical devices.
	Passive Cooling:	The evaporative cooling with increase in moisture content of the air is called direct evaporative cooling and when there is no increase of moisture content it is called indirect cooling.
	Passive Cooling: Indirect evaporative cooling systems :	The most commonly used system is a desert cooler, which comprises water, evaporative pads, a fan and a pump.
	Passive Cooling: Roof sprays:	External cooling through humidification can be achieved by keeping the surfaces of roofs moist using sprays or a lawn sprinkler. The surface temperature can be reduced significantly, but large amounts of water are used.
	Passive Cooling: Roof Pond:	A water body covering the roof functions similarly to a soil cover, it minimizes the diurnal temperature range. It is a technically demanding and expensive solution.
	Radiative cooling:	Nocturnal cooling: Night sky cooling can use very low-energy passive systems and can be very effectively used for office buildings, institution, residential buildings.
	Ground cooling:	Heat dissipation to the ground can be achieved by conduction or by convection.
	Ground cooling strategies : Earth berm structure :	Underground structures in contact with the earth are benefited by the huge thermal mass of the adjacent ground and are thus not affected by hot days or chilly nights.
	Ground cooling strategies : Geothermal cooling or earth-air tunnel systems :	Hot summer air is passed through a buried pipe and as it passes through there is an exchange of heat between the air and the surrounding earth. Hence, during the summer, the air gets cooled up and during the winter it gets heated up. This air is circulated to

		the living spaces where it takes up the humidity and cools the structure by convection.
	Ground cooling strategies : Ventilation *strategies*:	Chimneys Chimney or stacks can be used to provide high -level ventilation outlet devices. Wind towers Wind towers are generally used in hot and dry climates for cooling.

Day-lighting brings light into a building interior and distributing it in a way that provides more desirable and better quality illumination than artificial light sources. This reduces the need for electrical light sources, thus cutting down on electricity use and its associated costs and pollution. The general day-lighting principles include:-

- Avoid direct sunlight on critical tasks and excessive brightness.
- Bring the daylight in at a high location.
- Filter the daylight.
- Bounce daylight off of surrounding surfaces.
- Integrate daylight with other building systems and strategies.

Energy efficient lighting design focuses on methods and materials that improve quality of lighting (Annexure 13). The general lighting systems need to comply with the ECBC code and apply to the following:-

(a) Interior spaces of buildings,

(b) Exterior building features, including facades, illuminated roofs, architectural features, entrances, exits, loading docks, and illuminated canopies, and,

(c) Exterior building grounds lighting that is provided through the building's electrical service.

Exceptions to above:

(a) Emergency lighting that is automatically off during normal building operation and is powered by battery, generator, or other alternate power source; and,

(b) Lighting in dwelling units except for dwelling units where the developer is providing lighting fixtures inside the units (however, common area lighting of residential complexes fall under purview of the code)

Solar photovoltaic systems (SPV) can be used as it is direct conversion of sunlight into electricity and could be a viable option. Street lighting, fixed type solar lighting system are some applications of SPV systems. The recommended values for illuminance is given in Annexure 14.

A new lighting technology in the form of Light Emitting Diodes is also available nowadays. These are solid light bulbs, which are extremely energy efficient. An LED lamp generally lasts about 10 times longer than CFLs and about 130 times more than an ordinary Incandescent lamp. Certified Emissions Reductions (CERs) on the basis of the CO emissions reductions that would occur because of the low electricity consumption of CFLs compared to incandescent bulbs.

5.3 Transportation

Road network: A well-planned road network both within the township and connecting to the nearest highway or main road need to be established so that proper communication links are established.

Some of the factors are important and must be taken into the consideration, while planning, are the movement of heavy traffic loads and operation of construction machinery. Construction machinery due to its operation produces smoke, dust and noise and vibration. Road design should be done with due consideration for environment, and safety of the people residing or working near the roads.

Transportation system is dependent on a number of factors, like design of the engine of the vehicles, traffic rules and regulations, which are not under our control. However the Hierarchy of roads, Road geometry and traffic calming, Entry and exit points, Parking norms can be planned.

Hierarchy in roads should be adopted to segregate the traffic according to the size, frequency and density of traffic. Arterial roads meant for intra-urban through traffic with intersection spacing of 500m, sub-arterial roads meant for intra-urban through traffic with frontage access, no standing vehicles having high cross traffic, high capacity intersections and minimum roadway intersection spacing 300 m. Collector Streets for collecting and distributing traffic from and to local streets and also for providing access but no parked vehicles and having heavy cross traffic and minimum roadway intersection traffic spacing 150 m. Local Streets for access to residence, business or other abutting property, having necessary parking and pedestrian movement (Annexure 18). Design considerations for roads of different hierarchy are given below

Design Considerations for Roads of Different Hierarchy

Type of Road	Design speed	Right of way
Arterial	80 kph	50-60m
Sub-arterial	60 kph	30-40 m
Collector street	50 kph	20– 30 m
Local Street	30 kph	10-20 m

Source: UDPFI guidelines volume i august 1996

Traffic calming is required in school, hospital zones. The tools of traffic calming include:-

1. Installation of speed humps by raising the surface of the street in certain spots.
2. Narrowing the street to give drivers the feeling they are in a crowded place, which will make them slow down and totally or partially blocking half the entrance to a side street so drivers cannot turn in but still can come out.
2. Speed tables, build outs, etc.
3. Space for vehicles at the entrance gate for checking before entry.

The entry and exit points design is very important as it should not disturb the existing traffic. Sufficient parking provisions are to be made. Visitors parking should not disturb the traffic of surrounding area. Additional space should be left for the lanes as per the design of existing road, surrounding the site. The standard spacing for car parking are given in Annexures 19.1 and 19.2.

Parking facilities for visitors

- For individual homes it is necessary to provide 1 visitor car park
- For multi dwelling units it is necessary to provide an additional 10% parking area over and above the normal parking requirements
- Design of the building is to ensure that adequate parking provisions are made to cater to the occupants as well as visitors
- The parking provisions should take into consideration the two wheelers and four wheelers. It is also desirable to design parking facilities with basement / stilts parking to reduce the heat island effect. When inevitable the surface parking planned should cover issues to address heat island effect.
- It is also desirable to have electric charging facility for vehicles which could cater for both two and four wheelers.

6

ENVIRONMENTAL MONITORING PROGRAM

6.0 General

This includes the technical aspects of monitoring the effectiveness of mitigation measures (including measurement methodologies, data analysis, reporting schedules, emergency procedures, detailed budget and procurement schedules). The details include summary matrix of environmental monitoring, during construction and operation stage; requirement of monitoring facilities; frequency, location, parameters of monitoring; compilation and analysis of data; comparison with base line data and compliance to accepted norms and reporting system and plantation monitoring programme.

The description of the monitoring programme should include:

(a) A technical plan which spells out in detail the methodologies for measurement, the required frequencies of measurement, the planned location of measurement, data storage and analysis, reporting schedules and emergency procedures, and

(b) Detailed budgets and procurement schedules for, necessary equipment and supplies, technical and administrative manpower.

The environmental monitoring includes

- Air pollution
- Noise level monitoring
- Water quality monitoring and ground water level monitoring
- Maintenance of rainwater harvesting pits and other water conservation methods used are to be done regularly.

The entire data is to be furnished to the regulatory agencies.

7

ADDITIONAL STUDIES

7.0 General

This chapter covers the risk assessment and disaster management plan. Apart from these, R & R Action Plan and Natural Resource Conservation plan are also included in this chapter.

7.1 Risk Assessment and Disaster Management Plan (DMP)

Emergency prevention through good design, operation, maintenance and inspection are essential to reduce the probability of occurrence and consequential effect of such eventualities. The overall objective of the Emergency Response Plan ERP is to make use of the combined resources at the site and outside services to achieve the following:-

- Localize the emergency
- Minimize effects on property and people
- Effective rescue and medical treatment
- Evacuation

Major hazards identified include:-

- Hazards pertaining to fires in buildings
- Fire in diesel storage areas, garbage storage and disposal area
- Earthquakes
- LPG gas leak
- Flooding from natural and man-made causes
- Electrical accidents

7.2Natural Resource Conservation

Plan of action for conservation of natural resources and recycle waste materials due to the project activity in the construction and operational phase of the project is to be discussed.

7.3R&R Action Plan

Detailed R&R Plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternative livelihood concerns / employment for the displaced people, civil and housing amenities being offered, etc and the schedule of he implementation of the project specific R&R Plan if any is to be given. Details of provisions (capital & recurring) for the project specific R&R Plan .

National Policy on Resettlement and Rehabilitation for project affected families-2003 (published in the gazette of India, extraordinary part-i, section 1, no- 46, dated 17th February, 2004)gives the details of the national R&R policy.

8

PROJECT BENEFITS

8.0 General

This chapter should include benefits accruing to the locality, neighborhood, region and nation as a whole. It should bring out details of benefits by way of:

- Improvements in the physical infrastructure of project, ancillary industries that may come up on account of the project.
- Improvements in the social infrastructure like roads, railways, townships, housing, water supply, electrical power, drainage, educational institutions and hospitals etc.
- Employment potential skilled; semi-skilled and unskilled labour both during construction and operational phases of the project with specific attention to employment potential of local population as well as necessity for imparting any specialized skills to them to be eligible for such employment in the project on a long term basis i.e., during operational and maintenance stages of the project

9

ENVIRONMENTAL MANAGEMENT PLAN

9.0 General

Environmental Management Plan (EMP) deals with mitigation of unavoidable or residual impacts. The Environmental Management Plan (EMP) is needed to ensure that the mitigation measures specified in the EIA will actually be complied with when the project is approved for implementations. The administration of EMP may be required the establishment of an Environmental management cell to house monitoring staff after the closure of the EIA office. Funding to cover the costs of establishing and operating an appropriate Environmental Management Cell to administer the EMP should be guaranteed in the basic project budget.

The EIA report should include a description of the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored after approval of EIA. The facilities to be included are:

- Water supply and management: A well-planned and sustainable water management system is to be built within the township, providing round the clock water supply to residents. This also reduces dependence on municipal water supply.
- Electricity supply and management: Although an integrated township depends on a public or private utility supplier for basic power supply, it has to have adequate, back-up power for both homes and common areas during temporary or scheduled power cuts or disruptions by the utility supplier.
- Infrastructure maintenance: Proper and regular maintenance of roads, pathways, parks, electrical and plumbing infrastructure, children play areas and common areas including community centre is essential for a well-developed integrated township.
- Provision of Effective Controls and Building Management Systems such as Automatic Fire Alarm and Fire Detection and Suppression System etc. must be ensured. Adequate access to fire tenders should be provided.
- Provisions should be kept for the integration of solar water heating system and other energy conservation methods.
- Plan and design of green belt to mitigate dust, noise and odour near sources of air pollution (DG sets) and meteorology.
- Plan of maintenance for rainwater harvesting structures in the project area (taking into consideration the groundwater storage, ground water table and soil permeability).

The waste treatment facilities to be included are:

- Sewage treatment plant has been designed to treat the wastewater from the building. The wastewater be treated to tertiary level and after treatment, reused for flushing of toilets in apartment building, horticulture and air conditioning.
- Grey water treatment: Grey water is the wastewater that comes from clothes washers, bathtub, showers, bathroom wash basins, kitchen sinks and dish washers. It is that waste

water that is not contacted with toilet waste. This treated grey water can be used for landscaping, flushing requirements etc. It is essential to provide on-site grey water treatment system to treat atleast 50% of the water generated in the building to standards suitable for flushing and landscaping.

- Treated wastewater reused for landscaping, car washing etc. and partly discharged. Treated sewage should conform to E(P) Rules. Sewage Treatment Plants and monitored on a regular basis
- Spent oil from DG Sets should be stored in HDPE drums in isolated covered facility and disposed off as per the Hazardous Wastes (Handling & Management) Rules, 2003. Spent oil from DG Sets should be disposed off through registered recyclers only.
- Management of increment in storm water run off caused due to the built up and paved surfaces created in the township
- Root zone treatment provides an opportunity to treat waste water in a decentralised manner. Similarly, vessel-type converters can treat bio-degradable solid wastes in small space and relatively free from odour.

The environmental management plan should clearly mention the landscaping and the tree plantation to be taken up in the area. Also the parks and gardens if any to be developed are to be mentioned. The total number of plantations to be developed in the area are to be mentioned.

The plans to be adopted for handling of the domestic wastewaters and the solid waste management plan are to be detailed out.

10

SUMMARY AND CONCLUSIONS

10.0 General

The summary should be a clear presentation of the critical facts that make up each issue, and the resolution of the issues. Whenever possible, the summary should make use of base maps, tables and figures. Information should be condensed into succinct, but meaningful presentations. It must be able to stand alone as a document.

The summary should highlight the significance of the baseline data collected, impacts identified and the proposed environmental monitoring systems during the construction and operational phases of the project.

It should necessarily cover and brief the following chapters of the full EIA report and address the following:-

- Introduction
- Project description & Project benefits
- Environmental Examination
- Additional Studies
- Environmental Management Plan and Post Project Monitoring Program
- Environmental Risk Assessment (ERA) and Disaster Management Plan (DMP)

The following should be highlighted in the EIA report

- Public health and safety issues related to the project;
- The socio-economic impacts of the project;
- New building technologies to be implemented
- Energy conservation measures to be implemented
- Statement of overall impact of the construction activity on the environment.

11

DISCLOSURE OF CONSULTANT ENGAGED

11.0 General

The EIA consultants shall have accreditation with Quality Control of India (QCI)/ National Accreditation Board of Education and Training (NABET) as per office memorandum dated 2nd December 2009 of MoEF. This chapter shall include the names of the consultants engaged with their brief resume and nature of consultancy rendered. The consultants shall include the copy of the accreditation certificate and data provided by the other organizations/ laboratories including their status of approvals etc.

ANNEXURE – II

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சுருக்கம்

நில எடுப்பு - திருவள்ளூர் மாவட்டம் – கும்மிடிப்பூண்டி வட்டம் – மாநல்லூர் கிராமம் – புல எண் 226/2 மற்றும் சில – சுமார் 2.98.5 எக்டேர் பரப்பளவு கொண்ட புஞ்செய் பட்டா நிலம் – சிப்காட் தொழில் பூங்கா தேவைக்காக – தமிழ்நாடு தொழிலியல் நோக்கங்களுக்கான நில எடுப்புச் சட்டம் 1997 (தமிழ்நாடு சட்டம் 10/99)இன் கீழ் நில எடுப்பு செய்வது – நிர்வாக ஒப்புதல் வழங்கல் – ஆணை வெளியிடப்படுகிறது.

தொழில் (சிப்காட்-நிஎ) துறை

அரசு ஆணை (நிலை) எண்.119

நாள்: 07.06.2013
விஜய வருடம்
வைகாசி 24, திருவள்ளுவர் ஆண்டு 2044
படிக்கப்பட்டது:

1. திருவள்ளூர் மாவட்ட ஆட்சித் தலைவரின் கடித எண் 37468/2009/எப்1, நாள் 21.04.2012.
2. முதன்மைச் செயலர் மற்றும் நிலநிர்வாக ஆணையரின் கடித எண்.எம்2/28363/2012, நாள் 18.12.2012.

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ஆணை:-

திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், மாநல்லூர் கிராமத்தில் தொழில் பூங்கா ஒன்று புதிதாக உருவாக்குவதற்காக, சுமார் 2.98.5 எக்டேர் பரப்பளவு உள்ள புஞ்செய் பட்டா நிலங்களும் 300.76.5 எக்டேர் அரசு புறம்போக்கு நிலங்களும் தமிழ்நாடு தொழில் நோக்கங்களுக்கான நில எடுப்புச் சட்டம் 1997 (தமிழ்நாடு சட்டம் 10/99) இன் கீழ் நில எடுப்பு / நில உரிமை மாற்றம் செய்து தருமாறு சிப்காட் நிறுவனத்தின் தலைவர் மற்றும் மேலாண்மை இயக்குநர் அவர்கள் கேட்டுக் கொண்டதாகவும், அதன் அடிப்படையில் 300.76.5 எக்டேர் அரசு புறம்போக்கு நிலங்களுக்கு ஏற்கனவே நில நிர்வாக ஆணையர் வழியாக சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வதற்கு அரசுக்கு முன்மொழிவுகள் அனுப்பப்பட்டுள்ளதாக மாவட்ட ஆட்சித் தலைவர் அவர்கள் தெரிவித்துள்ளார் என்றும், மேலும் நில உரிமை மாற்றம் செய்ய உத்தேசித்துள்ள நிலங்களின் ஊடே அமைந்துள்ள புஞ்செய் பட்டா புல எண்கள் 226/2, 235/1, 235/2 மற்றும் 233/3 ஆகியவற்றிலுள்ள 2.98.5 எக்டேர் பரப்பளவுள்ள நிலம் தொடர்ச்சியாக உள்ளதால் மேற்கண்ட புல எண்களை நில எடுப்பிலிருந்து விலக்களிக்க முடியாது என்றும் எனவே அவற்றை நில எடுப்பு செய்வது அவசியமாகிறது என்றும், பார்வை ஒன்றில் படிக்கப்பட்ட கடிதத்தில் மாவட்ட ஆட்சித்தலைவர் அவர்கள் தெரிவித்துள்ளார்.

2. திருவள்ளூர் மாவட்ட ஆட்சித்தலைவரின் கோரிக்கையினை ஏற்று, திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், மாநல்லூர் கிராமம் புல எண்கள் 226/2, 235/1, 235/2 மற்றும் 233/3–இல் உள்ள சுமார் 2.98.5 எக்டேர் பரப்பளவு உள்ள நிலத்தினை சிப்காட் தொழில்பூங்காவிற்கு தெரிவு செய்யப்பட்டுள்ள அரசு புறம்போக்கு நிலங்களின் ஊடே வருவதால் அவற்றை நில எடுப்புச் செய்வதற்கு ஏதுவாக நிர்வாக ஒப்பளிப்பு ஆணை வழங்கும்படி முதன்மைச் செயலர் மற்றும் நில நிர்வாக ஆணையர் அவர்கள் பார்வை இரண்டில் படிக்கப்பட்ட கடிதத்தில் அரசுக்கு பரிந்துரை செய்துள்ளார்.

3. முதன்மைச் செயலர் மற்றும் நில நிர்வாக ஆணையர் அவர்களின் பரிந்துரையினை ஏற்று, திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், மாநல்லூர் கிராமம் புல எண்கள் 226/2 (0.18.0 எக்டேர்), 235/1 (0.81.5 எக்டேர்), 235/2 (1.06.0 எக்டேர்) மற்றும் 233/3 (0.03.0 எக்டேர்) மொத்தம் 2.98.5 எக்டேர் (7.37 ஏக்கர்) நிலங்கள் ஏற்கனவே சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்ய உத்தேசித்துள்ள அரசு புறம்போக்கு நிலங்களின் ஊடே வருவதால் அந்நிலங்களை சிப்காட் தொழில் பூங்காவின் தேவைக்காக தமிழ்நாடு தொழிலியல் நோக்கங்களுக்கான நிலஎடுப்புச் சட்டம் 1997 (த.நா. சட்டம் 10/99)–இன் கீழ் நில எடுப்பு செய்வதற்கும் மேலும் திருவள்ளூர் மாவட்ட ஆட்சியர் இந்நில எடுப்பு நடவடிக்கையை தொடர்வதற்கு முன்பாக நகர்ப்புற நில உச்சவரம்பு மற்றும் நிலச் சீர்திருத்தச் சட்டத்தில் கவரப்படவில்லை என்பதற்கான தடையில்லாச் சான்று பெற வேண்டும் என்ற நிபந்தனையுடனும், நிர்வாக ஒப்பளிப்பு வழங்கி அரசு ஆணையிடுகிறது.

(ஆளுநரின் ஆணைப்படி)

நா.ச. பழனியப்பன்
அரசு முதன்மைச் செயலாளர்

பெறுநர்
முதன்மைச் செயலர் மற்றும் நில நிர்வாக ஆணையர்,
சேப்பாக்கம், சென்னை-600 005.
முதன்மைச் செயலர்/தலைவர் மற்றும் மேலாண்மை இயக்குநர்,
சிப்காட், 19-ஏ ருக்மணி லட்சுமிபதி சாலை,
எழும்பூர், சென்னை-600 008.
மாவட்ட ஆட்சித்தலைவர், திருவள்ளூர் மாவட்டம்.
மாவட்ட வருவாய் அலுவலர், திருவள்ளூர் மாவட்டம்.

நகல்
வருவாய் (நிஎ.2) துறை, சென்னை–9.
இ.கோ / உதிரி நகல்.

(ஆணைப்படி அனுப்பப்படுகிறது)

பிரிவு அலுவலர்

FOR INTERNAL USE

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

New Delhi August, 2015

Notification

S.O. 1533 Whereas, a draft notification **under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 for imposing** certain restrictions and prohibitions on new projects or activities, or on the expansion or modernization of existing projects or activities based on their potential environmental impacts as indicated in the Schedule to the notification, being undertaken in any part of India[1], unless prior environmental clearance has been accorded in accordance with the objectives of National Environment Policy **as approved by the Union Cabinet on 18th May, 2006** and the procedure specified in the notification, by the Central Government or the State or Union territory Level Environment Impact Assessment Authority (SEIAA), to be constituted by the Central Government in consultation with the State Government or the Union territory Administration concerned under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 for the purpose of this notification, was published in the Gazette of India ,Extraordinary, Part II, section 3, sub-section (ii) vide number S.O. 1324 (E) dated the 15th September ,2005 inviting objections and suggestions from all persons likely to be affected thereby within a period of sixty days from the date on which copies of Gazette containing the said notification were made available to the public;

And whereas, copies of the said notification were made available to the public on 15th September, 2005;

And whereas, all objections and suggestions received in response to the above mentioned draft notification have been duly considered by the Central Government;

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, read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 and in supersession of the notification number S.O. 60 (E) dated the 27th January, 1994, except in respect of things done or omitted to be done before such supersession, the Central Government hereby directs that on and from the date of its publication the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified hereinafter in this notification.

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[1]Includes the territorial waters

FOR INTERNAL USE

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

(i) All new projects or activities listed in the Schedule to this notification;

(ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;

(iii) Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.

3. State Level Environment Impact Assessment Authority:-

(1) A State Level Environment Impact Assessment Authority hereinafter referred to as the SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member – Secretary to be nominated by the State Government or the Union territory Administration concerned.

(2) The Member-Secretary shall be a serving officer of the concerned State Government or Union territory administration familiar with environmental laws.

(3) The Chairman shall be an expert in terms of eligibility criteria given in APPENDIX VI in one of the specified fields, with sufficient experience in environmental policy or management.

(4) The other member shall be an expert fulfilling the eligibility criteria given in APPENDIX VI in one of the specified fields.

(5) The State Government or Union territory Administration shall forward the names of the Members and the Chairman referred in sub- paragraph 3 to 4 above to the Central Government and the Central Government shall constitute the SEIAA as an authority for the purposes of this notification within thirty days of the date of receipt of the names.

(6) The non-official Member and the Chairman shall have a fixed term of three years (from the date of the publication of the notification by the Central Government constituting the authority).

(7) All decisions of the SEIAA shall be taken in a meeting and shall ordinarily be unanimous;

Provided that, in case a decision is taken by majority, the details of views, for and against it, shall be clearly recorded in the minutes and a copy thereof sent to MoEF.

4. Categorization of projects and activities:-

(i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources.

(ii) All projects or activities included as Category ‘A’ in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and

Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;

(iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, *will* require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In the absence of a duly constituted SEIAA or SEAC, a Category 'B' project shall be considered at the Central Level as a Category 'B' project;

5. Screening, Scoping and Appraisal Committees:-

The same Expert Appraisal Committees (EACs) at the Central Government and SEACs (hereinafter referred to as the (EAC) and (SEAC) at the State or the Union territory level shall screen, scope and appraise projects or activities in Category 'A' and Category 'B' respectively. EAC and SEAC's shall meet at least once every month.

(a) The composition of the EAC shall be as given in Appendix VI. The SEAC at the State or the Union territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union territory Administration with identical composition;

(b) The Central Government may, with the prior concurrence of the concerned State Governments or the Union territory Administrations, constitutes one SEAC for more than one State or Union territory for reasons of administrative convenience and cost;

(c) The EAC and SEAC shall be reconstituted after every three years;

(d) The authorised members of the EAC and SEAC, concerned, may inspect any site(s) connected with the project or activity in respect of which the prior environmental clearance is sought, for the purposes of screening or scoping or appraisal, with prior notice of at least seven days to the applicant, who shall provide necessary facilities for the inspection;

(e) The EAC and SEACs shall function on the principle of collective responsibility. The Chairperson shall endeavour to reach a consensus in each case, and if consensus cannot be reached, the view of the majority shall prevail.

6. Application for Prior Environmental Clearance (EC):-

An application seeking prior environmental clearance in all cases shall be made by the project proponent in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II, after the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, or preparation of land, at the site by the applicant. The applicant shall furnish, along with the

application, a copy of the pre-feasibility project report except that, in case of construction projects or activities (item 8 of the Schedule) in addition to Form 1 and the Supplementary Form 1A, a copy of the conceptual plan shall be provided, instead of the pre-feasibility report.

7. Stages in the Prior Environmental Clearance (EC) Process for New Projects:-

7(i) The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in this notification. These four stages in sequential order are:-

- Stage (1) Screening (Only for Category 'B' projects and activities)
- Stage (2) Scoping
- Stage (3) Public Consultation
- Stage (4) Appraisal

I. **Stage (1) - Screening**:

In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending up on the nature and location specificity of the project . The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

II. Stage (2) - Scoping:

(i) "Scoping" refers to the process to determine detailed and comprehensive Terms of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought. Standard TOR developed by the Ministry in consultation with the sector specific Expert Appraisal Committees shall be the deemed approved TOR for the projects or activities. The standard Terms of Reference are displayed on the website of the Ministry of Environment, Forest and Climate Change:

Provided that the Expert Appraisal Committee (EAC) or State Expert Appraisal Committee (SEAC) may finalise amendment, if found necessary for a project within thirty days of the acceptance of application in specified application Form I or Form IA. These standard TOR shall enable the Project Proponent to commence preparation of an Environment Impact Assessment Report after successful online submission and registration of the application:

Provided further that, the Expert Appraisal Committee (EAC) or State Expert Appraisal Committee (SEAC) may stipulate additional Terms of Reference, if found necessary, within thirty days of the acceptance of the application in the specified application Form I or Form IA

and the Project Proponent shall carry out the EIA study based on the standard TORs as well as the additional TOR, if any, stipulated by EAC/SEAC:

Provided also that the following shall not require Scoping−

(i) all projects and activities listed under Category 'B', against Item 8(a) of the Schedule;

(ii) all Highway projects in border States covered under entry (i) of column (3) and entry (i) of column (4) against item 7(f) of the Schedule;

(iii) all Highway expansion projects covered under entry (ii) of column (3) and entry (ii) of column (4) against item 7(f) of the Schedule;

Provided also that –

(A) the project and activities referred to in clause (i) shall be appraised on the basis of Form I or Form IA and the conceptual plan;

(B) the projects referred to in clause (ii) shall prepare EIA and EMP report on the basis of standard TOR specified by the Ministry of Environment, Forest and Climate Change;

(ii) Applications for prior environmental clearance may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned at this stage itself. In case of such rejection, the decision together with reasons for the same shall be communicated to the applicant in writing within sixty days of the receipt of the application.

III. **Stage (3) - Public Consultation**:

(i) "Public Consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following:-

(a) modernization of irrigation projects (item 1(c) (ii) of the Schedule).

(b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.

(c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.

(cc) maintenance dredging provided the dredged material shall be disposed within port limits.

(d) All Building or Construction projects or Area Development projects (which do not contain any category 'A' projects and activities) and Townships (item 8 (a) and 8(b) in the Schedule to the notification).

(e) all Category 'B2' projects and activities.

(f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government.

(g) all linear projects such as Highways, pipelines, etc., in border States.

(h) all standalone pelletization plants, which were in existence and in operation on or before the 27th day of May, 2014 and have valid consent to establish and consent to operate from the concerned State Pollution Control Board or the Union Territory Pollution Control Committee.

(ii) The Public Consultation shall ordinarily have two components comprising of:-

(a) a public hearing at the site or in its close proximity- district wise, to be carried out in the manner prescribed in Appendix IV, for ascertaining concerns of local affected persons;

(b) obtain responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity.

(iii) the public hearing at, or in close proximity to, the site(s) in all cases shall be conducted by the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) concerned in the specified manner and forward the proceedings to the regulatory authority concerned within 45(forty five) of a request to the effect from the applicant.

(iv) in case the State Pollution Control Board or the Union territory Pollution Control Committee concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period directly to the regulatory authority concerned as above, the regulatory authority shall engage another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days,.

(v) If the public agency or authority nominated under the sub paragraph (iii) above reports to the regulatory authority concerned that owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed, it shall report the facts in detail to the concerned regulatory authority, which may, after due consideration of the report and other reliable information that it may have, decide that the public consultation in the case need not include the public hearing.

(vi) For obtaining responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity, the concerned regulatory authority and the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) shall invite responses from such concerned persons by placing on their website the Summary EIA report prepared in the format given in Appendix IIIA by the applicant along with a copy of the application in the prescribed form , within seven days of the receipt of a written request for arranging the public hearing . Confidential information including non-disclosable or legally privileged information involving Intellectual Property Right, source specified in the application shall not be placed on the web site**.** The regulatory authority concerned may also use

other appropriate media for ensuring wide publicity about the project or activity. The regulatory authority shall, however, make available on a written request from any concerned person the Draft EIA report for inspection at a notified place during normal office hours till the date of the public hearing. All the responses received as part of this public consultation process shall be forwarded to the applicant through the quickest available means.

(vii) After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.

IV. Stage (4) - Appraisal:

(i) Appraisal means the detailed scrutiny by the Expert Appraisal Committee or State Level Expert Appraisal Committee of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of environmental clearance. This appraisal shall be made by Expert Appraisal Committee or State Level Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. On conclusion of this proceeding, the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior environmental clearance on stipulated terms and conditions, or rejection of the application for prior environmental clearance, together with reasons for the same.

(ii) The appraisal of all projects or activities which are not required to undergo public consultation, or submit an Environment Impact Assessment report, shall be carried out on the basis of the prescribed application Form 1 and Form 1A as applicable, any other relevant validated information available and the site visit wherever the same is considered as necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

(iii) The appraisal of an application be shall be completed by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within sixty days of the receipt of the final Environment Impact Assessment report and other documents or the receipt of Form 1 and Form 1 A, where public consultation is not necessary and the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee shall be placed before the competent authority for a final decision within the next fifteen days .The prescribed procedure for appraisal is given in Appendix V ;

7(ii). Prior Environmental Clearance (EC) process for Expansion or Modernization or Change of product mix in existing projects:

All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of EIA and public consultations and the application shall be appraised accordingly for grant of environmental clearance.

8.Grant or Rejection of Prior Environmental Clearance (EC):

(i) The regulatory authority shall consider the recommendations of the EAC or SEAC concerned and convey its decision to the applicant within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned or in other words within one hundred and five days of the receipt of the final Environment Impact Assessment Report, and where Environment Impact Assessment is not required, within one hundred and five days of the receipt of the complete application with requisite documents, except as provided below.

(ii) The regulatory authority shall normally accept the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. In cases where it disagrees with the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, the regulatory authority shall request reconsideration by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned while stating the reasons for the disagreement. An intimation of this decision shall be simultaneously conveyed to the applicant. The Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, in turn, shall consider the observations of the regulatory authority and furnish its views on the same within a further period of sixty days. The decision of the regulatory authority after considering the views of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be final and conveyed to the applicant by the regulatory authority concerned within the next thirty days.

(iii) In the event that the decision of the regulatory authority is not communicated to the applicant within the period specified in sub-paragraphs (i) or (ii) above, as applicable, the applicant may proceed as if the environment clearance sought for has been granted or denied by the regulatory authority in terms of the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

(iv) On expiry of the period specified for decision by the regulatory authority under paragraph (i) and (ii) above, as applicable, the decision of the regulatory authority, and the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be public documents.

(v) Clearances from other regulatory bodies or authorities shall not be required prior to receipt of applications for prior environmental clearance of projects or activities, or screening, or scoping, or appraisal, or decision by the regulatory authority concerned, unless any of these is sequentially dependent on such clearance either due to a requirement of law, or for necessary technical reasons.

(vi) Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection, and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance already granted, on such ground, shall be decided by the regulatory authority, after giving a personal hearing to the applicant, and following the principles of natural justice.

9. Validity of Environmental Clearance (EC):

(i) The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the Schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects and seven years in the case of all other projects and activities.

(ii) In the case of Area Development projects and Townships [item 8(b)], the validity period shall be limited only to such activities as may be the responsibility of the applicant as a developer:

Provided that this period of validity may be extended by the regulatory authority concerned by a maximum period of three years if an application is made to the regulatory authority by the applicant within the validity period, together with an updated Form I, and Supplementary Form IA, for Construction projects or activities (item 8 of the Schedule):

Provided further that the regulatory authority may also consult the Expert Appraisal Committee or State Level Expert Appraisal Committee, as the case may be, for grant of such extension.

(iii) Where the application for extension under sub-paragraph (ii) has been filed-

(a) within one month after the validity period of EC, such cases shall be referred to concerned Expert Appraisal Committee (EAC) or State Level Expert Appraisal Committee (SEAC) and based on their recommendations, the delay shall be condoned at the level of the Joint

Secretary in the Ministry of Environment, Forest and Climate Change or Member Secretary, SEIAA, as the case may be;

(b) more than one month after the validity period of EC but less than three months after such validity period, then, based on the recommendations of the EAC or the SEAC, the delay shall be condoned with the approval of the Minister in charge of Environment, Forest and Climate Change or Chairman, as the case may be :

Provided that no condonation for delay shall be granted for any application for extension filed 90 days after the validity period of EC.

10. Post Environmental Clearance Monitoring:

(i) (a) In respect of Category 'A' projects, it shall be mandatory for the project proponent to make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the district or State where the project is located and in addition, this shall also be displayed in the project proponent's website permanently. (b) In respect of Category 'B' projects, irrespective of its clearance by MoEF / SEIAA, the project proponent shall prominently advertise in the newspapers indicating that the project has been accorded environment clearance and the details of MoEF website where it is displayed. (c) The Ministry of Environment and Forests and the State / Union Territory Level Environmental Impact Assessment Authorities (SEIAAs), as the case may be, shall also place the environmental clearance in the public domain on Government portal. (d) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(ii) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

(iii) All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

11. Transferability of Environmental Clearance (EC):

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor, or by the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period.

No reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned is necessary in such cases.

12. Operation of EIA Notification, 1994, till disposal of pending cases:

From the date of final publication of this notification the Environment Impact Assessment (EIA) notification number S.O.60 (E) dated 27th January, 1994 is hereby superseded, except in suppression of the things done or omitted to be done before such suppression to the extent that in case of all or some types of applications made for prior environmental clearance and pending on the date of final publication of this notification, the Central Government may relax any one or all provisions of this notification except the list of the projects or activities requiring prior environmental clearance in Schedule I , or continue operation of some or all provisions of the said notification, for a period not exceeding twenty four months from the date of issue of this notification.

[No. J-11013/---/2015-IA-II (I)]
JOINT SECRETARY TO THE GOVERNMENT OF INDIA

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section(ii) vide notification number S.O. 1533(E), dated the 14th September, 2006 and amended vide S.O.1737(E) dated the 11th October, 2007, S.O. 3067(E) dated the 1st December, 2009, S.O.695(E) dated the 4th April, 2011, S.O.2896(E) dated the 13th December, 2012 , S.O.674(E) dated the 13th March, 2013, S.O.2204(E) dated the 19th July, 2013, S.O.2555(E) dated the 21st August, 2013, S.O.2559(E) dated the 22nd August, 2013, S.O. 2731(E) dated the 9th September, 2013, S.O. 562(E) dated the 26th February, 2014 , S.O.637(E) dated the 28th February, 2014, S.O.1599(E) dated the 25th June, 2014, S.O. 2601 (E) dated 7th October, 2014, S.O. 2600 (E) dated 9th October, 2014, S.O. 3252(E) dated 22nd December, 2014, S.O. 382 (E) dated 3rd February, 2015, S.O. 811(E) dated 23rd March, 2015, S.O. 996 (E) dated 10th April, 2015, S.O. 1142 (E) dated 17th April, 2015, S.O. 1141 (E) dated 29th April, 2015 and S.O.1834 (E) dated the 6th July, 2015.

SCHEDULE

(See paragraph 2 and 7)

LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE

Project or Activity		**Category with threshold limit**		**Conditions if any**
		A	**B**	
1		**Mining, extraction of natural resources and power generation (for a specified production capacity)**		
(1)	(2)	(3)	(4)	(5)

FOR INTERNAL USE

1(a)	(i)Mining of minerals	≥ 50 ha. of mining lease area in respect of non-coal mine lease. >150 ha of mining lease area in respect of coal mine lease Asbestos mining irrespective of mining area All projects.	<50 ha of mining lease area in respect of non-coal mine lease. ≤ 150 ha of mining lease area in respect of coal mine lease.	General Condition shall apply except for project or activity of less than 5 ha of mining lease area: Provided that the above exception shall not apply for project or activity if the sum total of the mining lease area of the said project or activity and that of existing operating mines and mining projects which were accorded environment clearance and are located within 500 meters from the periphery of such project or activity equals or exceeds 5 ha. Note (i)Prior environmental clearance is required at the stage of renewal of mine lease for which an application shall be made up to two years prior to the date due for renewal. Provided that no fresh environmental clearance shall be required for a mining project or activity at the time of renewal of mining lease, which has already obtained environmental clearance, under this Notification. (ii) Mineral prospecting is exempted.
	(ii)Slurry pipelines (coal, lignite and other ores) passing through national parks / sanctuaries / coral reefs, ecologically sensitive areas.			

1(b)	Offshore and onshore oil and gas exploration, development & production	All projects		Note Seismic surveys which are part of Exploration surveys are exempted provided the concession areas have got previous clearance for physical survey
1(c)	(i)River Valley projects (ii)Irrigation projects	(i) ≥ 50 MW hydroelectric power generation; (ii) ≥ 10,000 ha. of culturable command area	(i) < 50 MW ≥ 25 MW hydroelectric power generation; (ii) < 10,000 ha. > 2000 ha. of culturable command area	General Condition shall apply Note: Irrigation projects not involving submergence or inter-state domain shall be appraised by the SEIAA as Category 'B' Projects. Category 'B' river valley projects falling in more than one state shall be appraised at the central Government Level.
1(d)	Thermal Power Plants	≥ 500 MW (coal/lignite/naptha & gas based); ≥ 50 MW (all other fuels except biomass). >20 MW (using municipal solid non-hazardous waste, as fuel).	>50 MW < 500 MW (coal/lignite/ naptha & gas based); <50 MW ≥ 5MW (all other fuels except biomass and municipal solid non-hazardous waste); <20 MW >15 MW (using municipal solid non-hazardous waste, as fuel). >15 MW plants based on biomass fuel.	General Condition shall apply. Note: (i)Thermal Power Plants up to 15 MW based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite / petroleum products up to 15% are exempt. (ii)Thermal Power plants using waste heat boilers without any auxiliary fuel are exempt.
1(e)	Nuclear power projects and processing of nuclear fuel	All projects	-	
2		**Primary Processing**		

2(a)	Coal washeries	≥ 1 million ton/annum throughput of coal	<1million ton/annum throughput of coal	General Condition shall apply (If located within mining area the proposal shall be appraised together with the mining proposal)
2 (b)	Mineral beneficiation	≥ 0.5 million TPA throughput	< 0.5 million TPA throughput	General Condition shall apply (Mining proposal with Mineral beneficiation shall be appraised together for grant of clearance).

3		**Materials Production**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**
3(a)	Metallurgical industries (ferrous & non ferrous**)**	a)Primary metallurgical industry All projects b) Sponge iron manufacturing ≥ 200TPD c)Secondary metallurgical processing industry All toxic and heavy metal producing units ≥ 20,000 tonnes /annum -	 Sponge iron manufacturing <200TPD Secondary metallurgical processing industry i.)All toxic and heavy metal producing units <20,000 tonnes /annum ii.)All other non –toxic secondary metallurgical processing industries >5000 tonnes/annum	General Condition shall apply. Note: (i)The recycling industrial units registered under the HSM Rules are exempt. (ii)In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electric arc furnace, and cupola with capacity more than 30000 tonnes per annum (TPA) would require environmental clearance. (iii)Plant / units other than power plants (given against entry no. 1(d) of the schedule), based on municipal solid waste (non-hazardous) are exempted.
3(b)	Cement plants	≥ 1.0 million tonnes/annum production capacity	<1.0 million tonnes/annum production capacity. All Stand alone grinding units	General Condition shall apply
4		**Materials Processing**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**
4(a)	Petroleum refining industry	All projects	-	-

4(b)	(i)Coke oven plants (ii) Coaltar processing units	≥2,50,000 tonnes/annum	<2,50,000 & ≥25,000 tonnes/annum All projects	General conditions shall apply
4(c)	Asbestos milling and asbestos based products	All projects	-	-
4(d)	Chlor-alkali industry	≥300 TPD production capacity if a unit located out side the notified industrial area/ estate	(i)All projects irrespective of the size, if it is located in a Notified Industrial Area / Estate. <300 tonnes per day (TPD) and located outside a Notified Industrial Area / Estate.	General as well as specific conditions shall apply No new Mercury Cell based plants will be permitted and existing units converting to membrane cell technology are exempted from the Notification.
4(e)	Soda ash Industry	All projects	-	-
4(f)	Skin/hide processing including tanning industry	New projects outside the industrial area or expansion of existing units out side the industrial area	All new or expansion of projects located within a notified industrial area/ estate	General as well as specific conditions shall apply
5		**Manufacturing/Fabrication**		
5(a)	Chemical fertilizers	All projects including all Single Super Phosphate with H_2SO_4 production except granulation of chemical fertilizers.	All Single Super Phosphate without H_2SO_4 production and granulation of chemical fertilizers	General condition shall apply. Granulation of single super phosphate powder is exempt.
5(b)	Pesticides industry and pesticide specific intermediates (excluding formulations)	All units producing technical grade pesticides	-	-
5(c)	Petro-chemical complexes (industries based	All projects -	-	-

	on processing of petroleum fractions & natural gas and/or reforming to aromatics)			
5(d)	Manmade fibres manufacturing	Rayon	Others	General Condition shall apply
5(e)	Petrochemical products and petrochemical based processing such as production of carbon black and electrode grade graphite (processes other than cracking & reformation and not covered under the complexes).	Located out side the notified industrial area/ estate	Located in a notified industrial area/ estate	General as well as specific conditions shall apply. Note: Manufacturing of products from polymer granules is exempt.
5(f)	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	Located out side the notified industrial area/ estate except small units as defined in column (5)	(i)Located in a notified industrial area/ estate. (ii)Small units as defined in column (5)	General as well as specific conditions shall apply. Small units: with water consumption <25 cu mt per day, fuel consumption <25 TPD and not covered in the category of MAH units as per the Management, Storage and Import of Hazardous Chemical Rules, 1989.
5(g)	Distilleries	(i)All Molasses based distilleries (ii) Non-molasses based distilleries ≥60 KLD	Non-molasses based distilleries – <60 KLD	General Condition shall apply

5(h)	Integrated paint industry	-	All projects	General Condition shall apply
5(i)	Pulp & paper industry	Pulp manufacturing and Pulp & Paper manufacturing industry except from waste paper	Pulp manufacturing from waste paper and paper manufacturing from waste paper pulp and other ready pulp	General Condition shall apply. Note: Paper manufacturing from waste paper pulp and ready pulp without deinking, bleaching and colouring is exempt.
5(j)	Sugar Industry	- -	≥ 5000 tcd cane crushing capacity	General Condition shall apply
6		**Service Sectors**		
6(a)	Oil & gas transportation pipe line (crude and refinery/ petrochemical products)**,** passing through national parks /sanctuaries/coral reefs /ecologically sensitive areas including LNG Terminal	All projects		-
6(b)	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	-	All projects	General Condition shall apply
7		**Physical Infrastructure including Environmental Services**		

7(a)	Air ports	All projects including airstrips, which are for commercial use	-	Air strips which do not involve bunkering / refueling facility and or Air Traffic Control, are exempted.
7(b)	All ship breaking yards including ship breaking units	All projects	-	-
7(c)	Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes.	If at least one industry in the proposed industrial estate falls under the Category A, entire industrial area shall be treated as Category A, irrespective of the area. Industrial estates with area greater than 500 ha. and housing at least one Category B industry.	Industrial estates housing at least one Category B industry and area <500 ha. Industrial estates of area> 500 ha. and not housing any industry belonging to Category A or B.	General as well as specific conditions shall apply Note: 1.Industrial Estate of area below 500 ha. and not housing any industry of category A or B does not require clearance. 2.If the area is less than 500 ha. But contains building and construction projects > 20000 sq. mtr. and or development area more than 50 ha it will be treated as activity listed at serial no. 8(a) or 8(b) in the Schedule, as the case may be.
7(d)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having land fill only	General Condition shall apply
7(da)	Bio-Medical Waste Treatment Facilities	-	All projects	-
7(e)	Ports, harbors, break waters, dredging	≥ 5 million TPA of cargo handling capacity (excluding fishing harbours)	< 5 million TPA of cargo handling capacity and/or ports/ harbours ≥10,000 TPA of fish handling capacity	General Condition shall apply Note: 1.Capital dredging inside and outside the ports or harbors and channels are included; 2.Maintenance dredging is exempt provided it formed part of the original proposal for which Environment

				Management Plan (EMP) was prepared and environmental clearance obtained.
7(f)	Highways	i) New National High ways; and ii) Expansion of National High ways greater than 100 km involving additional right of way or land acquisition greater than 40m on existing alignment and 60 m on re-alignment or by-passes	i) All New State Highway Projects; ii) State Highway expansion projects in hilly terrain (above 1000 m AMSL) and or ecologically sensitive areas.	General Condition shall apply Note: Highways include expressways.
7(g)	Aerial ropeways	(i)All projects located at altitude of 1000 mtr. and above; (ii)All projects located in notified ecologically sensitive areas.	All projects except those covered in column (3).	General Condition shall apply
7(h)	Common Effluent Treatment Plants (CETPs)		All projects	General Condition shall apply
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)		All projects	General Condition shall apply
8		**Building or Construction projects or Area Development projects and Townships**		
8(a)	Building and Construction projects		≥20000 sq.mtrs and <1,50,000 sq.mtrs. of built up area	The term "built up area" for the purpose of this Notification the built up or covered area on all the floors put together including its basement and other service areas, which

				are proposed in the building or construction projects. **Note 1.-** The projects or activities shall not include industrial shed, school, college, hostel for educational institution, but such buildings shall ensure sustainable environmental management, solid and liquid waste management, rain water harvesting and may use recycled materials such as fly ash bricks. **Note-2.-** "General Conditions" shall not apply.
8(b)	Townships and Area Development projects.		Covering an area of > 50 ha and or built up area > 1,50,000 sq .mtrs	A project of Township and Area Development Projects covered under this item shall require an Environment Assessment report and be apprised as Category 'B1' Project. **Note.-** "General Conditions" shall not apply.

Note:-

General Condition (GC):

Any project or activity specified in Category 'B' will be appraised at the Central Level as Category 'A', if located in whole or in part within 5 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972 (53 of 1972); (ii) Critically Polluted areas as notified by the Central Pollution Control Board constituted under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) from time to time; (iii) Eco-sensitive areas as notified under sub-section (2) of section 3 of the Environment (Protection) Act, 1986, and (iv) inter-State boundaries and international boundaries; provided that for River Valley Projects specified in item 1(c), Thermal Power Plants specified in item 1(d), Industrial Estates/ parks/complexes/areas, Export Processing Zones (EPZ), Special Economic Zones (SEZs),

biotech parks, leather complexes specified in item 7 (c) and common hazardous waste treatment, storage and disposal facilities (TSDFs) specified in item 7 (d), the appraisal shall be made at Central level even if located within 10 km.

Provided further that the requirement regarding distance of 5 km or 10 km, as the case may be, of the inter-State boundaries can be reduced or completely done away with by an agreement between the respective States or the Union Territories sharing the common boundary in case the activity does not fall within 5 km or 10 km, as the case may be of the areas mentioned at item (i), (ii), and (iii) above.

Specific Condition (SC):

If any Industrial Estate/Complex / Export processing Zones /Special Economic Zones/Biotech Parks / Leather Complex with homogeneous type of industries such as Items 4(d), 4(f), 5(e), 5(f), or those Industrial estates with pre –defined set of activities (not necessarily homogeneous, obtains prior environmental clearance, individual industries including proposed industrial housing within such estates /complexes will not be required to take prior environmental clearance, so long as the Terms and Conditions for the industrial estate/complex are complied with (Such estates/complexes must have a clearly identified management with the legal responsibility of ensuring adherence to the Terms and Conditions of prior environmental clearance, who may be held responsible for violation of the same throughout the life of the complex/estate).

F. No. J-11013/36/2014-IA-I
Government of India
Ministry of Environment, Forest & Climate Change
(IA Division)

Indira Paryavaran Bhawan
Jor Bagh Road
New Delhi- 110003.

Dated: 4th April 2016

Office Memorandum

Subject: **Exemption from Public Consultation for the projects/activities located within the Industrial Estate/Parks-reg.**

In Original Application (O.A.) No. 157 (THC) / 2013 (Society for Environmental Protection Vs. Union of India & Ors) before Hon'ble National Green Tribunal (Western Zone), Pune, in its order dated 14th March 2016 has ordered that " ... *We have seen from the provisions of Environment Clearance Regulations, 2006, the Schedule appended to the Rules enumerates several projects and activities which require prior clearance and there is a tabular form showing the size of the industry and the threat or damage it is likely to cause to the environment. Therefore, we do not find there should be any difficulty in modifying or superseding O.M. dated 10th December, 2014 because all that MoEF&CC is required to do is to specify which of the industries depending upon the nature of industrial activity require prior permission etc; such of the unit which could be exempted ...*".

2. The concept of Public Hearing was introduced for the first time in the Environment Impact Assessment *vide* Notification S.O. 60 (E) dated 27.01.1994 and subsequently formalized *vide* Notification S.O. 318 (E) dated 10.04.1997 making amendment in the Environment Impact Assessment Notification, 1994. Whereas, the Industrial Estates were added in the Schedule to the EIA Notification mandating the requirement of environmental clearance *vide* notification S.O. 801 (E) dated 7.07.2004. In between, the above two notifications, another notification No. S.O. 737 (E) dated 1st August, 2001 introducing the concept of exemption from public hearing for certain category of projects and activities in the process of environmental clearance was published. The said notification reads as "*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) modernization of existing irrigation projects.*" The provisions of this notification were reflected as Para 7 of the new EIA Notification, 2006 with some more additions.

3. The Hon'ble NGT, Western Zone, Pune based on the interpretation of the provision of Para 7 (i) III. Stage (3) (i) (b) of the EIA Notification, 2006 given by the Ministry vide O.M. No. J-11013/ 36 / 2014- IA-I dated 16th May 2014 ordered on 8th August 2014 in above O.A. that exemption from public consultation will be available to only those industrial units which are coming up in industrial estates which have got environmental clearance under EIA Notification, 2006. The O.M. dated 16th May 2014

Contd 2/-

issued by the Ministry, was reviewed in the Ministry in the light that the EIA Notification 2006 on this subject provides for exemption from public consultation for the industries coming up in industrial areas, means that those industrial areas must be in existence on the day of EIA Notification, 2006, as is the case of other category of projects and activities which have got this exemption under Para -7 of the EIA Notification, 2006. The Ministry clarified the status as per the provisions *vide* O.M. No. J-11013/ 36 / 2014- IA-I dated 10th December 2014. The above O.M. dated 10th December 2014 was also challenged before the Hon'ble High Court of Madras, in W.P. No. 3514 of 2015; Hon'ble Court ordered on 10.09.2015 that "... *we are thus of the view that the impugned notification / Office Memorandum cannot be faulted and if there is any individual grievance qua any particular nature existing, it is always open to the petitioner to move the NGT with requisite material. The writ petition accordingly stands dismissed with aforesaid observations.*"

4. The above O.A. (157 (THC) / 2013) was instituted against EC given to a Thermal Power Plant of 6 x 276 MW over an area 546.55 ha of land in which public hearing was exempted as the said TPP was in industrial area.

5. The industrial estate in EIA Notification, 2006 in Schedule at item 7 (c) provides that industrial estates with an area greater than 500 ha and housing at least one Category B industry will be Category A, and industrial estate of area greater than 500 ha. and not housing any industry belonging to Category A and B is Category B. Industrial estate of area below 500 ha and not housing any industry of Category A or B does not require prior environmental clearance under EIA Notification, 2006. If the area is less than 500 ha but contains building and construction projects greater than 20000 sq. mt. and development area more than 50 ha. it will be treated as activity listed at S.No. 8 (a) or 8 (b) in the Schedule as the case may be.

6. It is evident from the Notification of 2001 as mentioned above and provisions at item 7 (c) of EIA Notification, 2006 regarding size of the industrial estates, the intent of the Notification has been to grant exemption from public consultation for small industrial units located in industrial estates of 500 to 1000 ha. area. The industrial units or activities itself located on an area of 500 ha in industrial estate or regions of 10000 ha. has not been in the intent to be granted exemption from public consultation. So a Thermal Power Plant, Cement Plant, or Integrated Steel Plant even if located in notified Industrial Regions / Zones cannot be granted exemption from the public consultation, as that is not the intent of the EIA Notification, 2006.

7. It is accordingly clarified that the category of projects and activities mentioned in the Annexure of this O.M. will require Public consultation in the process of Environment Impact Assessment and environmental clearance irrespective of its location in or outside a notified industrial area / estate / region.

8. The O.M. No. J-11013/ 36 / 2014- IA-I dated 16th May 2014 and dated 10th December 2014 will stand modified to the extent of this O.M.

This issues with the approval of the Competent Authority.

04/04/2016

(Dr. Satish C. Garkoti)
Scientist 'F'

Distribution :

1. Chairman of All the Expert Appraisal Committees

3. All officers of Impact Assessment Division, MoEFCC

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ANNEXURE

Projects or Activities where Public consultation will be required as a part of the Environment Impact Assessment Process even if they are located in notified industrial areas / regions / zones / EPZ

S.N. in Schedule of EIA Notification, 2006	Project or Activity
1 (d)	Thermal Power Plants
1(e)	Nuclear power projects and processing of nuclear fuel
2 (a)	Coal washeries
2(b)	Mineral beneficiation
3 (a)	Metallurgical industries(ferrous & non ferrous)
3 (b)	Cement plants
4 (a)	Petroleum refining industry
4 (b)	Coke oven plants
4 (c)	Asbestos milling and asbestos based products
4 (f)	Skin / hide processing including tanning industry
5 (g)	Distilleries
5 (i)	Pulp paper paper industry
5 (j)	Sugar Industry

.....

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

For

THERMAL POWER STATION – II SECOND EXPANSION PROJECT (2X660 MW SUPERCRITICAL- LIGNITE BASED)

At

VILLAGES	**:**	**MUDANAI, KUNANKURICHI, UTHANGAL**
TALUK	**:**	**VIRUDHACHALAM**
DISTRICT	**:**	**CUDDALORE**
STATE	**:**	**TAMIL NADU**
COUNTRY	**:**	**INDIA**

By

M/s. NLC India Ltd

[Formerly Neyveli Lignite Corporation]

CREATING WEALTH FOR WELL BEING

[Project termed under schedule 1 (d): Category 'A' Thermal Power Plants, ToR *vide* MoEF & CC File No. J-13012/11/2016 – IA. I (T), dated: 23.03.2017, Public Hearing Conducted on 15.02.2018, Public Hearing Proceedings Lr.No. DEE/TNPCB/CUD/PH/4825/A/2018, dated: 21.02.2018

Prepared by

HUBERT ENVIRO CARE SYSTEMS (P) LTD, CHENNAI
(NABET Accredited vide Certificate No. NABET/EIA/1619/RA0083
MoEF Recognized Lab vide F. No. Q-15018/13/2016-CPW)

JUNE - 2018

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The following personnel are gratefully acknowledged for their fullest support in collection, compilation of needful data regarding the project and kind cooperation in fulfilling the report on Environmental Impact Assessment (EIA) of M/s. NLC India Limited, Tamil Nadu, India.

NLC India Limited,

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Mr.S. Sakthivel	-	DGM (P & BD)
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Mr. Vamsee Krishna Navooru	-	EIA Coordinator (EC) & Functional Area Expert (FAE)
Mr. A. Manoharan	-	FAE
Mr. V. Dhivakar	-	FAE
Mr. Brijesh Kumar	-	FAE
Mr. R. Venkateswarlu	-	FAE
Dr. Rajkumar Samuel	-	FAE
Mr.N. Varadarajan	-	FAE
Mr.B. Harsha Vardhan	-	FAE
Mrs. T. Rajani	-	FAE
Mr.B. Tamil Selvan	-	TM
Mr. Abishek Moses	-	TM
Mr. A.K. Natarajan	-	TM
Mr. Chengalvarayan	-	TM

Declaration of Experts contributing to the EIA

I hereby certify that I was involved in the EIA report for the project titled **Thermal Power Station – II Second Expansion Project (2x660MW Supercritical-Lignite based) at Villages Mudanai, Kunankurichi & Uthangal, Vridhachalam Taluk, Cuddalore District, Tamil Nadu State, India by M/s. NLC India Limited.** I was a part of the EIA team in the following capacity that developed the above EIA with the support of the following functional area experts &Team Members.

EIA Co-ordinator	Team Member
Name: Mr. Vamsee Krishna Navooru	**Name:** Mr. B. Tamil Selvan
Signature:	**Signature:**
Date:15/06/2018	**Date:** 15/06/2018

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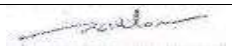
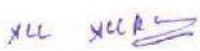
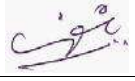
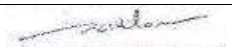
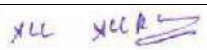
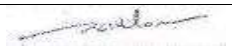
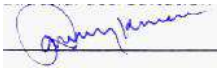
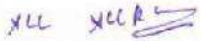
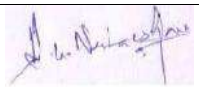
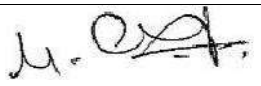
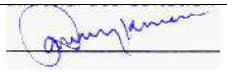
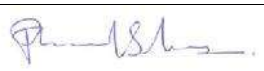
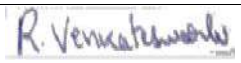
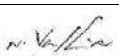
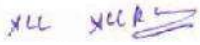
Functional Area Experts (FAEs):

S. No.	Functional Areas	Name of the Expert	Signature	Duration of Involvement
1	AP	FAE Dr. J R Moses		Oct 2016 – Till date
		TM Mr. Vamsee Krishna Navooru		Oct 2016 – Till date
		Mr. Abhishek Moses		Oct 2016 – Till date
		Mr. B. Tamil Selvan		Oct 2016 – Till date
		Mr. Harsha Vardhan		March 2017 – Till date
		Mrs. T Rajani		July 2017- Till date

2	AQ‘	FAE Dr. J R Moses		Oct 2016 – Till date
		TM Mr. Abhishek Moses		Oct 2016 – Till date
		Mr. Harsha Vardhan		March 2017 – Till date
		Mr. B. Tamil Selvan		Oct 2016 – Till date
3	WP	FAE Dr. J R Moses		Oct 2016 – Till date
		TM Dr. Rajkumar Samuel		Oct 2016 – Till date
		Mr. Vamsee Krishna Navooru		Oct 2016 – Till date
		Mr. Abhishek		Oct 2016 – Till date
		Mr. A. K. Natarajan		March 2017 – Till date
		Mr. Chengalvarayan		March 2017 – Till date
		Mr. B. Tamil Selvan		Oct 2016 – Till date
		Mrs. T Rajani		July 2017- Till date
4	SHW	FAE Mr. A. Manoharan		Oct 2016 – Till date
		TM Mr. Vamsee Krishna Navooru		Oct 2016 – Till date
		Mrs. T Rajani		July 2017- Till date
5	SE	FAE Mr. V. Dhivakar		Feb 2017 – Till date
6	EB	FAE Mr. A. Manoharan		Oct 2016 – Till date
		TM Dr. Rajkumar Samuel		Oct 2016 – Till date

		Mr. B. Tamil Selvan		Oct 2016 – Till date
7	NV	FAE Mr. Brijesh Kumar		March – May 2017
		TM Mr. Vamsee Krishna Navooru		Oct 2016 – Till date
		Mr. N. Varadharajan		March 2017 – Till date
		Mr. Chengalvarayan		March – May 2017
8	LU	FAE Mr. Venkateswarlu		June 2017 – Till date
		TM Mr. N. Varadharajan		March 2017 – Till date
9	RH	FAE Dr. J R Moses		Oct 2016 – Till date
		TM Mr. Abhishek Moses		Oct 2016 – Till date
		Mr. Harsha Vardhan		March 2017 – Till date

LU - Land use
AP - Air pollution monitoring, prevention and control
AQ - Meteorology, air quality modeling and prediction
WP - Water pollution monitoring, prevention and control
EB - Ecology and biodiversity
NV - Noise& Vibration
SE - Socio-economics
RH - Risk assessment and hazard management
SHW - Solid and hazardous wastes

Declaration by the Head of the Accredited Consultant Organization

I, Dr. J R Moses hereby, confirm that the above mentioned experts prepared the EIA report for the **Thermal Power Station – II Second Expansion Project (2x660 MW Supercritical -Lignite based) at Villages Mudanai, Kunankurichi & Uthangal, Vridhachalam Taluk, Cuddalore District, Tamil Nadu State, India by M/s. NLC India Ltd.** I also confirm that I shall be fully accountable for any misleading information mentioned in this statement.

Signature: **Date:** 15/06/2018

Name: Dr. J.R Moses

Designation: CEO

Name of the EIA Consultant Organization: M/s. Hubert Enviro Care Systems (P). Ltd., Chennai.

NABET Certificate No & Validity: NABET/EIA/1619/RA 0083 & 13.10.2019.

HECS

Hubert Enviro Care Systems (P) Ltd.

Client: **M/s. NLC India Ltd**

Mudanai, Kunankurichi, Uthangal village, Virudhachalam Taluk, Cuddalore District, Tamil Nadu State, India

Project: **Thermal Power Station -II Second Expansion Project (2 x 660 MW Supercritical – Lignite Based)**	**Project No.:** **Amendment Work order: CO CONTS/0034/TPS-II (2nd EXPN)/EIA/EMP & SIA Report/2015 Date: 15/10/2016**
Title: EIA Report	**Document No.**RP003 **Rev.: B**

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Notes:

1. **ToR vide F.No. J-13012/11/2016-IA. I (T) dated 23.03.2017**
2. **EIA Submission for Public Hearing Lr.No. NLCIL/CGM/PBD/TS-II(2nd EXPN/TNPCB/598/2017 dated: 19.12.2017**
3. **Public Hearing Proceedings Lr.No. DEE/TNPCB/CUD/PH/4825/A/2018, dated: 21.02.2018**

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			Name.	Sign.	Name.	Sign.	Name.	Sign.
B	15/06/2018	3rd Submission	Moses Manoharan Dhivakar Mallikarjun Rajkumar Brijesh Vamsee Tamil Abhishek Natarajan Chengal Harsha Varadarajan Sheetal		Vamsee GBS		Moses	
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LIST OF ACCRONYMS

1.	AERMOD	Atmospheric Dispersion Modelling System
2.	ATM	Atmospheres Absolute
3.	AVT	All Volatile Treatment
4.	AHP	Ash Handling Plant
5.	ACW	Air Circuit Water
6.	ACSR	Aluminium Conductor steel reinforced cable
7.	AAQ	Ambient Air Quality
8.	AAQM	Ambient Air Quality Monitoring
9.	BFP	Boiler Feed Pump
10.	BIS	Bureau of Indian Standards
11.	BMCR	Boiler maximum continuous Rating
12.	BFP	Boiler Feed Pump
13.	BPL	Below Poverty Line
14.	CSR	Corporate Social Responsibility
15.	CGWB	Central Ground Water Board
16.	CPCB	Central Pollution Control Board
17.	CDM	Clean Development Mechanism
18.	CWT	Combined Water Treatment
19.	CIP	Clean In Place
20.	CBL	Convective Boundary Level
21.	CPHEEO	Central Public Health and Environmental Engineering Organisation
22.	CER	Certified Emission Reduction
23.	CERC	Central Electricity Regulatory Commission
24.	CEA	Central Electricity Authority

25.	CRH	Crusher House
26.	CAGR	Compound Annual Growth Rate
27.	CW	cooling water
28.	CTBD	Cooling Tower Blow Down
29.	CEMS	Continuous Environment Monitoring System
30.	CT	Cooling Tower
31.	COD	Commercial Operation Date
32.	CW	Cooling Water
33.	CEA	The Central Electricity Authority
34.	CPU	Condensate Polishing Unit
35.	DG	Diesel generator
36.	DCS	Distributed Control System
37.	DSCR	Debt Service Coverage Ratio
38.	DDCMIS	Distributed Digital Control Monitoring Information System
39.	E	Expansion
40.	ETP	Effluent Treatment Plant
41.	ELHS	External Lignite Handling System
42.	EAC	Expert Appraisal Committee
43.	EHS	Environmental Health and Safety
44.	EMP	Environmental Management Plan
45.	EMC	Environmental Management Cell
46.	EPS	Electric Power Survey
47.	EC	Environmental Clearance
48.	EIA	Environmental Impact Assessment
49.	ESP	Electrostatic precipitator
50.	FGD	Flue-gas desulfurization

51.	FAB	Fluidised Aerobic Bio-reactor
52.	FY	Fiscal Year
53.	GPS	Global Positioning System
54.	GCV	Gross Calorific Value
55.	GOI	Government Of India
56.	GLC	Ground Level Concentrations
57.	HFO	Heavy Furnace Oil
58.	IMD	India Meteorological department
59.	ISH	Intermediate Surge Hopper
60.	ISO	International Standard for Organization
61.	IDC	Intangible Drilling Cost
62.	ILHS	Internal Lignite Handling System
63.	IDCT	Inverse Discrete Cosine Transform
64.	kVA	Kilovolt-ampere
65.	kWh	Kilo Watt per hour
66.	KSPCB	Karnataka State Pollution Control Board
67.	KLD	Kilo Litres per Day
68.	LDO	Light Diesel Oil
69.	LPCD	litres Per Capita per Day
70.	MoEF & CC	The Ministry Of Environment, Forest and Climate Change
71.	MBBR	Moving Bed Bio film Reactor
72.	MW	Mega Watt
73.	MTPA	Million Tonnes Per Annum
74.	MDBFP	Motor Driven Boiler Feed Pump
75.	MCM	Million Cubic Meter
76.	MSL	Mean Sea Level

77.	MCR	Maximum Continuous Rating
78.	NTU	Nephelometric Turbidity Unit
79.	NLCIL	NLC India Limited
80.	NABL	The National Accreditation Board for Testing and Calibration Laboratories
81.	NDCT	Natural Draft Cooling Tower
82.	NAAQM	National Ambient Air Quality Monitoring
83.	NTPL	National Thermal Power Limited
84.	NAAQs	National Ambient Air Quality Norms
85.	ONAN	Oil Natural Air Natural
86.	ONAF	Oil Natural Air Forced
87.	OLTC	On Load Tap Changer
88.	PGCIL	The Power Grid Corporation of India Limited
89.	PHAST	PHAge Search Tool
90.	PF	Pulverized Fuel
91.	PCB	Pollution Control Board
92.	PCU	Passenger Car Unit
93.	PUC	Pollution Under Control
94.	PIA	Project Influenced Area
95.	Ppm	Parts Per Minutes
96.	Ppb	parts per billion
97.	PLC	Programmable Logic Controller
98.	PLF	Plant Load Factor
99.	RO	Reverse osmosis
100.	RF	Reserved Forest
101.	RPM	Revolution Per Minutes

102.	RCC	Reinforced Cement Concrete
103.	STP	Sewage Treatment Plant
104.	SBL	Stable Boundary Level
105.	SG	Steam Generator
106.	SCR	Selective Catalytic Reactor
107.	SGMCR	Steam Generator Maximum Continuous Rating
108.	SSC	Submerged Scrapper Chain
109.	TDS	Total Dissolved Solids
110.	TPS	Thermal Power Station
111.	TPP	Thermal Power Plant
112.	TDBFP	Turbine Driven Boiler Feed Pump
113.	TANGEDCO	Tamil Nadu Generation And Distribution Corporation
114.	TSDF	Treatment Storage and Disposal Facility
115.	TNPCB	Tamil Nadu pollution Control Board
116.	TPD	Turns Per Day
117.	ToR	Terms of Reference
118.	TANTRANSCO	The Tamil Nadu Transmission Corporation Limited
119.	TGMCR	Turbo Generator Maximum Continuous Rating
120.	TPH	Tonnes per Hour
121.	USC	Ultra Supercritical
122.	WTP	Water Treatment Plant
123.	ZLD	Zero Liquid Discharge

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1.0 INTRODUCTION

1.1 About NLC India Ltd

NLC India Ltd (NLCIL) (formerly, Neyveli Lignite Corporation) is an existing, profit making Navratna Public Sector Enterprise of Government of India (GoI) engaged in mining of lignite and generation of power through lignite based thermal power plants. NLCIL was established by GoI in 1956, following the discovery of lignite deposits in Neyveli, Tamil Nadu. NLCIL comes under administrative control of Ministry of Coal, GoI and serves as an important source of power generation to the states of Tamil Nadu, Andhra Pradesh, Karnataka, Kerala, Telangana, Union Territory of Puducherry and Rajasthan. NLCIL currently operates four opencast lignite mines with a combined capacity of 30.6 MTPA.

1.1.1 Power Generation

NLCIL's thermal power station (the units under TPS-I) are South Asia's first lignite fired and India's first pit head based power station. From the lignite extracted from its mines, NLCIL operates five thermal power stations with an aggregate capacity of 3,240 MW in the states of Tamil Nadu and Rajasthan. Apart from lignite based power plants, NLCIL also operates one coal based thermal power plant of 1,000 MW (2 X 500 MW) capacity through its joint venture with TANGEDCO, NLC Tamil Nadu Power Limited. It has also installed solar and wind based power plants.

Apart from lignite and coal based thermal power plants, NLCIL also enter into renewable energy sector by setting up wind and solar based power plants. The details of power plants operated by NLCIL is given in **Table-1**.

Table-1: The details of power plants operated by NLCIL

Power Station	Location of plant	Capacity (MW)
TPS I	Neyveli, Tamil Nadu	600
TPS II	Neyveli, Tamil Nadu	1470
TPS I Expansion	Neyveli, Tamil Nadu	420
Barsingsar TPS	Bikaner, Rajasthan	250
TPS II Expansion (Unit-I &Uni -II)	Neyveli, Tamil Nadu	500
NTPL (Unit-I & Unit II)	Tuticorin, Tamil Nadu	1000
Solar	Neyveli, Tamil Nadu	440
Wind	Tirunelveli, TN	51
TOTAL		4731

1.2 Need for the project

NLC India ltd (NLCIL) formerly, Neyveli Lignite Corporation has the initiative for developing thermal power project in the state of Tamilnadu to meet the growing electricity demand in the State of Tamilnadu and neighbouring states such as Andhra Pradesh, Karnataka, Kerala, Telangana, and Union Territory of Puducherry. NLCIL had identified 608 Acres of land at their existing power complex TPS – II near Mudanai village in Cuddalore District and plans to set up second expansion of (2X660 MW Supercritical Lignite Based) adjacent to operating thermal power station –II. It is worthwhile mentioning that the proposed power plant would be the first lignite fired 660 MW Supercritical Unit in India.

The proposed power project can propel both economic and social growth in the region through direct benefits of power supply and indirect benefits through various induced economic development in the region. In addition to the above factors, NLCIL proposes to take up comprehensive community development plans under the Corporate Social Responsibility programs of the company.

1.3 Chronological Events of EC/CTE/CTO (as per NLCIL Records)

Year	Products		EC No	CTE No	CTO No	Remarks
	Stage/ Phase	Unit Configuration (MW)				
Industry Started 1960 Commissioned progressively from 1962 onwards	TPS - I	6 x 50 = 300 3 x 100 = 300	-	-	-	-
1977	TPS – II Stage I	3 x 210 = 630	DST NOC File No. 10/1/17G-KV dated 18.8.1977	T8/TNPCB/cud/ 21409/A2008 dated: 8.4.2018	Consent renewal Consent order no. 180827815736 Proceedings no.T2/TNPCB/F.0066 CUD/RL/CUD/A/ W/2018 dated: 09.02.2018 validity: 31.3.2018 Renewal Under	under operation NOC from DST
1983	TPS – II Stage II	4 x 210 = 840	MoEF&CC File No. 14/13/82-Env.2 dated: 5.1.1983	T8/TNPCB/cud/ 21409/A2008 dated: 8.4.2008		Under in operation

					Process (2018 – 2019)	
1990	TPS - I Expansion	2 x 210 = 420	MoEF&CC File No. J-13011/31/87-IA-II dated 29.06.1990	T8/TNPCB/F28636/ cud/A/2006 dated 21.7.2006	Consent renewal Consent order no. 180828920223 Proceedings no.T2/TNPCB/F.0102 CUD/RL/CUD/A/W /2018 dated: 09.02.2018 validity: 31.3.2018 Renewal Under Process (2018 – 2019)	under operation
1992*	TPS - I	6 x 50 = 300 3 x 100 = 300	MoEF&CC File No. J-13011/31/87-IA dated 23.1.1992	APCI/PROC.APCI/ 14984/TNPCB-BD/ 1985/F19 dated: 28.12.1985	Consent order No. 308/665 Proc No. T4/TNPCB/F. 130691/cud/RL/A/W 2014 dated: 23.7.2014 Renewal Under Process (2018 – 2019)	1. EC is for life Extension. 2. The unit is presently under operation and likely to be decommissioned after commissioning of the NNTPP
2003	TPS - II Expansion	2 x 250 = 500	MoEF&CC File No. J-13011/8/2002-IA (T) dated: 9.1.2003	Consent order no. 2473 Proceedings no. MII/17595/2001/ RL/CHD/A dated: 08.07.2003	Consent renewal Consent order no. 180822695599 Proceedings no.T2/TNPCB/F.0214 CUD/RL/CUD/A/ W/2018 dated: 09.02.2018 validity: 31.3.2018 Renewal Under Process (2018 – 2019)	under operation
2010	NNTPP	2 x 500 = 1000	MoEF&CC File No. J-13012/250/2007-IA.II (T) dated: 21.10.2010	Consent no. 26031884702	Under construction Renewal Under Process (2018 – 2019)	1. Under construction as a replacement to ageing 600 MW TPS – I units.

			Extension of validity of EC File No. J-13012/250/2007-IA.II (T) dated: 1.9.2016 Extension of validity of EC File No. J-13012/250/2007-IA.II (T) dated: 1.9.2017	Proceddings no. T7/TNPCB/F0086/ cud/RL/cud/W/2016 dated: 10.5.2016		
2016 - 2018	TPS II 2nd Expansion	2 x 660 = 1320	Current application ToR vide MoEF & CC File no. J-13012/11/2016 – IA. I (T), dated: 23.3.2017 2.	Current application	Current application	Current application 1. Public Hearing Conducted on 15.02.2018, 2. Public Hearing Proceedings Lr.No. DEE/TNPCB/CUD/PH/ 4825/A/2018, dated: 21.02.2018

Note: *After commissioning of NNTPP 2 x 500 MW, the Proponent plans to phase out the existing 600 MW Thermal Power Station-I. (Letter sent to CPCB vide Lr No. 002/GM/TPS-I/CPCB/2018 dated 10/02/2018)

NLCIL Existing TPS – II is operating with existing EC (TPS Stage II 4 x 210 MW F.No. EP/121/138/TN dated 05.1.1983 & TPS Stage II - 1st Expansion 2 x 250 MW F.No. J.13011/8/2002-IA II (T) dated: 09.01.2003) and Consent for Establishment & Consent for Operation from TNPCB**.**

The project termed under Item 1(d) in the Schedule of the EIA Notification issued on September 14th2006. Based on the capacity (2x660MW), the power plant is classified as Category “A”. Any project falling under Category “A” requires prior Environmental Clearance from Ministry of Environment, Forest and Climate Change, which is to be sanctioned by Thermal Power Projects Environmental Appraisal Committee (EAC). In order to obtain prior environmental clearance from statutory authorities, EIA study has to be carried out as per ToR issued by MoEF & CC vide File no. J-13012/11/2016 – IA. I (T), dated: 23rd March, 2017 by Ministry of Environment, Forests & Climate Change (MoEF & CC), New Delhi.

As per the ToR conditions EIA report has to be submitted to SPCB to conduct Public Hearing. The EIA Report has been prepared as per issued ToR and submitted to DEE, TNPCB, Cuddalore District, Tamil Nadu vide Lr.No. NLCIL/CGM/PBD/TS-II(2nd EXPN/TNPCB/598/2017 dated: 19.12.2017,

Public Hearing notice was issued in an English daily named 'The New Indian Express' and in a Tamil Daily named ' Dinamani' on 12.01.2018 **(News paper advertised notice enclosed as Appendix III)** and further villages near the project site were informed by Beats (Dhandora) on 12.02.2018

Public Hearing was conducted on 15.02.2018 (at 10:00 hrs) at Community Hall, block-29, Neyveli Township, Virudhachalam Taluk, Cuddalore District.

The Public Hearing was organized byTNPCB, Cuddalore District and presided by The Sub Collector, Cuddalore District and The Revenue Divisional officer.

Public Hearing Proceedings vide Lr.No. DEE/TNPCB/CUD/PH/4825/A/2018, dated: 21.02.2018 is enclosed as **Appendix IV** & Public Hearing Photos are appended in **Figure 7-1.**

1.4 Project Location

The proposed project site of Thermal Power Station – II Second Expansion Project (2 x 660 MW Supercritical Lignite Based) covers Re survey numbers 328,332,333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384 and 385 in Mudanai Village, Re survey number 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 420, 421, 428, 429, 430, 431, 432, 433, 434, 434, 435 and 436 in Uthangal Village, Re survey number 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 189, 190, 191 and 197 in Kunnankurichi Village, Virudhachalam Taluk, Cuddalore district, Tamil Nadu, India. The site is falling on topo sheet nos. 58 M/6, M/7 & M/10 and situated between the GPS coordinates of Latitude 11032'39" N and Longitude 79024'35" E at a distance of 1.5 km towards North away from the NH-532 connecting Cuddalore and Chinnasalem.

The site is on south west side of existing Thermal Power Station-II and comprises of about 608 Acres of land in possession of NLCIL. The nearest airports is at Trichy Airport at a distance of ~120 km towards SW and Chennai International airport at a distance of ~185 km towards NE.

Nearest railway station at Uthangal Mangalam on Vridhachalam- Cuddalore section is at a distance of 1.5 km towards South.

NLCIL operating Thermal Units & Lignite Mining Units & TAQA IPP are the industries in the study area. As per the revenue records and also Indian Topo sheet data, there are no forest land parcels at the project site. In the 10Km radius of the study area, there are four Reserved forest (Semakottai RF 3 km towards NE, Semakottai RF 3 km towards NW, Velangulam RF 6 km towards NE & Narumanam RF 2.5 km towards west) study area. There are no notified ecologically sensitive areas in the study area. Environmental Settings at Project Site are given in **Table-2**. Environmental Settings of the Study area (10Km radius from proposed Expansion Project Site) is given in **Table-3**. Google Map Showing the Existing & Proposed Expansion project is given in **Figure-1.** Topo Map Showing the Existing Units & Proposed Expansion project is given in **Figure-2.**

Table-2: Environmental Settings at Project Site

S.No.	Particulars	Details
1	Location:	
	Village	Mudanai, Kunankurichi and Uthangal
	Taluk (Mandal)	Vridhachalam
	District	Cuddalore
	State	Tamil Nadu
2	Latitude	$11^0$34' N to 11^0 35' N
3	Longitude	$79^0$26' E to 79^0 27' E
4	Elevation above mean sea level (MSL)	Height :+ 47m to + 57m MSL Switchyard Area : 55 m MSL Plant Area : 54 m MSL IDCT and WTP Area: 52 m MSL Ash Silo Area : 47 m MSL
5	Present land use at the proposed expansion project site	Present land use industrial 608 acres of land already acquired and is in possession of NLC is to be utilized for construction of proposed Thermal power plant.
6	Type of Land	Barren Land with shrubs
7	Settlements	Nil
8	Ecologically Sensitive Areas	Nil
9	Water bodies	Nil
10	Archaeologically important Monuments	Nil

S.No.	Particulars	Details
11	Abandoned building structures	Nil
12	Nature of soil	Red Loamy

Table-3: Environmental Settings of the Study area (10Km radius from proposed Expansion Project Site)

S.No.	Particulars	Details	
1	Location:		
	Village	Mudanai, Kunankurichi and Uthangal	
	Taluk (Mandal)	Vridhachalam	
	District	Cuddalore	
	State	Tamil Nadu	
2	Latitude	11^0 34' N to 11^0 35' N	
3	Longitude	79^0 26' E to 79^0 27' E	
4	Elevation above Mean Sea Level (MSL)	Height : + 47m to + 57m MSL Switchyard Area: 55 m MSL Plant Area : 54 m MSL IDCT and WTP Area : 52 m MSL Ash Silo Area : 47 m MSL	
5	Climatic conditions as per IMD (2015 – 2016)	Ambient Temperature	Annual Max. - 34.5°C Annual Min. - 24.4°C
		Relative Humidity	Annual Max. - 100% Annual Min. - 20%
		Rainfall	Annual Max. – 1950.3 mm Annual Min. – 1173.8 mm
		Predominant Wind Direction	**Site Specific:** March – May 2017 - SW
		Wind Speed at 8:30 hr.	Annual Max. – 4.0 Km/hr. Annual Min. – 3.1 Km/hr.
		Wind Speed at 17:30 hr.	Annual Max. – 4.5 Km/hr. Annual Min – 3.2 Km/hr.
6	Present land use at the proposed site	Barren land with shrubs	

<table>
<tr><td>7</td><td>Nearest Highway/Road</td><td colspan="3">NH – 532, ~1.5 km (S)</td></tr>
<tr><td>8</td><td>Defence installations</td><td colspan="3">None in 10km radius</td></tr>
<tr><td>9</td><td>Nearest railway station</td><td colspan="3">Uthangal Mangalam: ~1.5 km (NW)</td></tr>
<tr><td>10</td><td>Nearest airport/air strip</td><td colspan="3">Trichy : ~150 km (S)
Chennai : ~185 km (N)</td></tr>
<tr><td>11</td><td>Nearest Sea</td><td colspan="3">Cuddalore – ~45 km (E)</td></tr>
<tr><td>12</td><td>Nearest town</td><td colspan="3">Virudhachalam: ~15 km (W)</td></tr>
<tr><td>13</td><td>Nearest River</td><td colspan="3">Manimukta Nadi: ~7.5 Km (S)</td></tr>
<tr><td>14</td><td>Hills/Valleys</td><td colspan="3">None in 10km radius</td></tr>
<tr><td>15</td><td>Archaeologically important places</td><td colspan="3">None in 10km radius</td></tr>
<tr><td>16</td><td>Nearest place of Tourist/Religious importance</td><td colspan="3">None in 10km radius</td></tr>
<tr><td>17</td><td>Ecologically sensitive areas (National Parks/Wildlife sanctuaries/bio-sphere reserves)</td><td colspan="3">None in 10Km radius</td></tr>
<tr><td rowspan="4">18</td><td rowspan="4">Reserved/Protected forests within 10 km radius</td><td>Semakottai RF</td><td>~3 Km</td><td>North East</td></tr>
<tr><td>Semakottai RF</td><td>~3 Km</td><td>North West</td></tr>
<tr><td>Velangulam RF</td><td>~6 Km</td><td>North East</td></tr>
<tr><td>Narumanam RF</td><td>~2.5 Km</td><td>West</td></tr>
<tr><td>19</td><td>List of Major Polluting Industries</td><td colspan="3"><table>
<tr><th>S.No</th><th>Industires</th><th>Distance (≈ Km)</th><th>Direction</th></tr>
<tr><td>1</td><td>NLCIL Existing TPS-I</td><td>5.8</td><td>NE</td></tr>
<tr><td>2</td><td>NLCIL Existing TPS-I Expansion</td><td>6.4</td><td>NE</td></tr>
<tr><td>3</td><td>NLCIL Existing TPS-II & TPS-II 1st Expansion</td><td>0.9</td><td>E</td></tr>
<tr><td>4</td><td>NNTPP (under constructio n)</td><td>4.4</td><td>NE</td></tr>
<tr><td>5</td><td>NLCIL Existing Mine 1 & IA</td><td>5.5</td><td>E</td></tr>
<tr><td>6</td><td>NLCIL</td><td>1.3</td><td>S</td></tr>
</table></td></tr>
</table>

			Existing Mine - II		
		7	NLCIL Proposed Mine - III	8.8	S
		8	TAQA IPP	0.5	SW
20	Topography of the plant site	Flat terrain with little undulations towards North West			
21	Nature of Soil	Red loamy			

Figure-1: Google Map Showing the Existing & Proposed Expansion project

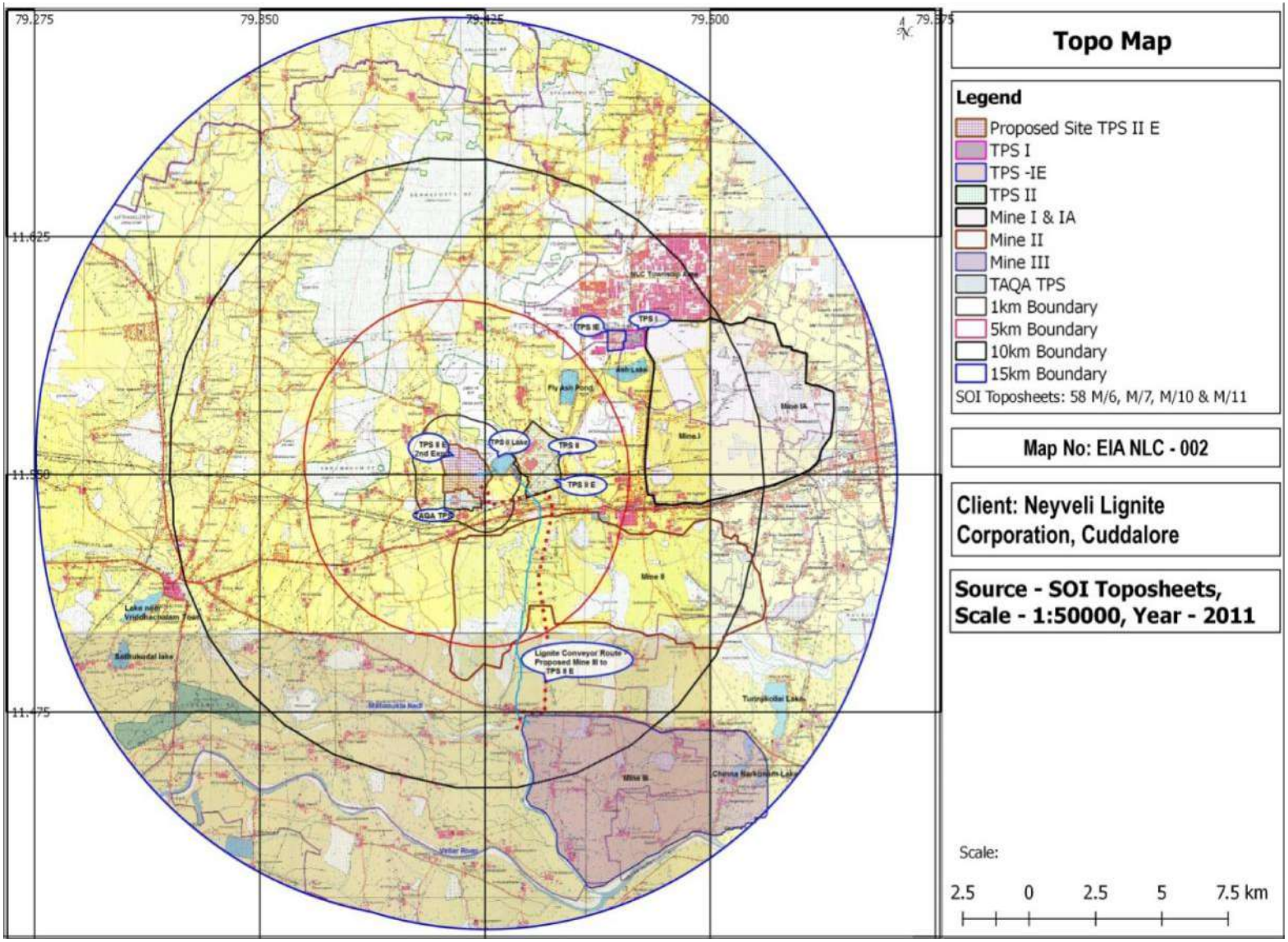

Figure-2: Toposheet view of the Proposed Project Site TPS – II 2nd Expansion

Existing Complex Site photographs	
Park in TPS-I Expansion	Substation in TPS-I Expansion
Cooling towers of TPS-I Expansion	Aerial view of the TPS
Proposed project Site photographs	
North side view of the proposed project site	West side view of the proposed project site
Aerial view of the poject site	Western side of the proposed project site & Eastern side of the Ash Dyke

Figure-3: Photographs of Existing Plants/Units and Proposed Expansion Project Site

2.0 OVERVIEW OF THE PROPOSED POWER PROJECT

2.1 Land Requirement

The Central Electricity Authority (CEA) has prescribed the land requirement for different configurations of 660 MW Supercritical Units. As per CEA guidelines the land requirement for 2 x 600 MW Supercritical – Lignite Based power project is 990 acres and NLCIL has optimized the land requirement to 608 Acres which is less than the stipulated land. The entire land of 608 Acres required for the project is in possession of NLCIL.

The land required for lignite transportation system, laying of pipeline, ROW, transmission lines etc., are in possession of NLCIL and there is no litigation.

The plant & associated facilities including green belt and ash disposal is proposed to be accommodated within 608 acres of land under possession of NLC India Limited. Land Use Breakup of the TPS-II Second Expansion is given in **Table-4**.

Table-4: Land Use Breakup of the TPS – II Second Expansion

S.No	Description	Area in Ha	Percentage (%)
1	Main Power Block & Auxiliaries	21.04	8.56
2	Switchyard	8.09	3.29
3	Raw Water Reservoir	14.16	5.76
4	Water Facilities, Cooling Tower etc.	26.30	10.70
5	Ash Dump Area (Existing)	28.32	11.52
6	Miscellaneous Non-plant buildings, roads etc.	37	15.05
7	Lay down and preassembly area	46.13	18.77
8	Green Belt	64.74	26.34
Total		**245.78**	**100**

Note: 1. The proposed expansion project area is 245.78 Ha i.e 608 Acres and proposed green belt area is 160 Acres i.e. 26.34 % of total project area. (i.e 37% of main plant area).

2. Over and above NLCIL proposes to implement Green Belt as to the extent possible in all the available vacant spaces.

I. Analysis of Site Considered

The Present project site near village Mudanai adjoining the TPS-II was selected by the site selection team of NLCIL for development of 2x660 MW Supercritical Lignite Based Thermal Power Plant after examining the availability of following facilities:

1. Availability of suitable & adequate land
2. Availability of reliable source of water
3. Availability of road and railway access
4. Environmental aspects
5. Availability of infrastructural facilities
6. Conformity to Siting Criteria of MoEF&CC

As it is an expansion project (Brown Field) the available land in the vicinity of Thermal Power Station- II having the above positive features has been selected for locating the project.

2.2 Water Requirement

The source of raw water for the Proposed Thermal Power Station – II Second Expansion Project (2X660 MW Supercritical - Lignite Based) NLC shall be the water pumped out during mining operations from the lignite mines of NLCIL. Fresh water requirement is worked out to be 3299 m^3/hr.

Water Requirement:

S.No	Description	KLD	m^3/hr	* As per MoEF&CC Requirements
1	Total water requirement	101160	4215	-
2	Fresh water requirement	79176	3299	2.49 m^3/MWh
3	Recycled water	21984	916	-

Note: 1. * As per MoEF&CC Notification S.O. 3305(E) dated: 7/12/2015 (water consumption upto maximum of 2.5 m^3/MWh and achieve zero waste water discharged).

2. The water requirement for FGD system indicated in the water balance diagram is indicative and subject to revision once the MoEF&CC Draft notification S.O. 3337(E). Item no 2.III, dated 16.10.2017 comes into force; we may consider 3m^3/MWh and rework the water balance accordingly.

Total Water Requirement = 4215 m^3/hr

Total Effluent generated = 1379 m^3/hr

Total Sewage generated = 2.5 m^3/hr

Total Recycled Water = 1379 m^3/hr (816 m^3/hr for cooling tower make up, 100 m^3/hr for service water make up & 463 m^3/hr for ash handling systems)

Total Fresh Water Requirement = 3299 m^3/hr

2.3 Fuel requirement

The primary fuel for the proposed project is Lignite from NLCIL's basket of mines including mine – III allocated by Ministry of Coal. The lignite requirement for 2x660 MW has been assessed as 8.09 Million Tons for 100% Lignite fuel every year at PLF 80 %. As per test reports the maximum ash content of lignite is 9.9 %. Lignite will be received and transported by suitable conveyor system to the project site.

2.4 Power Requirement

Power and energy requirement details are given in **Table-5.**

Table: 5 Power and Energy Requirement

Details	Proposed	Source
Power Evacuation	400 kV	Through PGCIL network
	230 kV	ThroughTANTRANSCO lines
Emergency power supply	3 x 1750 kVA	DG sets
Boiler	2 x 1930 TPH	-
HSD for DG	200 lt/hr	IOCL
Fuel consumption for boiler (Lignite)	27720 TPD	Basket of Mines including proposed Mine III

As per CERC norms, the auxiliary power requirement of a lignite based thermal power plant having natural draft cooling towers with FGD is considered as 6.85% of the generated power i.e. about 90.42 MW (106.38 MVA at an average power factor of 0.85).

2.3 Man Power

The estimated manpower shall be about 850 nos. during construction phase and about 1000 nos. during the operation stage including contract workmen.

2.4 Project cost

Cost of Project Rs. 8733.49 Crore including IDC (Interest During Construction)

Cost per MW Rs. 6.62 Crore

2.5 Process description

The proposed 2x660 MW 2nd expansion of the thermal power station - II will be developed in an area of 608 acres with an estimated budget of Rs. 9240 Cr (including IDC). NLCIL has planned to install Supercritical (SC) pulverised fuel combustion technology for the proposed project, targeting best possible eco-friendly technology which gives higher efficiency (hence minimum Lignite consumption) and reduced emissions. The proposed power plant is categorized with high steam pressure which is a well proven technology in Europe and Japan. In addition to this Selective catalyst reactor, Flue Gas Desulphurization, and Electro-static Precipitator are also equipped as pollution control devices. We are proposing to setup stack height 275 m as per Environmental Standards CPCB and MoEF&CC, July 2000 (Pollution Control Law Series: PCLS/4/2000-2001).

However as per **Draft** Notification No. S.O. 3337(E) dated 16.10.2017, the height of stack required shall be about 150 m. TPS will go for 150 m provided the appropriate technology namely Selective catalyst reactor, Flue Gas Desulphurization and Electro-static Precipitator will be implemented on issual of official order by MoEF&CC.

Table-6: Overview of the Project

1.	Project	:	Thermal Power Station – II Second Expansion Project (2x660 MW Supercritical Lignite Based)
2.	Promoters	:	NLC India Limited
3.	Plant Capacity	:	1320 MW
4.	Plant Configuration	:	2X660 MW Supercitical Lignite Based Thermal Project
5.	Nearest habitation / Village	:	Mudanai; Village, Cuddalore, Tamilnadu

6.	Geographical Location	:	Latitude: $11^0$32'39" N to $11^0$33'35" N
		:	Longitude: $79^0$24'35" E to 79^0 25'25" E
7.	Nearest Town	:	Virudhachalam: 10 km (South West)
8.	Nearest National Highway	:	NH 532: 1.5 km adjacent to the project site (South)
9.	Nearest Railway Station	:	• Uthangal Mangalam: .1.5 m (South) ii. Neyveli: 6 km (South East)
10.	Nearest Airports	:	a. Trichy: 120 km (South West) b. Chennai International Airport: 185 km (North East)
11.	Nearest Sea Port	:	Cuddalore: 43 km (North East)
12.	Site Elevation	:	Height : + 47m to + 57m MSL Switchyard Area : 55 m MSL Plant Area : 54 m MSL IDCT and WTP Area: 52 m MSL Ash Silo Area : 47 m MSL
13.	Seismic Zone	:	Zone II as per IS:1893 – 2002
14.	Source of Water	:	Mine water from NLCIL Mines
15.	Water Requirement	:	Total water requirement = 4215 m^3/hr Fresh water requirement = 3299 m^3/hr
16.	Plant Cooling System	:	Closed cycle cooling system using Natural Draft Cooling Tower.
17.	Primary Fuel & Source	:	Lignite will be sourced from NLCIL Basket of Mines including Mine III
18.	Support Fuel & Source	:	HFO / LDO from nearest refinery /oil depots.
19.	Lignite Fuel GCV	:	2720 Kcal/Kg
20.	Lignite Fuel Requirement (At 80% PLF)	:	8.09 Million TPA

21.	Support fuel (HFO) at 80% PLF	:	20556.8 KL PA
22.	Transportation:		
	i. Lignite fuel	:	Lignite will be transported from NLC's mines by pipe / belt conveyor systems
	ii. Support fuel	:	Support fuel transportation by Road Tankers
23.	Meteorological Data (2015-16)		
a.	Ambient Temperature		
	Annual Maximum (Mean)	:	34.5°C
	Annual Minimum (Mean)	:	24.4°C
b.	Relative Humidity		
	Maximum (Annually)	:	100%
	Minimum (Annually)	:	20%
c.	Rainfall		
	Maximum per Annum	:	1950.3 mm (2015)
	Minimum per Annum	:	1173.8 mm
d.	Predominant Wind Direction Site Specific (March – May 2017)	:	South West
e.	Wind Speed (at 8:30 hr.)		
	Maximum (Annually)	:	4.0 Km/hr. (2014)
	Minimum (Annually) (At 14:30 hr.)	:	3.1 Km/hr. (2016)
	Maximum (Annually)	:	4.5 Km/hr. (2014)

	Minimum (Annually)	:	3.2 Km/hr. (2016)
24.	Steam Generator	:	The SG would be of drumless type, single pass design, radiant, single reheat, balanced draft, semi-outdoor tower type suitable for outdoor installation designed for firing Lignite as main fuel.
25.	Steam Turbine Generator	:	The steam turbine shall be tandem compound, single reheat, regenerative, condensing (Single Pressure or Dual Pressure), multi cylinder design unit directly coupled to AC Generator giving a continuous rated output at generator terminals.
26.	Control System	:	Distributed Digital Control & Management Information System
27.	Chimney	:	One (1) no. of Twin Flue individual stacks in common RCC Stack of 275 meter high.
28.	Power Evacuation	:	400 kV through PGCIL / 230 KV through TANTRANSCO
29.	Project Completion Schedule	:	50 months for the first unit & 56 months for the second unit.
30.	Land Requirement	:	608 Acres

3.0 DESCRIPTION OF THE ENVIRONMENT

Site elevation: The project area (10 km radius) exhibits plain terrain. There are four reserved forest within 10 km radius from the project site boundary. The present land use at the proposed site is industrial, i.e., 608 Acres of land acquired and in possession of NLCIL is to be utilised for construction of the TPS. The average elevation of the proposed power plant project site falls between 47 m to 57 m (MSL). The project site falls under industrial use with highly undulating terrain. The project site is sloping from south-east to North west side. Manimaguda Nadi River is located at about 7.5km from the project site boundary.

3.1 Meteorological data

The area experiences a Annual mean maximum and minimum temperature of 34.5 Deg C in summer and 24.4 Deg C in winter respectively. The mean wind speed in the area is in the order of 4.5 m/sec to 3.1 m/sec. The wind blows predominantly in the south West direction site specific (March- May 2017).

3.2 Ambient Air Quality

NLCIL operating Thermal Units & Lignite Mining Units & TAQA IPP are the industries in the study area. Ambient air quality was monitored twice in a week for One (01) season (shall cover 12 weeks), i.e. during Pre-Monsoon season (March - May, 2017). PM_{10}, $PM_{2.5}$, SO_2, NO_x, Pb, NH_3, C_6H_6, $C_{20}H_{12}$, As, Ni, were monitored on 24 hourly basis and O_3 and CO were monitored on eight hourly basis. Sampling was carried out as per Central Pollution Control Board (CPCB) monitoring guidelines at each location. All values were found within the stipulated norms of NAAQ Standards.

The measured ambient air quality in the study area during May to May 2017 shows that the PM_{10} concentration varies from 44.4 to 95.3 µg/m^3 as against the stipulated limit of 100 µg/m^3. $PM_{2.5}$ concentration varies from 15.0 to 44.6 µg/m^{3}as against the stipulated level of 60 µg/m^3. Average SO_2 and NO_x concentration in the study area was reported to be in the range of 5 to 17.8 µg/m^3 and 9.8 µg/m^3 to 28.4 µg/m^3 respectively. It is inferred from the measured baseline data that all the stipulated pollutants are well within the limits suggested under National Ambient Air Quality Norms (NAAQs).

3.3 Noise Levels in the study area

Average day time and night time noise levels at residential areas in the study area was found to be varying from 44.9 to 54.9 dB (A) and 38.9 dB(A) to 49.6 dB(A) respectively. Significant interference from local community activities and also vehicular traffic was observed.

3.4 Water Environment

Cuddalore district is endowed with the following five river basins Cauvery- Coleroon river basin, Vellar river basin, Manimuthar river basin, Pennaiyar river basin & Gadilam river basin. To establish the baseline status of water environment, representative sampling locations for surface water within a radial distance of 10Km from project site have been selected as per CPCB guidelines of Water Quality Monitoring through an adequate survey of the project area. The prevailing status of surface water quality at Five (05) sampling locations have been assessed during the study period.

The standard methods prescribed in IS: 10500 (2012) for drinking water were followed for sample collection, preservation and analysis in the laboratory for various physiochemical parameters.

The pH of surface water sample is found to be in the range of 7.84 to 8.61. TDS varies in the range of 500 mg/l to 999 mg/l. The Heavy metals concentrations are found to be below detectable levels.

The pH of ground water sample is found to be in the range of 7.4 to 8.44, TDS varies in the range of 191 to 1747 mg/l. The chloride content in the ground water for study area is ranges between 42.8 mg/l – 325 mg/l and The Total hardness ranges is between 66 mg/l - 835 mg/l.

3.5 Soil Environment

In order to assess the quality of soil at different locations in the study area, various land use categories were taken into account. Soil sampling was carried out at Ten (10) locations in the study area.

The pH of the soil samples ranged from 6.67 – 7.93, Conductivity of the soil samples ranged from 244 - 533 µS/cm. As the EC value is less than 2000 µS/cm, the soil is found to be non-saline in nature, The water holding capacity of the soil samples varied from 20.3 – 28.5 (%), Nitrogen content ranged from 213 kg/ha to 628 kg/Ha, The Organic content ranged from 0.37% to 1.46 %, Phosporous content ranged from 36 kg/ha to 247kg/Ha, Potassium content ranged from 185 kg/ha to 504 kg/Ha. It has been observed that the texture of the soil is clay. The common color of soil vaired from reddish brown/ Yellowish brown at most of the locations.

3.6 Ecological Environment

There is no notified/protected ecologically sensitive area including national park, sanctuary, Elephant/Tiger reserves existing in the study area. The study area comprises of terrestrial and aquatic ecosystem. Predicted impacts are given below:

- Changes in activity pattern of terrestrial fauna due to Noise
- Loss of vegetation due to access cutting and site preparation
- Accidental discharge of wastewater may create impact on aquatic ecology if not handled properly.

The predicted impacts on the surrounding ecology during construction phase are not very significant.

b) Mitigation Measures

- Green belt development using native species will provide habitat and food to the birds and small animals.
- NLCIL will avoid noise producing construction activities at night and also unnecessary lighting at night to avoid any effect on avifauna.

3.6 Socioeconomic conditions

Cumulative population in the study area of 10 km radius is about 2.5 Lakhs with a population density of about 900 persons/Sq.km. According to the census records of 2011, about 40% population in the study area falls under Below Poverty Line (BPL) category. The higher rate of Agriculture with respect to study area shows the majority of the people are depended on agriculture for their livelihood.

4.0 Anticipated Environmental Impacts

4.1 Air Environment

Base line data reveals that ambient air quality in the study area for the Parameters PM_{10}, $PM_{2.5}$ SO_2 & NO_2, including 12 parameters are well within the permissible Limits as prescribed by the National Ambient Air Quality Standards (NAAQS) for Industrial Area, Residential, Rural & Other areas.

The major air pollution sources from the proposed power plant are from lignite fired boilers. The boiler sources are provided with stacks of adequate height so as to disperse the emanating flue gases containing particulate matters, oxides of sulphur and nitrogen without affecting the Ground Level Concentrations (GLCs).

4.2 Noise Environment

Baseline study showed that the noise levels were within the CPCB standards at industrial sites. The designed equipment with noise levels not exceeding beyond the requirements of Occupational Health and Safety Administration Standard will be employed. The field observations during the study period indicate that the ambient noise levels were slightly exceeded the prescribed standards of MoEF&CC.

4.3 Land Use

The present land use of the study area falls under Habitat, agriculture and undeveloped or Industrial use. After proposed expansion construction, land use will categorized as industrial use.

5.0 ENVIRONMENTAL MANAGEMENT PLAN

The proposed project is an environmental friendly facility with a reduced carbon foot print and water footprint when compared with conventional power plants that are currently in operation. The following environmental management plan will be adopted at design and operational phases of the proposed project. Cost proposed for Environmental Management Plan is Rs. 1123.71 Crores.

5.1 Air pollution Control Measures

Construction Phase:

The movement of equipment at site, dust emitted during the leveling, grading, earthworks, foundation works, vehicle movement on unpaved roads and other construction related activities, exhaust emissions from diesel generators, vehicles and other heavy construction equipment deployed at site will be the main sources of air pollution during the construction period. Due to the short duration of the planned action, any impacts on ambient air quality during construction activities are expected to be short term.

Mitigation Measures

- Transport vehicles and construction equipment / machineries will be properly maintained to reduce air emissions. Equipment will be periodically checked for pollutant emissions against stipulated norms. Exhaust vent of DG set will be kept at proper height to ensure quick dispersion of gaseous emissions. Sprinkling of water on roads and construction site, sufficient vegetation are some of the measures that would greatly reduce the impacts during the construction phase.
- Implementing proper upkeep and maintenance of vehicles, Pollution underControl (PUC) certified vehicles will be used for transporting machinery.
- The activities such as foundation & infrastructure construction, plant erection will produce periodic noise during construction phase. D.G set to be used during

construction phase shall be provided with acoustic enclosures. Where applicable, hearing protection shall be provided to the workers and their use by workers shall be enforced by contractors as well as site management. In the event construction noise levels at the facility boundary exceed the industrial limit of 70 dB(A), temporary noise barriers would be installed to minimize the overall noise related impacts on the neighbouring areas due to construction activities.

Operational Phase:

Table-7: Air Pollution Control Measures

Air Pollution Source	Proposed	Fuel Quantity	No of Stacks	Chimney height (in mts) & air pollution control system provided proposed
DG	3 x 1750 kVA	HSD 200 lt/hr	3	30 m height from ground level as per TNPCB/CPCB norms
Boiler	2 x 1930 TPH	Lignite 27720 TPD	1	APC provided are ESP, FGD and DENOX system, and the emission of PM,SO_2,NO_X are estimated to be less than, PM 30 mg/NM^3, 100 mg/NM^3& 100 mg/NM^3 respectively, in view of the provision FGD & DENOX system emission, MoEF & CC come out draft notification (no) for reduce the stack height..

- FGD system will be installed in flue gas duct to the chimney as per latest environmental stipulation. The design and layout of steam generator and its auxiliaries will take into account wet flue gas desulphurization system, taking suction from duct after ID fan and feeding the de-sulphurised flue gases back to the chimney with provision for bypassing the FGD system during start up of unit.
- SC [attached with the above emission capture equipment] is probably the best available 'Clean coal technology', because it reduces the amount of fuel (lignite) fired per unit of (kg/kwhr) Power generation, moreover, the emission produced by 'Combustion of fuel' is also Neutralized / captured / restricted before leaving chimney below statutory limits.
- DeNOx technology – Selective Catalytic reduction technology will be installed in the boiler to meet latest NOx emission norm.

- After commissioning NNTPP 2 x 500 MW, the Proponent plans to phase out the existing 600 MW Thermal Power Station-I. (Letter sent to CPCB Lr No. 002/GM/TPS-I/CPCB/2018 dated 10/02/2018 is enclosed as **Annexure 20**)
- Proponent plans to install FGD in TPS-I expansion and TPS-II.

5.2 Water and Waste water Management

Construction Phase:

The wash water from construction equipment maintenance centre will contribute to oil and grease concentration so oil and grease trap at standby DG set site will be provided. As far as possible, the unskilled work-force will be sourced from the local areas. Since most of the construction work force will consist of floating population, the demand for water and sanitation facilities will be low and it will be managed by NLCIL.The wastewater from temporary labor colony will contribute to BOD concentrations. Wastewater fro m the temporary labor colony and equipment washing if not treated properly might damage the water quality in the nearby water bodies. NLCIL will undertake proper mitigation measures to ensure nearby surface water bodies are not polluted. The overall impact on water environment during construction phase is likely to be short term and insignificant.

The ground water will not be used during construction phase. The entire water requirement for construction will be met from NLC Mine and TPS-II Reservoir and hence impacts are not envisaged on the quantity of groundwater. The wastewater from the construction site may find its way to groundwater and pollute the same.

Mitigation Measures

- Oil and grease trap at standby DG set site will be provided
- As far as possible, the unskilled work-force will be sourced from the local areas. Packaged Sewage Treatment Plant (STP)/septic tanks to treat sewage attemporary construction workers' shall be provided
- Temporary sanitation facilities (soak pits/septic tanks/ Bio Toilets) will be set up to prevent contamination.
- Since most of the construction work force will consist of floating population, the demand for water and sanitation facilities will be low and it will bemanaged by NLCIL.

Operational Phase:

The waste water treatment system shall be designed to collect wastewater from all sources in the power plant and provide treatment to enable it to be reused in the power plant to acheve Zero Liquid Discharge (ZLD).

The lant effluent is as follows

a. Blow down from closed cycle C.W. system
b. Plant drains
c. Oily waste
d. DM plant waste

The CW blow down and DM waste shall be treated in pre-filter, Ultra filtration and RO plant in order to make it suitable for reuse in CW system make up all other effluent shall be pumped to central monitoring basins.

Chemical dosing system & othe utilities for treatment & reuse of those treated effluent in the ash handlind system shall be provided, necessary instruments shall also be provded for monitoring the quality of treated effluents.

CTBD waste will be treated in Pre-filter, ultra-filtration & reverse osmosis (RO) in order to make it suitable for CW make-up.

The effluent generation will be 1379 m^3/hr, Recycled water is 1379 m^3/hr (916 m^3/hr used for cooling water makeup and 463 m^3/hr used for ash handling systems). The sewage generation will be 2.5 m^3/hr after treated in STP will be used for green belt development.

The sewage will flow from the manholes to the nearest collection chambers by gravity. The collected sewage in the collection chambers will flow through sewer lines and flow to the common collection sump. From the common collection sump, the sewage will be pumped to the equalization tank located in the STP Area. The Sewage Treatment Plant will be designed as per guidelines of CPHEEO Manual. The anticipated no. of users will be 1500 persons. The sewage treatment plant will be designed to handle a flow of 60 KLD considering average per capita consumption of 45LPCD with 80% of used water generated as sewage.

5.3 Hazardous and Solid Waste

The source of municipal waste in the industry & Township will be from the domestic use. The

municipal solid waste (organic waste from canteen & township) generate 450 kg/day. The total manpower is 1000 nos during operational phase including contract workmen.

Table 8: Municipal Solid waste

Type of waste	Quantity Kg/day	Collection method	Disposal method
Organic waste from canteen and Towinship	450	Bins	Composting for horticulture use
STP sludge	5-10 kg/day	Sludge drying beds	Horticulture use

Table 9: Hazardous waste

Waste category	Hazardous waste Generated	Quantity (tones)	Disposal
5.1	Used oil	175 TPA	Collected in Leak proof containers and disposed only to TNPCB registered authorized reprocessors provided the oil meets the standards as per schedule-5 part-A of the rules
35.3	Sludge from ETP	0.3 TPM	Stored in a secured manner and hand over to TNPCB authorized TSDF

5.3.1 Hazardous waste Management

The hazardous materials used during the construction may include diesel and paints. Construction sites handle small quantities of lube oils and diesel for running the machine powered construction equipment. In case of spill of these materials, the soil quality can get deteriorated and also in case of hazardous waste finding its way to the water ways may pollute the surface and groundwater of the nearby areas.

In order to avoid soil contamination due to accidental spills, it has been recommended to provide spill absorbing material at the construction site and the contaminated soil should be excavated and these materials shall be stored and disposed of to hazardous waste disposal sites according to the guide lines specified. The Hazardous waste - spent oil from rotating equipment will be disposed to authorised recyclers and oil soaked cotton waste and will be disposed through cement industries.

5.3.2 Solid Waste Management (Fly ash disposal)

Fly ash utilization level as per latest MoEF&CC Notification is given in **Table 7**

Table-7: Fly Ash Utilization Level

Sl. No.	Fly ash utilization level	Target date
1	At least 50% of fly ash generation	1 year from the date of commissioning
2	At least 70% of fly ash generation	2 years from the date of commissioning
3	90% of fly ash generation	3 years from the date of commissioning
4	100% of fly ash generation	4 years from the date of commissioning

The unutilized fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for these years and the balance unutilized fly target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

In order to meet the above ash utilization requirement the following schemes/measures shall be adopted.

a. The proposed expansion project is located in the vicinity of many cement plants and ash bricks manufacturing units. The ash management scheme for the ash generated from power plant will involve dry collection of fly ash, supply of ash to entrepreneurs for utilization, promoting ash utilization and disposal of un-used ash.

The ash generation is 0.405 Million TPA
The fly ash generation is 0.32 Million TPA and
The bottom ash generation is 0.081 Million TPA

b. The bottom ash generation from the project shall be issued to user industries and balance bottom ash and fly ash during emergency shall be pumped to emergency ash dyke/mine void filling.

c. The ash content in the lignite is very low and entire fly ash from existing units at Neyveli is consumed by user industries. NLCIL has obtained consent letter from cement manufactures namely Ramco cements Ariyalur, Dalmia Bharat Limited, Dalmiapuram & India Cements, Ariyalur for off take of the fly ash generated from the proposed project. Hence 100 % utilization of fly ash is envisaged.

Gypsum Disposal:

Approximately 11.88 T/day of gypsum is expected to be generated per day from FGD. Based on the marketability, the gypsum generated will be marketed or disposed to cement plant or used for back filling in the mines. The gypsum generated from the Thermal Power Plant FGD process may not warrant as per Hazardous and other wastes (Management and Transboundary Movement) Rules 2016, Notification No. G.S.R No. 395 (E) dated: 04.04.2016 since it is not from chemical plant source and hence may be considered as non-hazardous.

5.4 Noise Environment

The prevailing ambient noise level at a particular location is nothing but the resultant (total) of all kinds of noise sources existing at various distances around that location. The ambient noise level at a location varies continuously depending on the type of surrounding activities. Ambient noise levels have been established by monitoring noise levels at Ten (10) locations in and around 10Km distance from project area during March - May, 2017 using precision noise level meter. Acoustic enclosures will be provided to the D.G sets being used during construction phase to reduce the noise.

5.5 Environmental Monitoring Program

A monitoring schedule with respect to Ambient Air Quality, Water & Wastewater Quality, Noise Quality as per TNPCB & CPCB shall be maintained.

6.0 Risk Analysis

Hazard Identification and Risk Analysis including identification, screening of scenarios, and consequence analysis of the various risk scenarios. Risk Assessment has done with respect to the Raw materials, Processes, Solvent & neighbouring villages.

6.1 Methodology

The Methodology adopted for Risk Assessment by using the software PHAST examines the progress of potential incident from the initial release to far –field dispersion including modelling of pool spreading and evaporation, flammable and toxic effects where individual risks are to be identified and also PHAST software.

The scope of the study mainly involves:

- Identifications of Hazards
- Consequence modelling
- Flammable area of Vapor cloud explosion modelling
- Jet Fire analysis
- Toxic area of vapour cloud analysis
- Blast area of vapour cloud explosion
- Impact limits identifications and contour mapping of the risk on the layouts.
- Mitigating measures for handling and storage to reduce impacts & prevent incidents.

6.2 Risk Control Measures

- Pressure safety valves for storage tanks
- Pressure alarm high and pressure alarm low for storage tanks
- Level indicators with monitoring from control for storage tanks
- Level transmitter, Level gauge and Temperature indicators for the storage tanks
- Fire protection arrangements in the form of Fire Hydrants and Monitors for the storage tanks.
- Emergency Handling checklist and procedure.

7.0 Disaster Management Plan

The salient features of Disaster Management Plan include

- Emergency shutdown procedure
- Electrical Power Failure & Key Utility failures
- Fire protection system
- Emergency safety equipment & Reporting and response to emergency
- Emergency Help from nearby industries and tie up with nearby industries
- Emergency Control Room - is the focal point in case of an emergency from where the

- operations to handle the emergency are directed and coordinated. It will be equipped with Internal and P & T telephones, Paging system and Emergency siren.

7.1 On-Site Emergency Plan

- To provide effective planning, communication and to ensure discipline while mitigating identified emergencies at the earliest utilizing available resources, safety gadgets and systems.
- Synchronized action from all the internal and external agencies at the earliest to initiate corrective and preventive action.
- To minimize the human injury and illness during emergency mitigation, priority is given to rescue of incident victim/s, rendering them first aid onsite and if required providing further medical services at the earliest, which is available nearest to our plant (health city).
- To minimize damage to property, general environment or work environment.
- To effectively refer and utilize this revised onsite emergency plan while conducting on site emergency and preparedness response drills and also during real emergencies.
- To identify any deviations during above drills and real situations to ensure any identified and recorded observations for continual corrective actions and preventive actions.

7.2 Off-Site Emergency Plan

The Off-site Emergency Plan, which is the responsibility of the District Emergency Authority, deals with measures to prevent and control emergencies affecting the public and the environment. The management developed contingency plan as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and other applicable regulations, in association with District Emergency Authority. A yearly mock drill of district offsite emergency plan is essential and mandated as per National Disaster Management Guideline.

SOPs has implemented for rescues teams and regarding the wearing of full protective gear before entering the hazardous zone and cordoning off the disaster site are required. This plan considers the possible effects of incidents from any industry on the neighbouring population and the remedial measures.

- Inventory of hazardous chemicals if any
- MSDS of such chemicals

- Types of emergencies
- Nature, extent and likely effects of such incidents
- Risk and Environmental Impact Assessment

The District Emergency Authority, based on severity of any emergency in distribution network will declare off-site emergency.

7.3 Benefits of the Proposed Project

- Since, power is the wheel for any of the development, to meet the growing demand, surrounding villages, region& Southern States would get maximum benefits out of generated electricity. The benefits may be realized either as upcoming of industries and its allied ancillary units.
- The project is expected to generate around ten million units of electricity per year which will meet the growing energy deficit in the State and will have a tremendous positive impact on enhancement in the economy of the Country.
- There will also be a probable increase in the infrastructure resources due to the project in the region by the way of transport, communication, health facilities and other basic facilities to be created.
- Other benefits would be generation of either direct or indirect employment to the locals and improved socio-economic conditions of the people.
- As a apart of the Corporate Social Responsibility (CSR) initiatives, it is envisaged to create various infrastructure facilities in the form of drinking water, health care, roads, education, skill development etc. which will be beneficial to the local people living in the region improving their standard of living.

8.0 Conclusion

The baseline study carried out for the study area indicates that all the physical, chemical and biological characteristics of the environmental attributes in the surrounding area are well within the permissible limits.

Based on this environmental assessment, the possible impacts during both pre-project and post-project phases are anticipated and the necessary Environmental Management Plan has been formulated to address the impacts.

The project positively leads to commercial business opportunities, Employment opportunities, increased revenue and infrastructural development.

Thus, it can be concluded that with the judicious and proper implementation of the pollution control and mitigation measures, the proposed project can proceed without any significant negative impacts on the environment.

CHAPTER – 4

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Chapter 4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 General

To meet the growing demand of electricity, NLCIL has planned for TPS – II Second Expansion Project (2x660 MW Supercritical - Lignite Based) at Mudanai, Kunankurichi & Uthangal Villages, Virdhachalam Taluk, Cuddalore District, Tamilnadu State, Inida. It is worthwhile mentioning that the proposed power plant would be the first lignite fired 660 MW Supercritical Unit in India.

Environmental Impact is any change in the environmental attributes, adverse or beneficial, caused or induced by the proposed action or set of actions. The predicted adverse impacts during each stage of project development are super imposed over the baseline status of the existing environmental quality to infer the scenario of environmental conditions in the post-project stage. The main purpose of identifying the impacts is that it helps in adopting appropriate mitigation measures for the adverse consequences if any.

It also addresses the prediction and evaluation of the various significant impacts that are likely to occur. The impacts on the environmental indices viz. air, water, soil, noise, biological and socioeconomic conditions are scrutinized methodically and assessed during construction and operation phase. The various on impacts that could be triggered on the environmental attributes by the activities of the proposed project are discussed below.

4.2 Identification of Likely Impacts

Every activity and operation has either adverse or beneficial impacts on environment. The environmental impact identification has been done based on proposed project activities. All the activities from construction phase to operational phases of the project and its impacts have been broadly covered, which is given in **Table 4-1** & **Table 4-2.**

Table 4-1 Activity-Impact Identification Matrix for Construction Phase of the Proposed Project

S.No	Main Activities	Sub-Activities	Land use	Landscape	Land/soil Environmental	Surface/ground water resoureces	Water quality	Air Quality	Solid waste generation	Ambient noise level	Traffic and Transport density	Resource use (energy)	Ecology	Social economic	Culture/Hertiage	Agriculture in the surroundings
1	**Site Preparation**	Site Clearing & Cleaning Ground leveling Waste handling and its transportation Soil Compaction	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			
2	**Labour Deployment camp siting**	Construction of labour sheds to accommodate labour, supply of water, supply of fuel/energy, waste handling & its disposal sewage disposal		✓	✓	✓	✓	✓	✓			✓		✓	✓	
3	**Excavation**	Moving of Heavy Machinery Soil Extraction and Stacking, Soil Loading and Transportation For Disposal, Various Tools Like Crow Bar Foundations for heavy machinery installation Construction Power through onsite Diesel Generators			✓			✓	✓	✓	✓	✓				✓
4	**Material Handling & storage**	Transportation and Unloading of material from trucks Storage & Handling of steel sheets, metals, Fabricated structure, Cement, Concrete, Bricks, Steel etc. Conveyance of material within the project site			✓		✓	✓		✓	✓	✓		✓		
5	**Plant Building Construction**	Transportation of material to construction site Preparation/ Mixing of construction material Supply of water Operation of construction machinery (like cranes, Concrete Mix Plant, Floor Developer, Forklift etc.). Handling and disposal of construction wastes Diesel Generator Operation		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	

6	**Erection of sheds, installation of machinery building fittings & furnishing**	Erection of sheds – welding/ cutting onsite, Installation of heavy machinery, pumps, Mechanical installation and sand blasting, Electrical installation Drilling and Fixing, Painting/ White washes Disposal of Wastes (empty paint cans, containers, electrical waste, wooden and metal waste etc.)						✓	✓	✓		✓				
7	**Demobilization of Construction Equipment**	Dismantling of temporary support construction structures/ Equipments, Removal of construction machinery Transportation of Construction/ Dismantled waste Site cleaning/ washings			✓			✓	✓	✓	✓					
8	**Site Commissioning**	Trials functioning of Production & Warehousing units, Conveying and packing system, Plumbic fixtures, Electrical gadgets, Fire fighting system, Effluent Treatment plant, etc.,				✓	✓	✓	✓					✓		

Table 4-2 Activity – Impact Identification Matrix for Operation Phase of the Proposed Project

S.No	Main Activities	Sub-Activities	Air Quality	Water Quality	Surface water resources	Ground water resources	Land and soil quality	Noise Quality	Traffic volume	Ecological	Socio economic aspects
1	**Transportation of Lignite& Fuels**	Lignite will be transported from NLC's mines by pipe / belt conveyor systems & Support fuel transportation by Road Tankers	✓				✓	✓	✓		
2	**Point Source and AssociatedEnvironmental Impacts**	Emission generated from stack	✓							✓	✓
3	**Fugitive emission**	Fugitive emissions are envisaged from handling and storage of Lignite in the stock yard, fly ash handling systems and transfer operations	✓				✓			✓	✓
4	**Noise emission**	Generation of noise from boiler section areas, Loading & Unloading areas, Machineries and Vehicle Movement						✓	✓		
5	**Utilization of Water resources**	Ground water and storm water to be sourced from NLCIL Mine through TPS-II to Reservoir.		✓	✓	✓					
6	**Wastewater generation**	Generation, Treatment and Disposal of effluent		✓	✓	✓				✓	✓
7	**Fly ash generation from Boiler**	Fly ash generation and disposal and transportation	✓	✓	✓	✓	✓		✓		✓
8	**Occupational Health**	Effects on human health in the plant and nearby area due to plant operations									✓

4.3 Impacts and Mitigation Measures during Construction Phase

Most of the construction phase activities would exhibit reversible and short term impacts which can be readily controlled and mitigated through robust and scientifically designed construction work-method procedures as per the best engineering and management practices.

4.3.1 Land Use

a) Predicted Impacts on land Use

The site is almost plain land. The altitude above mean sea level is 47 to 57 M. The land required of the project is owned NLCIL, hence there is no Resettlement and Rehabilitation (R&R) issues. The land use of the existing area is already under industrial use. The site will have minor impact is anticipated on the existing drainage pattern in the project area and proper drainage in the adjoining area will be developed without disturbing the existing drain. As the land is not rocky, no blasting is envisaged. Apart from localized construction impacts at the plant site, no significant adverse impacts on soil in the surrounding area are anticipated.

b) Mitigation Measures

To avoid any adverse impacts on the project,

- Construction debris will be removed continuously from the site
- Construction debris will be stored at a designated area to ensure they do not find their way to water bodies.
- The topsoil removed during construction phase shall be stored separately to be used afterwards for green belt development and leveling of site.
- The planning shall be in accordance with the standard landscape planning concepts adequate provision for green areas.
- On completion of works all temporary structures, surplus materials and wastes will be completely removed Optimization of land requirement through proper site lay out design will be basic criteria at the design phase.

4.3.2 Soil Quality

a) Predicted Impacts on Soil Quality

The construction activities will result in loss of vegetation cover and top soil of negligible extent in the plant area. Apart from localizedconstruction impacts at the plant site, no significant adverse impacts on soil in the surrounding area are anticipated.

b) Mitigation Measures

- The topsoil requires proper handling like separate stacking so that it can be used for greenbelt development.
- Oil trap for D.G set to prevent oil from damaging the soil.
- Management of spilling of contaminants such as oil from equipment, cement, etc. on the soil.

4.3.3 Air Quality

a) Predicted Impact on Air Quality

The movement of equipment at site, dust emitted during the leveling, grading, earthworks, foundation works, vehicle movement on unpaved roads and otherconstruction related activities, exhaust emissions from diesel generators, vehicles and other heavy construction equipment deployed at site will be the main sources of air pollution during the construction period. Due to the short duration of the planned action, any impacts on ambient air quality during construction activities are expected to be short term.

b) Mitigation Measures

- Transport vehicles and construction equipment / machineries will be properly maintained to reduce air emissions
- Equipment will be periodically checked for pollutant emissions against stipulated norms
- Exhaust vent of DG set will be kept at proper height to ensure quick dispersion of gaseous emissions
- Sprinkling of water on roads and construction site, growing sufficient vegetation are some of the measures that would greatly reduce the impacts during the construction phase.
- Implementing proper upkeep and maintenance of vehicles, and using Pollution under Control (PUC) certified vehicles for transport macheniery.

4.3.4 Noise Levels

a) Predicted Impacts on Noise Quality

The activities such as foundation & infrastructure construction, plant erection will produce periodic noise during construction phase. However, possible noise control measures will be adopted and hence the impact of generated noise on the equipment is likely to be temporary and insignificant.

b) Mitigation Measures

- D.G set to be used during construction phase shall be provided with acoustic enclosures
- Where applicable, hearing protection shall be provided to the workers and their use by workers shall be enforced by contractors as well as site management.
- In the event construction noise levels at the facility boundary exceed the industrial limit of 70 dB(A), temporary noise barriers would be installed to minimize the overall noise related impacts on the neighbouring areas due to construction activities.

4.3.5 Water Quality

a) Impact on Water Quality and Quantity

The wash water from construction equipment maintenance centre will contribute to oil and grease concentration so oil and grease trap at standby DG set site will be provided. As far as possible, the unskilled work-force will be sourced from the local areas. Since most of the construction work force will consist of floating population, the demand for water and sanitation facilities will be low and it will be managed by NLCIL.The wastewater from temporary labor colony will contribute to BOD concentrations. Wastewater fro m the temporary labor colony and equipment washing if not treated properly might damage the water quality in the nearby water bodies. NLCIL will undertake proper mitigation measures to ensure nearby surface water bodies are not polluted. The overall impact on water environment during construction phase is likely to be short term and insignificant.

The ground water will not be used during construction phase. The entire water requirement for construction will be met from NLC Mine and TPS-II Reservoir and hence impacts are not envisaged on the quantity of groundwater. The wastewater from the construction site may find its way to groundwater and pollute the same.

b) Mitigation Measures

- Oil and grease trap at standby DG set site will be provided
- As far as possible, the unskilled work-force will be sourced from the local areas. Packaged Sewage Treatment Plant (STP)/septic tanks to treat sewage attemporary construction workers' shall be provided
- Temporary sanitation facilities (soak pits/septic tanks/ Bio Toilets) will be set up to prevent contamination.

- Since most of the construction work force will consist of floating population, the demand for water and sanitation facilities will be low and it will bemanaged by NLCIL.

4.3.6 Solid and Hazardous Waste

a) Predicted Impacts of Solid and Hazardous Waste

The hazardous materials used during the construction may include diesel and paints. Construction sites handle small quantities of lube oils and diesel for running the construction equipments. In case of spill of these materials, the soil quality can get deteriorated and also in case of hazardous waste finding its way to the water ways may pollute the surface and groundwater of the nearby areas.

b) Mitigation Measures

- In order to avoid soil contamination due to accidental spills, it has been recommended to provide spill absorbing material at the construction site and the contaminated soil should be excavated and these materials shall be stored and disposed of to hazardous waste disposal sites according to the guidelinesspecified.
- Hazardous waste such as used oil generated during construction activities shall be stored at designated paved area in leak proof containers at site and shall be sent for disposal to an authorized recycler.
- Other solid waste generated during construction phase such as packaging waste i.e. paper, plastic and etc., shall be collected in dedicated area and shallbe disposed off to an approved scrap dealer.
- Special care will be taken during deliveries of construction materials, especially when fuels and hazardous materials are being handled.
- Care will be taken to avoid direct contact and spillage of painting waste containing heavy metals during painting job. It is recommended to cover ground with protecting sheets to avoid damage to soil and groundwater.

4.3.7 Ecology and Biodiversity

a) Predicted Impacts on Ecology and Bio Diversity

There is no notified/protected ecologically sensitive area including national park, sanctuary, Elephant/Tiger reserves existing in the study area. The study area comprises of terrestrial and aquatic ecosystem. Predicted impacts are given below:

- Changes in activity pattern of terrestrial fauna due to Noise

- Loss of vegetation due to access cutting and site preparation
- Accidental discharge of wastewater may create impact on aquatic ecology if not handled properly.

The predicted impacts on the surrounding ecology during construction phase are not very significant.

b) Mitigation Measures

- Acoustic enclosures will be provided to the D.G sets being used during construction phase to reduce the noise.
- Green belt development using native species will provide habitat and food to the birds and small animals.
- NLCIL will avoid noise producing construction activities at night and also unnecessary lighting at night to avoid any effect on avifauna.

4.3.8 Socio-Economic Impacts

There is no rehabilitation and resettlement issue for the proposed project as the land is already acquired and in possession by NLCIL. During construction phase both direct and indirect employment will be generated. About 850 people will work at the construction period. This will be beneficial to the local economy. Hence no adverse impacts are envisaged during construction phase.

4.4 Impacts during operational phase

The proposed expansion plant operation will involve (2 x 660 MW) of power generation.The following activities related to the operational phase will have varying impacts on the environment and are considered for impact assessment.

- Topography and climate
- Air quality
- Water resources and quality
- Soil quality
- Noise levels
- Solid waste;
- Ecology
- Demography and socio-economics; and
- Impact on Health

The possible impacts during Supercritical thermal power plant operation on the environmental attributes such as land use, soil quality, topography & climate, Ambient air quality, water environment, noise levels, demographic &socio economics and health were identified and presented briefly in report.

- In order to minimize the impact on climate change and harmonize the project with the local eco-system, an extensive green belt development program with native tree species will be adopted.
- The water requirement for the proposed project will be met water pumped out from NLCIL Mine through TPS-II Reservoir and the wastewater generated from the plant will be treated in an ETP to achieve Zero Discharge as far as possible to comply with the norms of CPCB and the same will be recycled/reuse in the plant and Domestic wasterwater will be treated in STP and used for green belt development within the plant premises.
- Acoustic enclosures will be provided to the turbines, generators and other possible high noise producing equipments to reduce the transmission of noise to the outside environment.
- The overall impact on the socio economic environment will be beneficial as the project increases the employment opportunities, increase the literacy rate, improvement in socio-cultural environment of the study area.

4.4.1 Land Use

The present land use of the area falls under Industrial use. After proposed expansion there will not be any change in land use and any adverse impact on the surrounding land use is also not expected.

4.4.2 Topography and Climate

The area of the plant site is slightly undulated to plain and it will be leveled for construction purpose.

Heat loss through stack will be 6 to 7% of the total heat input to the furnace. The quantum of heat so lost to the atmosphere is not significant. The moderate wind speed and rainfall in the region will mitigate the adverse impacts. The vegetation in the region will help to manage thermal balance.

The major topographical changes envisaged would be the manmade structures like erection of power plant sheds, raw material storage space, civil structures, water reservoirs, etc. However,

it will also invite some positive benefits in the form of up gradation of existing roads, land leveling, tree plantations, greenbelt development, etc., in the plant vicinity.

Being a thermal power project the impact on the climate due to the exhaust gas could be envisaged. Impact on the climatic conditions from the proposed power plant will be marginal which can be nullified / reduced by implementing greenbelt.

4.4.3 Air Environment

Base line data reveals that ambient air quality in the study area for the Parameters PM_{10}, $PM_{2.5}$, SO_2 & NO_2, are well within the permissible Limits as prescribed by the National Ambient Air Quality Standards (NAAQS) for Industrial Area, Residential, Rural & Other areas.

The major air pollution sources from the industry are boilers. The boiler sources are provided with stacks of adequate height so as to disperse the emanating flue gases containing suspended particulate matters, oxides of sulfur and nitrogen without affecting the ground level concentrations. The impact on air quality by this project is assessed using AERMOD.

4.4.3.1 Meteorological Data

The site specific meteorological data for three months from March to May 2017 was obtained from secondary sources. Other data included for AERMET were daily wind speed, wind direction, temperature, relative humidity, air pressure, precipitation, and solar radiation recorded during the period. AERMET reformats meteorological data so that it can be used as input for AERMOD model.

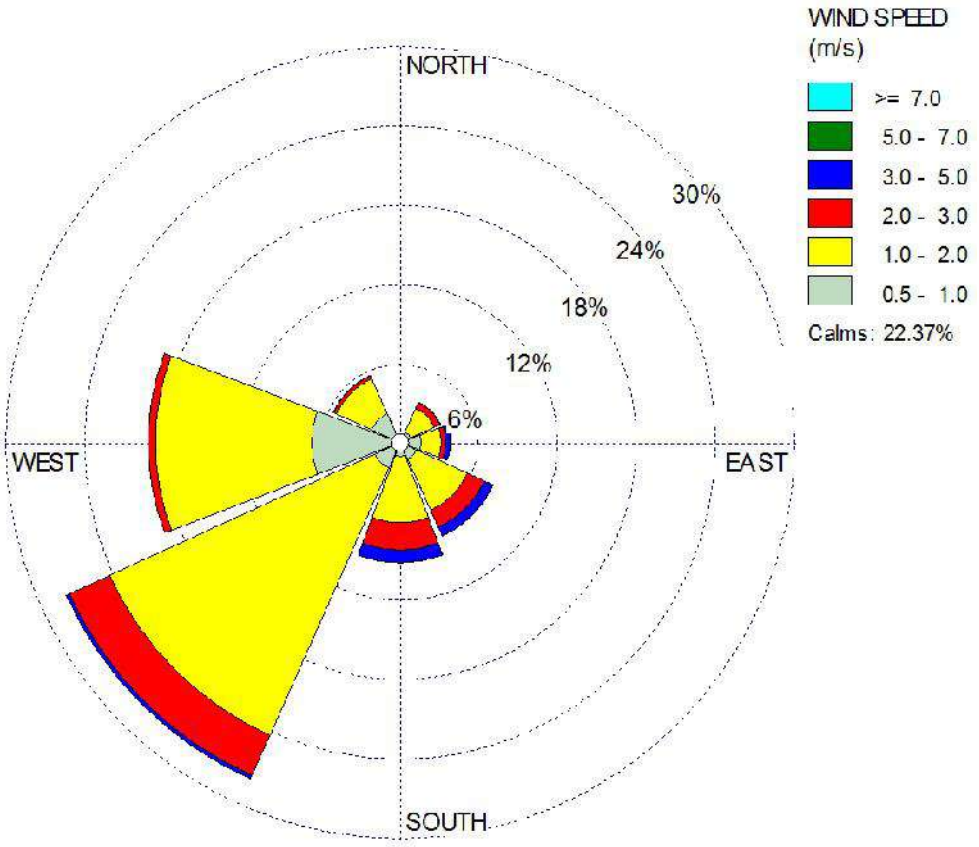

Figure 4-1 Wind-rose considered for Modelling (March-May-2017)

4.4.3.2 AERMET Process

For the 3 phase AERMET processing of the meteorological data, specifications of the land use in the area are required to determine the terrain roughness for modelling. The land use was characterized for in and around the site. The surface characteristics for the site and surroundings were selected and used to calculate the Albedo, Bowen ratio and surface roughness parameter.

The meteorological data were processed in the AERMET software to generate wind flow pattern & to generate surface meteorological data and profile meteorological data in a prescribed format that can be fed to AERMOD for modelling.

4.4.3.3 AERMOD Process

AERMOD Software Version 8.0.5 was used for air dispersion modelling and is applicable to a wide range of buoyant or neutrally buoyant emissions up to a range of 50 km. In addition to

more straight forward cases, AERMOD is also suitable for complex terrain and urban dispersion scenarios.

AERMOD is a steady-state plume model. In the stable boundary layer (SBL), it assumes the concentration distribution to be Gaussian in both the vertical and horizontal. In the convective boundary layer (CBL), the horizontal distribution is also assumed to be Gaussian, but the vertical distribution is described with a bi-Gaussian probability density function (pdf). This behavior of the concentration distributions in the CBL was demonstrated by Willis and Deardorff (1981) and Briggs (1993). Additionally, in the CBL, AERMOD treats "plume lofting," whereby a portion of plume mass, released from a buoyant source, rises to and remains near the top of the boundary layer before becoming mixed into the CBL. AERMOD also tracks any plume mass that penetrates into the elevated stable layer, and then allows it to re-enter the boundary layer when and if appropriate. For sources in both the CBL and the SBL AERMOD treats the enhancement of lateral dispersion resulting from plume meander. The emissions from proposed stacks are estimated and used for the air dispersion modeling as shown in**Table 4.4.**

Inorder to estimate the GLC from thermal power plant stack two scenarios were considered.

Scenario 1: Assuming stack height of 275 m Environmental Standards CPCB and MoEF&CC, July 2000 (Pollution Control Law Series: PCLS/4/2000-2001).

Scenario 2: Assuming stack height of 150 m (As per MoEF & CC draft notification S.O. 3337(E), dated 16th Oct, 2017).

Maximum incremental value for SO_2, NOx and PM are shown in **Figure 4-2 - Figure 4-7** and Ground Level Concentration (GLC) for proposed stacks is given in **Table 4.5 - 4.12** respectively.

Table 4-3 Plant Technical Parameters

S. No.	Description	Symbol	Unit	Ref./Formula	Value
1	Fuel to be used	--	--	--	Lignite
2	Unit Capacity	Cp1	MW	--	660
3	No. of Units	Np	no.	Unit-1/2	2
4	Total Installed MW	IMW	MW	IMW = Cp1 x Np	1320
5	Hourly fuel consumption for 2x 660 MW	q0	Tph		1425
6	Lignite Consumption per day for 2x660MW	q1	Tpd	q1 = q0 x 24	34211
7	Operating hour per day per fuel stream	t0	hr.	--	12
8	No. of fuel Stream provided	N	no.	However, both streams shall operate	2 [1W+1S]

				simultaneously whenever required.	
9	Capacity of single fuel stream with 5% margin	Q	Tph	Q=(q1 x 1.05) /12	2993
10	Capacity of ILHS (per stream)	Q1	Tph	Q = Q1 = Q2	3000
11	Capacity of ELHS (per stream)	Q2	Tph	-	3000
12	Station heat rate	-	kCal/kW hr	-	2380
13	GCV of Lignite	-	kCal/kg	-	2720
14	Specific coal consumption	-		-	0.875
15	Specific Oil consumption	-	ml/kWhr	-	2
16	Fuel consumption at full load per hour for each unit	-	TPH	-	577.5
17	Ash content	-	%	-	10
18	Ash generated	-	TPH	-	57.75
19	Bottom ash generated 20% of 57.75 TPH	-	TPH	-	12
20	Coarse ash generated 10% of 57.75 TPH	-	TPH	-	6
21	Fly ash generated 90% of 57.75 TPH	-	TPH	-	52

Table 4-4 Proposed Stack Emission details

Source	**Fuel used**	**Stack Details**						**Emission per stack (g/s)**		
		No of Stack	**Height (m)**	**Top Dia (m)**	**Temp (°C)**	**Exit Velocity (m/s)**	**Flow Rate (M3/Hr)/Stack**	**PM**	**SO2**	**NOx**
Thermal Power plant Boiler Stack (2 nos)	Lignite 1425 MTPH	2	275	7	145	23	36 x 105	60	200	200
3 No x 1750KVA DG	DG	3	40	0.6	180	9	4800	0.012	9.33E-5	0.183
Total (g/s)								**60**	**200**	**200**
Total (Kg/Hr)								**216**	**720**	**720**

Note: *1. Lignite Ash content is 10 % andSulphur content is 0.5 %,*

2. As per Draft Notification No. S.O. 3337(E) dated 16.10.2017 on revised stack height for TPS has been issued by MoEF&CC, based on the revised stack height of 150 m was also considered and AERMOD model was executed.

Scenario 1: Stack Height of 275 m

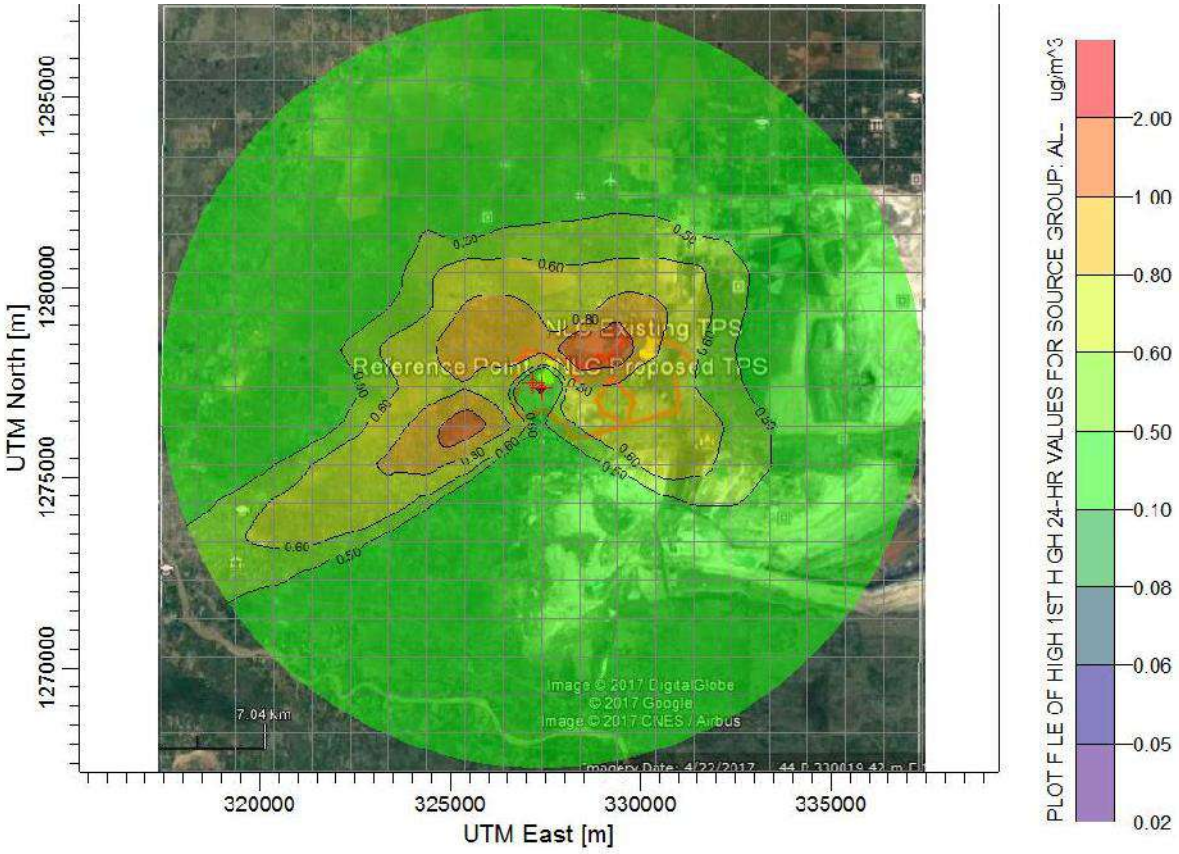

Figure 4-2 Predicted 24-Hrs GLC's of Particulate matter within 10 km Radius of the Study Area

Table 4-5 Top 10 Highest Concentrations of Particulate Matter Estimated Through Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	1.32828	1.45	NE
2	329389.5	1278372	1.22363	2.3	ENE
3	325386.5	1276353	1.17932	2.3	WSW
4	326387.2	1278372	0.98984	1.4	NW
5	329389.5	1279381	0.95903	2.8	NE
6	325386.5	1278372	0.93671	2.3	WNW
7	324385.7	1276353	0.9298	3	WSW
8	324385.7	1275344	0.89816	3.6	WSW
9	326387.2	1279381	0.897	2.3	NNW
10	326387.2	1276353	0.89323	1.45	SW

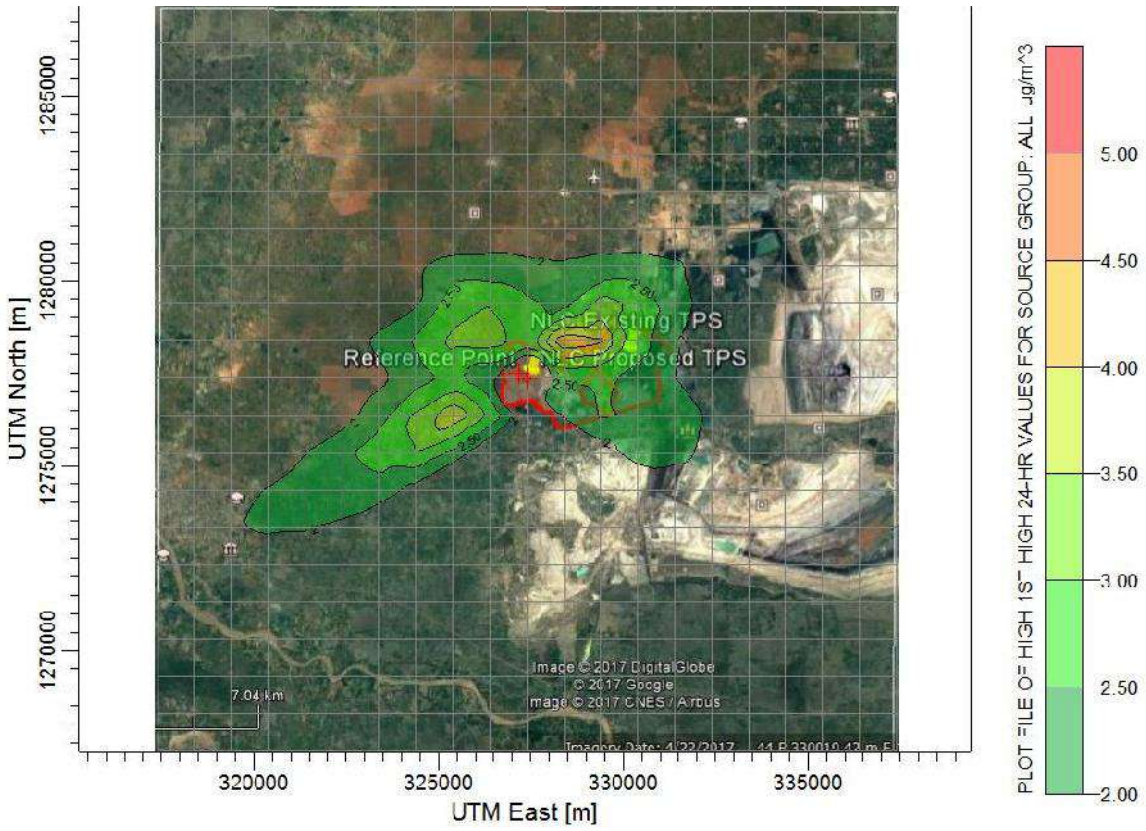

Figure 4-3 Predicted 24-Hrs' GLC's of SO2 within 10 km Radius of the Study Area

Table 4-6 Top 10 Highest Concentrations of Sulphur Dioxide Estimated Through Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	4.42243	1.45	NE
2	329389.5	1278372	4.0764	2.3	ENE
3	325386.5	1276353	3.91334	2.3	WSW
4	326387.2	1278372	3.28469	1.4	NW
5	329389.5	1279381	3.19497	2.8	NE
6	325386.5	1278372	3.11985	2.3	WNW
7	324385.7	1276353	3.08251	3	WSW
8	324385.7	1275344	2.98765	3.6	WSW
9	326387.2	1279381	2.98208	2.3	NNW
10	326387.2	1276353	2.97445	1.45	SW

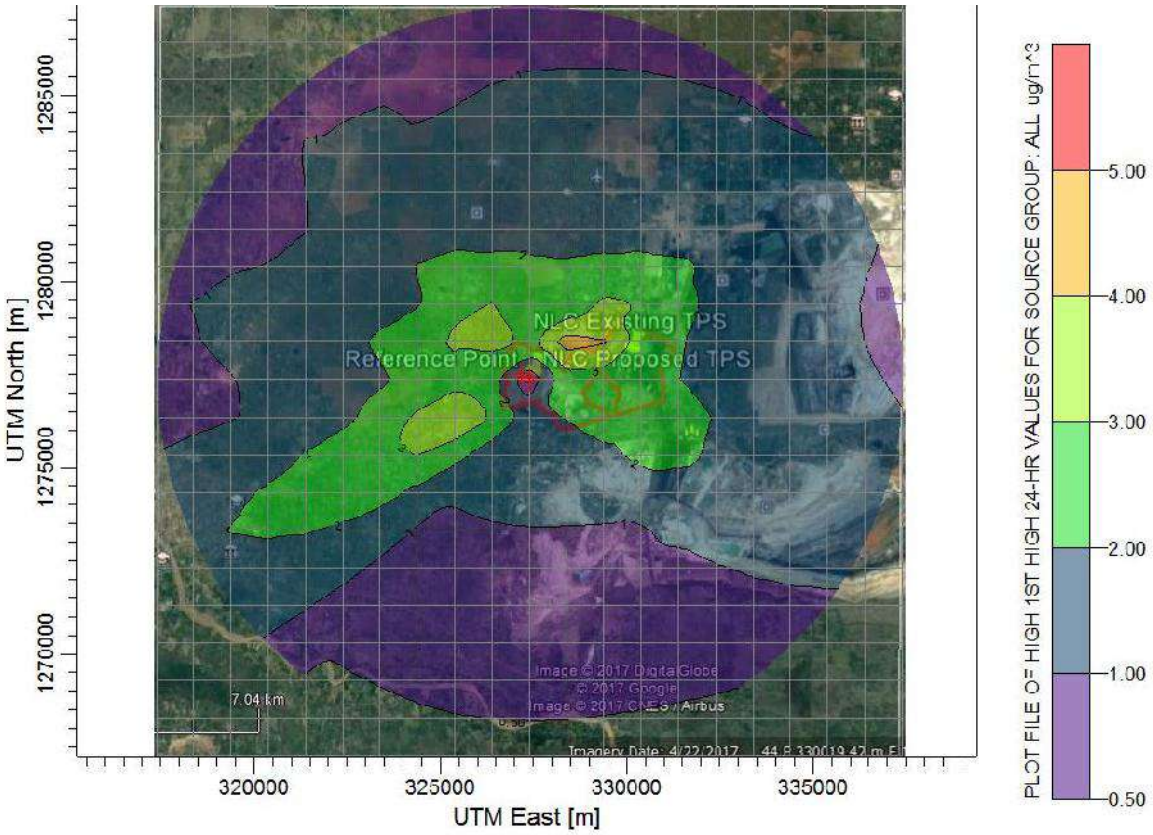

Figure 4-4 Predicted 24-Hrs' GLC's of NOx within 10 km Radius of the Study Area

Table 4-7 Top 10 Highest Concentrations of Oxides of Nitrogen EstimatedThrough Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	4.4461	1.45	NE
2	329389.5	1278372	4.08722	2.3	ENE
3	325386.5	1276353	3.99454	2.3	WSW
4	326387.2	1278372	3.35249	1.4	NW
5	329389.5	1279381	3.20317	2.8	NE
6	324385.7	1276353	3.15956	2.3	WNW
7	325386.5	1278372	3.13139	3	WSW
8	326387.2	1279381	3.01841	3.6	WSW
9	324385.7	1275344	3.0161	2.3	NNW
10	326387.2	1276353	2.98807	1.45	SW

Scenario 2: Stack Height of 150 m

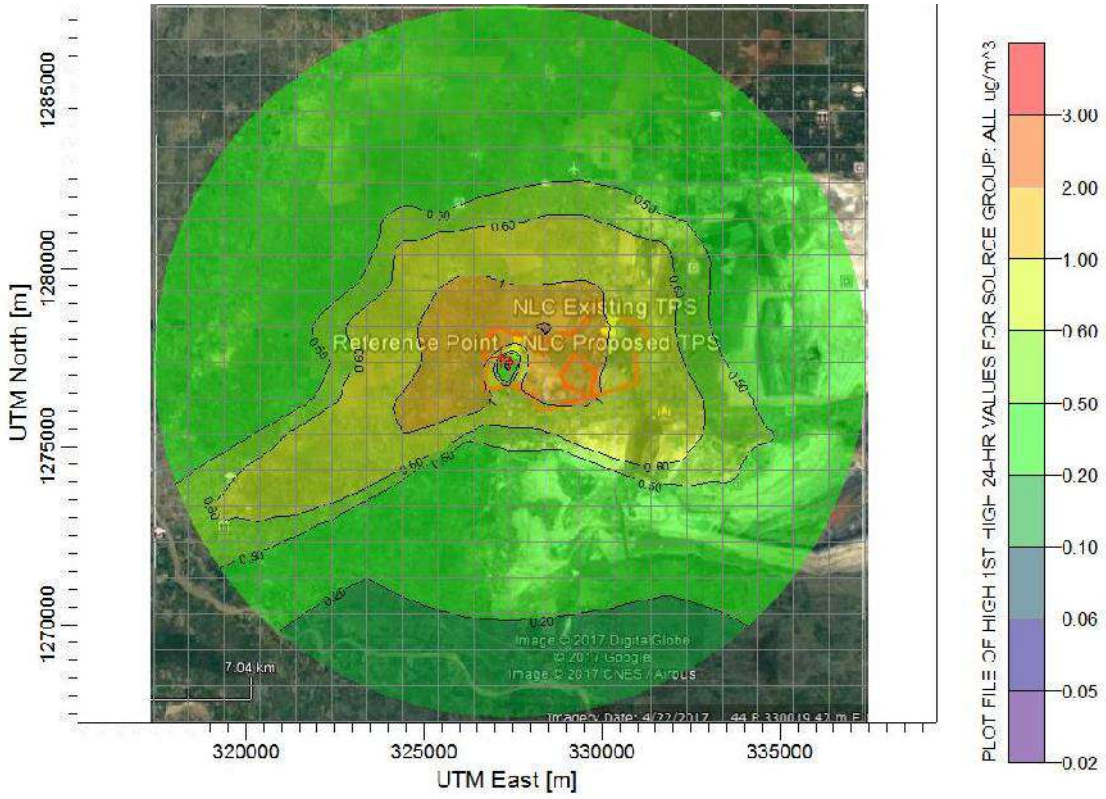

Figure 4-5 Predicted 24-Hrs GLC's of Particulate matter within 10 km Radius of the Study

Table 4-8Top 10 Highest Concentrations of Particulate Matter Estimated Through Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	2.13617	1.4	NE
2	326387.2	1278372	1.77915	1.45	NW
3	327388	1278372	1.68986	1	N
4	328388.7	1277363	1.63339	1	E
5	329389.5	1278372	1.50085	2.3	ENE
6	325386.5	1276353	1.45116	2.2	WSW
7	326387.2	1276353	1.41613	1.5	SW
8	326387.2	1277363	1.35055	1	W
9	329389.5	1277363	1.26584	2	E
10	325386.5	1278372	1.19049	2.2	WNW

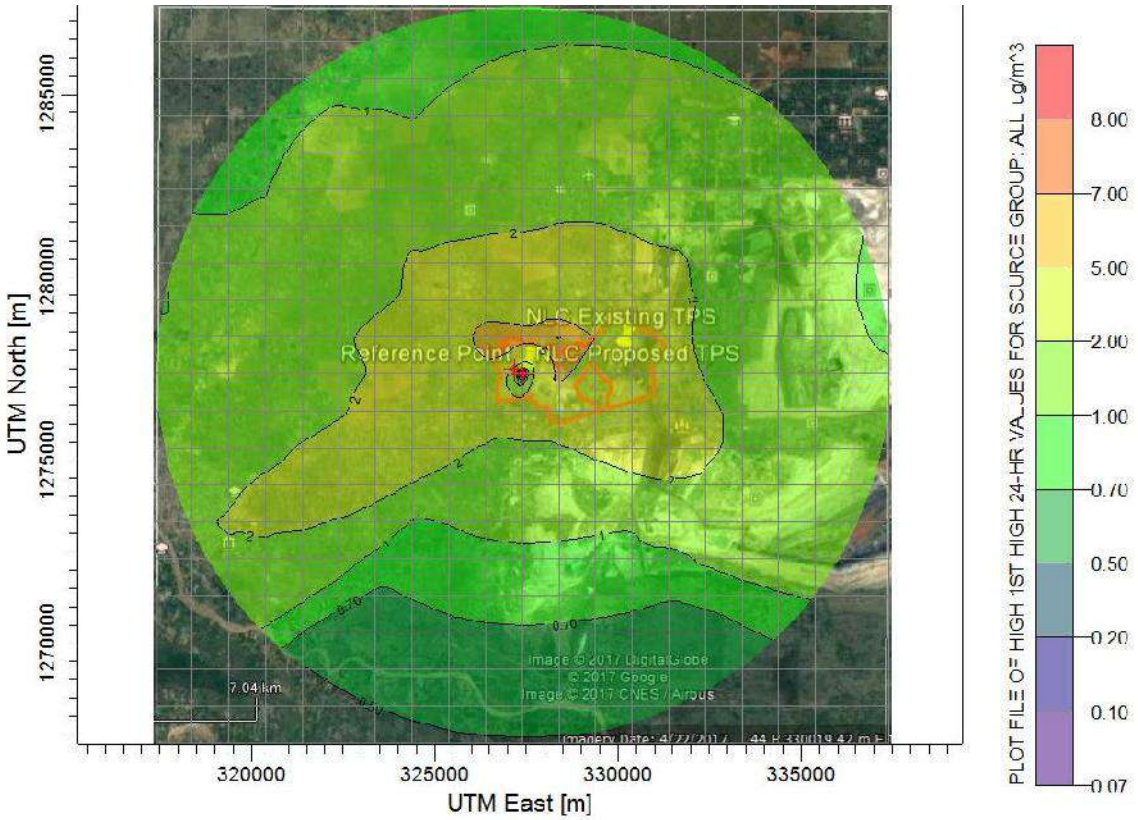

Figure 4-6 Predicted 24-Hrs' GLC's of SO2 within 10 km Radius of the Study Area

Table 4-9 Top 10 Highest Concentrations of Sulphur Dioxide Estimated Through Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	7.1154	1.4	NE
2	326387.2	1278372	5.91571	1.45	NW
3	327388	1278372	5.62729	1	N
4	328388.7	1277363	5.43623	1	E
5	329389.5	1278372	5.00047	2.3	ENE
6	325386.5	1276353	4.81949	2.2	WSW
7	326387.2	1276353	4.71747	1.5	SW
8	326387.2	1277363	4.48778	1	W
9	329389.5	1277363	4.21579	2	E
10	325386.5	1278372	3.96577	2.2	WNW

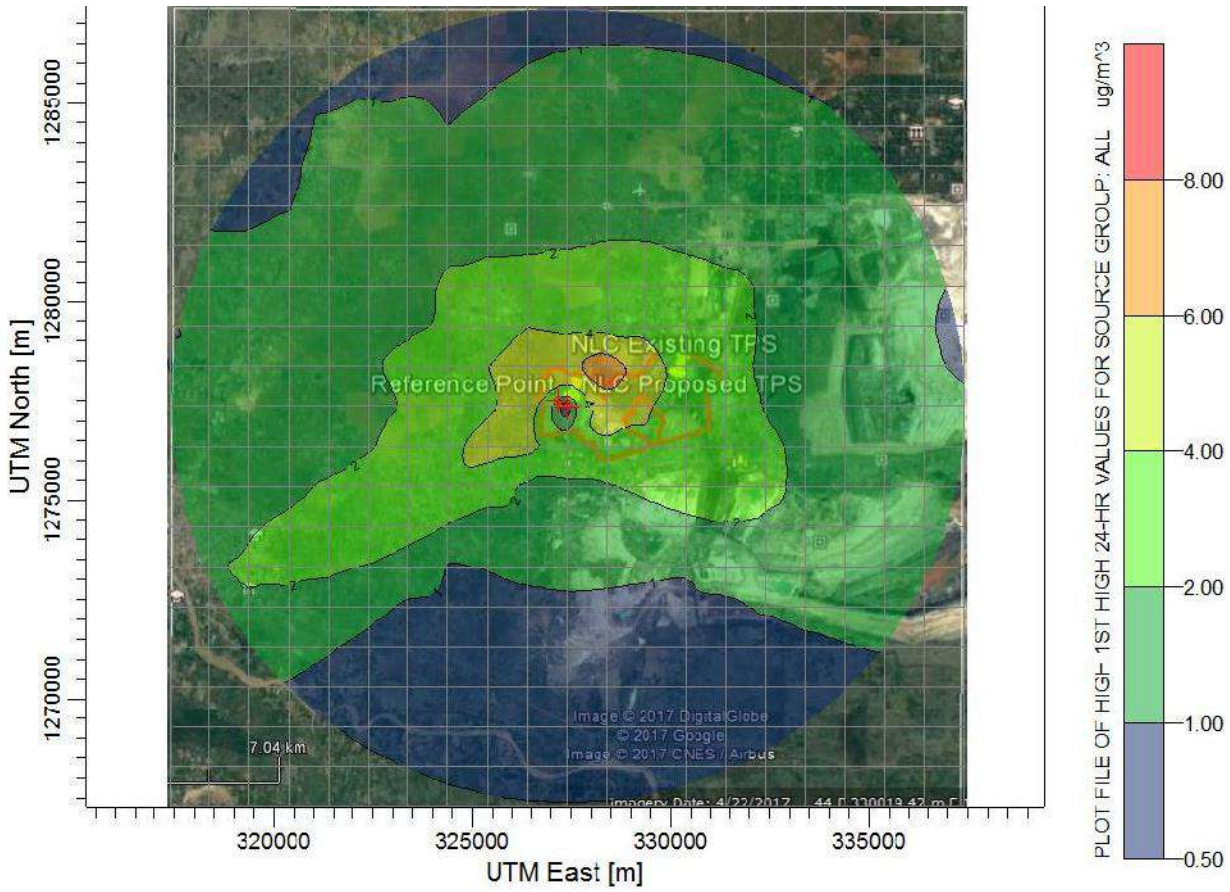

Figure 4-7 Predicted 24-Hrs' GLC's of NOx within 10 km Radius of the Study Area

Table 4-10Top 10 Highest Concentrations of Oxides Of Nitrogen Estimated Through Modeling

S.NO	UTM coordinates (m)		Conc. (µg/m3)	Distance from Centre of Sources (Km)	Direction from Source Centre
	E	N			
1	328388.7	1278372	7.13907	1.4	NE
2	326387.2	1278372	5.9835	1.45	NW
3	327388	1278372	5.65281	1	N
4	328388.7	1277363	5.4747	1	E
5	329389.5	1278372	5.01129	2.3	ENE
6	325386.5	1276353	4.90069	2.2	WSW
7	326387.2	1276353	4.7311	1.5	SW
8	326387.2	1277363	4.61132	1	W
9	329389.5	1277363	4.23263	2	E
10	325386.5	1278372	3.97732	2.2	WNW

4.4.3.4 Conclusion:

The Maximum GLC predicted for 275 m & 150 m stack height are given in **Table 4-11** & **Table 4-12**. It was observed that the maximum ground level concentrations observed due to proposed expansion for PM, SO2 and NOx by considering 150 m Stack height are 2.13 µg/m3, 7.11 µg/m3 and 7.13 µg/m3. So it can be concluded that even after the expansion of the plant the impact envisaged is minimum. The total increase in concentrations above baseline status is estimated and the percentage increase and summarised inTable 4-11 & Table 4-12.

Table 4-11 Total Maximum GLCs from the proposed Stack Emissions for 275m Stack

Pollutant	Max Base line Conc. (µg/m3)	Estimated Incremental Conc. at source (µg/m3)	Total Conc. (µg/m3)	NAAQ standard	Distance from Source (km)	Direction from Source	% increase
PM	95.3	1.328	96.628	100	1.45	NE	1.4
SO2	17.8	4.42	22.22	80	1.45	NE	24.8
NOx	29.1	4.44	33.54	80	1.45	NE	15.3

Table 4-12 Total Maximum GLCs from the proposed Stack Emissions for 150m Stack

Pollutant	Max Base line Conc. (µg/m3)	Estimated Incremental Conc. at source (µg/m3)	Total Conc. (µg/m3)	NAAQ standard	Distance from Source (km)	Direction e	% increase
PM	95.3	2.13	97.43	100	1.4	NE	2.2
SO_2	17.8	7.11	24.91	80	1.4	NE	39.9
NO_x	29.1	7.13	36.23	80	1.4	NE	24.5

Due to stringnent emission norms prescribed by MOEF&CC during Dec'2016, the emission of SO_2 and other pollutants will be drastically reduced due to installation of ESPs, FGD & Low NOX burners, and stack height of 275 mt may not be technically required. In this regard, MOEF&CC has come out with a draft regulation to calculate the stack height with the reduced emission. As per the revised MoEF & CC draft notification S.O. 3337(E), dated 16th Oct, 2017 the stack height works out to 150 mt. Aermod was run for the revised stack height and maximum GLC predicted is 7.11 & 7.13 ug/m^3 for SO_2 and NO_X.

The resultant pollution levels due to proposed project will be well within the limits of NAAQS, hence significant impacts are not anticipated.

The proposed power plant is categorized with high steam pressure which is a well proven technology in Europe and Japan. In addition to this Selective catalyst reactor, Flue Gas Desulphurization, and Electro-static Precipitator are also equipped as pollution control devices. We are proposing to setup stack height 275 m as per Environmental Standards CPCB and MoEF&CC, July 2000 (Pollution Control Law Series: PCLS/4/2000-2001).

However as per **Draft** Notification No. S.O. 3337(E) dated 16.10.2017, the height of stack required shall be about 150 m. TPS will go for 150 m provided the appropriate technology namely Selective catalyst reactor, Flue Gas Desulphurization and Electro-static Precipitator will be implemented on issual of official order by MoEF&CC.

4.4.3.5 Mitigation Measures for Reduction of Emissions at Source

4.4.3.5.1 Air Pollution ControlSystem

Latest Pollution control equipment will be adapted to the once-through steam generator, for compliance to latest MOEF&CC guidelines:

- Selective Catalytic Reactor (SCR)
- Flue Gas Desulphurization (FGD)
- Electrostatic Precipitator (ESP)

Electrostatic precipitators (ESPs) will be installed to control the emission of ash particles. The precipitators will be designed to limit the particulate emission to less than 30 mg/Nm^3. As per the MOEF&CC amended notification (5.0.3305 (E) dated 7th December, 2015), all new plants to be installed after 10th Jan. 2015 shall have to meet the updated Standard Environmental (Protection) Act, 1986 with the following emission limits:

PM	-	30 mg/Nm^3
SO_2	-	100 mg/Nm^3
NOx	-	100 mg/Nm^3
Hg	-	0.03 mg/Nm^3

One (1) no. twin flue stack of 150m height will be provided based on existing CPCB /MOEF&CC norms for wider dispersion.

For the control of fugitive dust emission within and around the fuel handling plant, fuel dust extraction and suppression systems will be provided.

Particulate Matter Emissions: As per the latest MoEF & CC Notification dated 7thDecember 2015, all the new thermal power plants to be commissioned from 1st January 2017 shall achieve the stringent emission levels of 30 mg/Nm^3 of particulate matter as against the current levels of 50 mg/Nm^3. In order to meet such stringent standards, high efficiency Electro Static Precipitators (ESP) shall be installed. The possible peak emission load on the ESPs. Each flue gas line of the boiler will be passed through two parallel ESPs with a total four ESPs in the proposed 2x660MW power plant. In general about 20 to 25% of the fly ash generated from the boiler will be collected at the economizer and super-heater stages of the boiler, and the remaining 75 to 80% of the fly ash will reach ESPs. However, for the purpose of the design of the ESPs, NLCIL has considered a peak fly ash load of 85% of total fly ash on the ESP.

The electrostatic precipitator design depends on the ash characteristics in terms of quality and quantity and the gas volume to be treated. It also requires proper sizing and optimizing the precipitator efficiency for performance. The precipitator performance depends on several factors such as specific gas volume and the dust load, gas flow rate, particle size and size distribution, particle resistivity, gas temperature, collecting plate and discharge electrode geometry, electrode spacing, current and voltage, and rapping system and frequency.

4.4.3.5.2 Installation of Flue Gas Desulphurizing system (FGD) for Sulfur DioxideEmissions

FGD system will be installed in flue gas duct to the chimney as per the latest environmental stipulation. The design and layout of steam generator and its auxiliaries will be taken into account wet flue gas desulphurization system can be installed, taking suction from duct after ID fan and feeding the desulphurised flue gases back to the chimney with provision for bypassing the FGD system during start up.

- The FGD system shall be provided to treat the flue gases so produced in the furnace in order to keep the SO_X value within the prescribed norms. The FGD system shall be having limestone scrubber of a proven design & shall be capable of meeting plant emission requirement to prevent a visible stack plume and MOEF requirement.
- The limestone system shall be furnished complete, with necessary pumps, piping and valves, control and instrumentation and moisture separators for the flue gas.
- FGD system shall be designed to remove SO_2 for all load conditions from minimum continuous through BMCR to meet the limits.

- FGD system shall be designed and constructed to operate as specified at maximum continuous rated load 24 hours per day, 7days per week, 365 days per year, except during unit outages. Particulate matter in the flue gas leaving the boiler shall be removed by ESP.

- FGD system shall include an emergency water quench system to protect absorber module, linings, and internals from damage in the event of loss of water to scrubber module at normal flue gas temperature for a period of 30 minutes.

- The control system shall be PLC-based with dual redundant data links utilizing MODBOUS protocol for interface with plant DCS.

4.4.3.5.3 Continuous Environmental Monitoring System (CEMS)

Separate Continuous Environmental Monitoring System shall be envisaged for each Unit as per Emission latest Regulation of CPCB/State PCB. CEMS shall comprise of Flue Gas Oxygen analyzer for control and monitoring, Carbon Mono Oxide, SOx / NO_x, Dust & Opacity analyzer, Mercury analyser for Boiler Emission monitoring system. The CEMS shall be interfaced with state PCB suitably. All stack emission monitoring instruments shall be of Extraction type. A programmable controller shall be provided for signal output, alarms, calibration cycle timers and measurement indication for each analyzer. Each analyser shall be independent and shall not share power supply processor etc. All the data shall also be available on DDCMIS for analysis and monitoring from CEMS.

Following are the Flue Gas measurements and their locations:

- Zirconia Probe type Boiler Flue Gas Oxygen analyzer and before and after APH for control and monitoring (i.e. HT O_2 Analyser and LT O_2 Analyser).

- Stack emission monitoring system comprising of CO, SOx / NO_x, Dust, Opacity analyzer, Mercury Analyser.

4.4.4 Noise Levels and Impacts

4.4.4.1 Impact Assessment

The major noise emitting sources from the proposed Lignite based Supercritical Thermal Power Plant, Stationary sources are operation of heavy duty machinery at the project site like Boiler ID & FD Fans, Boilers feed pump, Steam Turbine & DG etc.

- Mobile sources corresponding to mainly vehicular traffic for staff mobilization, materials, material transportation, liquid fuel transportation to project site, etc.
- Vibrations are expected to be generated by various activities associated with the proposed project during operational phase. The impact of vibrations beyond the site would be negligible during normal operation phase. However, the impacts on workers engaged in the plant area would be considerable due to occupational exposure. The proposed fixed major equipment/units such as boiler house, compressors, pumps, DG sets etc., also generate vibrations during operational phase and may cause exposures to the workers/operators engaged at these units. The noise levels at the source for these units will be in the range of 80-90 dB(A).

4.4.4.2 Mitigation Measures for Noise

To achieve the noise limitations around the equipment, the main measures taken shall be as follows:

- Each feed water pump sets shall be covered by a separate enclosure,
- Each Liginite crusher shall be covered by a separate hood, small units like condensate and vacuum pumps, shall be designed so as to limit noise emission,
- Bypass valve, the de-superheater and the relevant piping shall be covered with acoustic insulation.
- During maintenance/inspection works, the personnel will wear ear protections.

Far Field Noise

To achieve the far field noise limitations, the following main measures shall be taken, as apropriate for that purpose:

- Low noise fans may be considered to ensure that the overall noise levels shouldnot exceed a level of 85 dB(A) at 1m from the Cooling tower area
- Steam turbines will be housed in a dedicated room with walls with NoiseReduction Rate of 45 dB(A) so that the noise levels outside the room can bemaintained below 75 dB(A).
- The steam generator draught fans, the electrostatic precipitators and the airheaters will be designed to limit noise emission,
- Steam vent pipes will be fitted with silencers,
- Noise levels will be periodically monitored and necessary steps for reduction of noise levels will be taken up.

- Lining of chutes in Lignite handling plant for noise absorption.
- Use of personal protective devices i.e., earmuffs and earplugs by workers, working in high noise activity centre.

Industrial facilities will adopt sound noise abatement and control program to meet the following criteria. Sound pressure levels at the property boundary should be less than 55 dB (A) during daytime hours and 45 dB(A) during night time hours. Noise levels near the work-zone areas should comply with a maximum permissible level of 85 dB(A). ISO 9613-1:1996 Acoustics-attenuation of sound during propagation outdoors- Part 1 & ISO 9613-2:1996 Acoustics-attenuation of sound during propagation outdoors- Part 2.

Table 4-13 Envisaged Equipment Noise Levels (Sound Pressure Levels)

S.No	Equipment	Noise Levels in dB(A)
1	Steam turbine - outside the room	80
2	Boiler feed pumps	85
3	Boiler FD fans	85
4	Lignite pulverizer etc	85
5	Boiler ID fans	85
6	Natural draft Cooling towers	75

Ambientnoiseinside andoutsidetheplantareanoiselevelsforvariouslandusecategoriesasper National Standards forAmbientNoise.Thiswillbeensuredthrough proper designing of the equipment with adequate acoustics permitting the ambientnoise levels without exceeding the specified criteria from the source.

Noise levels outside thefacility boundary will be further attenuated due to the proposed green belt all along the plant boundary.

4.4.5 Water Environment

4.4.5.1 Impact

Availability of water and proximity to source are the most important criteria for selection of sites for Power Project is which are met in this site.

Source of Water is water pumped out from NLCIL Mine through TPS-II Reservoir.

Availability of Water

Ground water & storm water to be pumped from NLCIL Mines for the project. Raw Water Reservoir is 35.00 Acres

S.No	Description	KLD	m^3/hr	* As per MoEF&CC Requirements
1	Total water requirement	101160	4215	-
2	Fresh water requirement	79176	3299	2.49 m^3/MWh
3	Recycled water	21984	916	-

Note: 1. * As per MoEF&CC Notification S.O. 3305(E) dated: 7/12/2015 (water consumption upto maximum of 2.5 m^3/MWh and achieve zero waste water discharged).

2. The water requirement for FGD system indicated in the water balance diagram is indicative and subject to revision once the MoEF&CC Draft notification S.O. 3337(E). Item no 2.III, dated 16.10.2017 comes into force; we may consider 3m^3/MWh and rework the water balance accordingly.

Total Water Requirement = 4215 m^3/hr

Total Effluent generated = 1379 m^3/hr

Total Sewage generated = 2.5 m^3/hr

Total Recycled Water = 1379 m^3/hr (816 m^3/hr for cooling tower make up, 100 m^3/hr for service water makeup & 463 m^3/hr for ash handling systems)

Total Fresh Water Requirement = 3299 m^3/hr

No ground water source will be tapped in the project site for meeting the water requirements during operation of proposed plant. Detailed water drawl study has been undertaken inorder to confirm the availability of requisite quantity of make-up water for the proposed expansion. Raw water requirement is worked out to be 3299 m^3/hras per the attached composite. Sufficient fresh water is available as per the detailed below:

GWC pumping - 1363 m^3/hr
Seepage well pumping – 545 m^3/hr
Storm water pumping – 2181 m^3/hr
Total - 4089 m^3/hr

The entire consumptive water requirement for the proposed project shall be pumped from the NLCIL operating mines including the mine-III and stored in plant Lake (Thermal Lake). The capacity of this lake shall be equivalent to the 7 days of consumptive requirement.

The major components of the Plant Water System for both the units are as follows:

1. Raw Water Reservoir
2. Raw Water Pumps with drives and accessories on Raw Water Reservoir.
3. Pretreatment Plant
4. Clarified Water Reservoir including storage for fire water.
5. CT Makeup, Service water, FGD Make-up, AHP seal water, Jockey & fire hydrant and DM Plant Supply Pumps with drives and accessories on Clarified Water Reservoir.
6. Demineralizing Plant
7. Hot Well Makeup Pumps with drives and accessories.
8. Raw Water & CW Chlorination System

For the purpose of plant cooling water, services and potable water requirement of about 3399 m^3/hr will be drawn from NLC Mines. Plant water system will have facilities to store water for 7 days consumptive use. Demineralized water system has been envisaged. Water systems shall be based on the concept of zero liquid discharge to the outside of the plant

4.4.5.2 Mitigation Measures

Water Pre-Treatment Plant

Raw water drawn from the in plant reservoir through 3x50% (2w + 1s) 1900m^3/hr. pumps, will be clarified in PLC operated 2000m^3/hr capacity clariflocculator and 150 m^3/hr capacity DM Clarifier. Ferric chloride/ lime/ polyelectrolyte and chlorine will be dosed in the pre-treatment plant to accelerate coagulation process. The clarified water (not exceeding 10 NTU turbidity) will flow by gravity. The clarified water from the Main Clarifier will be stored in 13000 cum sized clarified water tank and 4200 cum in other compartment for firewater storage requirement. DM clarifier water will be stored in 500 cum sized DM Clarified water storage tank. Sludge from the clariflocculators will be taken to sludge sump.

Clarified Water Reservoir

Clarified water will be distributed to various areas of the plant through dedicated pump sets as follows: -

i) Three (3) - (2W+1S) 50% capacity pump sets for supply of clarified water to CW sump.
ii) Three (3) - (2W+1S) 50% capacity service water pumps with adequate head will supply clarified water to the service water distribution network all over the plant building through an adequately sized overhead tank suitably located at a Deaerator floor.
iii) Two (2) – (1W+1S) 100% capacity FGD Make-up pump sets for supply of water to FGD unit.
iv) Two (2) – (1W+1S) 100% capacity AHP seal water pump sets.
v) Set of fire hydrant pumps/spray and Jockey pumps of adequate head and capacity will be provided for firefighting system.
vi) Three (3) - (2W+1S) 50% capacity DM Feed water pump sets for supply water to DM plant.

Water Demineralisation Plant& RO System

D M Plant consisting of PLC based UF-RO-MB streams each MB of net capacity 80 cum/hr. with details is as follows:

i) Three (3) nos. Dual Media Filter along with 2 nos. blowers and 2 nos. backwash pumps with all accessories.
ii) One (1) no. Filter water storage tank along with 2 nos. Potable water pumps complete with all accessories.
iii) Two (2) nos. Ultra filtration modules of 60% capacity each along with Basket filter, CIP system, back wash pump drive, and all accessories.
iv) One (1) no. Ultra Filter water storage tank complete with all accessories.
v) Two (2) nos. Reverse Osmosis – I modules of 60% capacity each along with RO Feed pumps, Chemicals Dosing system, Micron Cartridge filters, High Pressure pumps, Chemical Cleaning system etc. with all accessories.
vi) One (1) no. RO – I Permeate water storage tank complete with all accessories.
vii) Two (2) nos. Reverse Osmosis – II modules of 60% capacity each along with RO Feed pumps, Chemicals Dosing system, Micron Cartridge filters, High Pressure pumps, Chemical Cleaning system etc. with all accessories.
viii) One (1) no. RO – II Permeate water storage tank complete with all accessories.
ix) Two (2) nos. (1W+1S) Mixed Bed Feed pumps with drives and all accessories.
x) Two (2) nos. (1W+1S) Mixed Bed exchanger along with MB Blower & regeneration pumps with drives and all accessories.

xi) Complete acid/ alkali handling, storage and regeneration system including unloading pumps with drive motors.

xii) One (1) no. Neutralizing Pit complete with Two (2) nos. of Effluent Disposal pumps with electrical drive motors and other accessories.

xiii) Two (2) no. Demineralized water storage tank complete with all accessories.

xiv) Two (2) nos. of DM Transfer pumps complete with electrical drive motors and other accessories.

xv) Two (2) no. Condensate storage tank complete with all accessories.

xvi) Three (3) nos. of Hot well makeup pumps complete with electrical drive motors and other accessories.

Chlorination Plant

Chlorination Plant for CW & Raw Water System

Suitable dose of Chlorine Gas in the CW system will be given to curb organic growth and to prevent microbiological slime. Chlorine Gas will be dosed at a normal dosing rate of 1.0 ppm continuous and shock dosing rate of 3.0 ppm for a period of 30 minutes per shift.

There will be three (3) (2W+1S) streams of chlorination each of capacity 180 kg/hr.

In the Raw water, Chlorine Gas will be dosed in Pretreatment Plant.

There will be two (2) (1W + 1S) streams of chlorination each of capacity 20 kg/hr.

In the Potable water, Chlorine Gas will be dosed in DM Plant.

There will be two (2) (1W + 1S) streams of chlorination each of capacity 0.250 kg/hr.

Circulating Water System

Closed cycle condenser cooling is envisaged for cooling water system with Natural Draft Cooling Tower (NDCT). The CW sump will be provided with CW pumps of Vertical turbine type (3x33%) / concrete volute pumps (2x50%) per unit with a common stand by (type and sizing to be finalized during tender specification stages based on techno-economic study) for two units for pumping Cooling Water to the Condenser and thereafter shall be discharged into NDCT having ΔT as same as in condenser, maintaining cycle of concentration minimum 3.0. To maintain 3 C.O.C. in C.W. system chemical treatment will be carried out.

Auxiliary Cooling Water System

The ACW system meets the cooling water requirements of all the auxiliary equipment of the TG and SG units such as turbine lube oil coolers, generator air cooler, Vacuum pump, ash cooler, exciter air coolers, Seal Pot, ID/SA/PA fan bearing oil coolers, BFP auxiliaries such as lube oil coolers, working oil coolers, drive motors, etc., condensate pump bearings, sample coolers, air compressors and ash handling system compressors, etc.

The ACW pumps shall be located in CW pump house and the no. of working and stand by pumps shall be 2W+1S and the type of pump shall be vertical turbine pump.

Natural Draft Cooling Tower

It is proposed to install one (1) nos Natural draft cooling tower for condenser cooling water and auxiliary cooling water for each unit.

Condensate Water Treatment System

The boiler feed water and condensate dozing system consists of the following: -

- Ammonia and Oxygen – (CWT) Combined Water Treatment
- Ammonia and Hydrazine – (AVT) All Volatile Treatment

In order to maintain pH and prevent/reduce the corrosion of equipment AVT should be used during start-up or abnormal conditions or difficult to achieve cation conductivity of feed water < 0.15 Ms/cms. CWT should be used under normal operation when cation conductivity of feed water is maintained < 0.15 µS/cms and polishing treatment is running normally, then appropriate to add oxygen.

Each feed system for Ammonia & Hydrazine shall consists of one tank and two (2) metering pumps for each unit.

Each unit oxygen dozing device shall consist of a set for dosing oxygen at deaerator outlet and CPU outlet. Each unit equipped with 8 oxygen bottles and set of automatic oxygen dosing device.

Specification for Water & Steam:

Description	Specification
DM Water Quality	
Conductivity	≤ 0.08 µS/cm
Silica	< 10 ppb
pH	6.8 – 7.3
Sodium	< 5 ppb
Total Organic Carbon	< 200 ppb
Main Condensate	
Conductivity (after cation column)	< 0.2 µS/cm
Silica	< 20 ppb
pH	8.0 – 9.0 (< 9.5)
Feed Water	
Conductivity (after cation column)	< 0.2 µS/cm
Silica	< 20 ppb
Iron	< 20 ppb
Sodium	< 10 ppb
Oxygen	30 – 150 ppb
pH	8.0 – 9.0 (< 9.5)
Main Steam	
Conductivity (after cation column)	< 0.2 µS/cm
Silica	< 20 ppb
Iron	< 20 ppb
Sodium	< 10 ppb
pH	8.0 – 9.0 (< 9.5)

Wastewater Treatment Systems

Effluent Disposal System

The wastewater treatment system shall be designed to collect wastewater from all sources in the power plant and provide treatment to enable it to be reused in the power plant to achieve Zero Discharge as far as possible. The quality of effluent shall conform to norms stipulated by Central / Local Pollution Board.

The sources of plant effluent are mainly:

a. CT Blow Down
b. Plant drains
c. Oily waste
d. DM Plant waste

CTBD waste will be treated in Pre-filter, ultra-filtration & reverse osmosis in order to make it suitable for CW make-up.

All the above effluent except CT Blow Down shall be pumped to the Central Monitoring Basin.

The Central Monitoring Basin shall have two (2) compartments, each compartment having adequate storage to collect a day's effluents. Facilities in the form of chemical dosing system, effluent recirculation system, etc. shall be provided to treat the effluent and to bring the quality suitable for reuse in ash handling plant, along with the ETP waste. Necessary instruments shall be provided for monitoring the quality of effluents.

Rain Water Harvesting System

All the rain water from road drains, roof top drains, would be collected in the rain water pit. The collected water would be recharged into the ground. All the buildings will be provided with rain water harvesting arrangement.

Sewage Treatment Plant

The sanitary waste streams from the different buildings of the plant will flow under gravity through their respective manholes. The sewage will flow from the manholes to the nearest collection chambers by gravity. The collected sewage in the collection chambers will flow through sewer lines and flow to the common collection sump. From the common collection sump the sewage will be pumped to the equalization Tank located in the STP Area.

The sewage treatment plant will be designed as per guidelines of CPHEEO Manual. The anticipated no. of users will be 1500 persons. The sewage treatment plant will be designed to handle a flow of 60 KLD considering average per capita consumption of 45 lpcd with 80% of used water generated as sewage. The Sewage Treatment Plant will be modular type based on FAB/MBBR technology followed by disinfection by Hypo and necessary tertiary treatment prior to reuse in horticulture purpose.

4.4.6 Solid Waste Management (Fly Ash Disposal)

The ash management scheme for the ash generated from powerplant will involve dry collection of flyash, supply of ash to entrepreneurs for utilization, promoting ash utilization and disposal of unused ash.

Fly ash Generation

Ministry of Environment and Forests (MoEF&CC) Notification dated 3rdNovember,2009)stipulate that "newcoaland, orlignitebasedthermal power stationand, or expansionunitscommissionedafter this notification to achieve thetargetofflyashutilization level.

Fly ash utilization level

Sl. No.	Fly ash utilization level	Target date
1.	At least 50% of fly ash generation	Oneyearfromthedateofcommissioning
2.	At least 70% of fly ash generation	Twoyearfromthedateofcommissioning
3.	90%offlyash generation	Threeyearfromthedateofcommissioning
4.	100%offlyash generation	Fouryearfromthedateofcommissioning

The unutilizedfly ashinrelationtothetarget duringayear, if any, shall be utilized within next two years in addition to the targets stipulated for these years and the balance unutilized fly target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

Ash Disposal Area

The maximum ash content of lignite is 10% having an ash generation of 577.5 TPH/unit (with GCV of 2720 kcal/kg). The ash collected in Seven (7) nos. Intermediate Surge hopper (ISH) from ESP, APH and Duct hoppers in dry form and then it is conveyed to Two (2) nos Silo of 1000 MT capacity for each unit.

Bottom ash collection & disposal would be continuous from submerged Scrapper chain conveyor (SSC – by SG package) located at the bottom of the furnace. From the SSC, bottom ash will be discharged in to a mobile conveyor for collecting the bottom ash in lorry parked below it for onward transport to the ash disposal area. In case of non availability of lorry, a mobile hopper shall be placed and bottom ash shall be collected in the mobile hopper.

Bottom ash collection & disposal would be continuous from submerged Scrapper chain conveyor located at the bottom of the furnace. The bottom ash generation is about 12 TPH/ unit.

Ash generated will be supplied to nearby manufacturers of building material, cement, and for land filling of low lying areas as per MOEF&CC guidelines.

4.4.7 Ecological Environment

4.4.7.1 Impact on Ecology

List of flora and fauna identified in the study area does not indicate any endemic or endangered Species of flora and fauna. The existing biological environment in the core zone area consists mostly of un-irrigated dry cultivated land with many barren patches. Only a few species of birds are sighted in and around the project area.

The impact on the flora of the area due to the operation of the project will mainly occur from the deposition of pollutants through air medium. Dust in the form of dry Lignite fly ash affects the biotic and abiotic components of the ecosystem individually and synergistically with other pollutants. Chronic and acute effects on plants and animals may be induced when the concentration of pollutants exceeds threshold limits. The dust particles depending upon the size and weight settle down at varying distances on vegetation and soil surfaces in the prevailing wind direction.

Deposition of dust on soil alters the physical and chemical character of soil also which may leach out in the soil and hamper plant growth at higher concentration. The pollutants normally contaminate the food chain and may create health problems to the organisms at the higher tropic level. The growth reduction and unfavorable alterations in different plant parameters under the stress of dust pollution can be described in the following manner.

- Quantitative and qualitative changes in solar radiation impinging on the leaf surface and alterations in the energy exchange process of leaf due to dust deposition.
- Decrease in chlorophyll level and injury of chloroplast.
- Interruption in gaseous exchange due to shading of cuticle and clogging of stomata by dust.
- Dust induced alterations in pH and other physico-chemical properties of soil supporting plant growth.

There will be emission of PM, SO_2 and NOx from proposed powe plant expansion. NOx and SO_2 are not consideredto be of major concern as phyto-toxicants, since several studies suggest that concentration sufficient to injure vegetation would be far above the monitored ambient levels. The gaseous pollutants are unlikely to create any adverse impact on the plants because SO_2 and NOx are phyto-toxicant at much higher level.

USEPA air quality criterion for SO_2 stipulates 0.2 ppm level (524 µg/m^3) when visible injury tosensitive vegetation in humid regions after 3 hours exposure is observed. In another criteria, level 0.5 ppm SO_2 level (1310µg/m^3) for 1 hour exposure results in visible injury to sensitive vegetation inhumid regions. At higher SO_2 concentration of 10 ppm (26214 µg/m^3), visible injury to vegetation inarid regions is observed. Such high ambient air concentration of sulphur dioxide i.e., 524 µg/m^3, is highly improbable for occurring in the study area after execution of the proposed project. USEPA air quality criteria for NOx stipulate 2 ppm level (3760 µg/m^3) when foliar injury to vegetation at 4 hoursexposure is observed. At a lower NOx concentration of 0.25ppm (470µg/m^3) during the growing period, decrease of growth and yield of tomatoes and oranges are observed. Such high ambient air concentration of nitrogen dioxide i.e., 470 µg/$m^3$is again improbable in the study area after execution of the proposed project. This will enhance the outlook and status of the area from the angle of biological diversity, aesthetic quality etc.

Impact on flora

The initial construction works at the project site involves land clearance. During construction activities vegetation may be disturbed which can be considered insignificant. The removal of vegetation from the soil and loosening of the topsoil generally causes soil erosion. Due to the present developmental activity, the number of trees, shrubs, herbs and grass species that are going to be removed are very few as it is an Industrial land. Proper care shall be taken during gaseous and liquid emissions by the industry.

Impacts on fauna

The construction phase does not envisaged excavation or alteration in water bodies hence shall not entail changes in aquatic biodiversity.

4.4.7.2 Control Measures for Biological Impacts

Necessary regulatory and statutory steps will be undertaken for Greenbelt Plantation in consultation with the state forest department authorities within the project sites.

The incremental GLC values are not likely to induce any significant changes on the flora of the study area. The dust from raw material storage and handling and ash disposal sites (dump yard) generated during dry season may have local impact to the nearby areas. However, this dust will be controlled using water sprinkling and Green covering surrounding the facility.

Greenbelt will be developed during construction to improve the aesthetic value in the area and to screen out the fugitive dust generated during construction.

However, such impacts will be confined to the project site and will be minimized through paving and water sprinkling. The option of transplantation of trees will also be studied to save the existing matured trees and replant them in the area earmarked for greenbelt development.

4.4.8 Socio economic Aspects

4.4.8.1 Impacts

The proposed expansion will be developed as per the said plant layout and there will not be any loss to public properties such as roads, canals or any public infrastructures.

The project does not involve R&R issue as the land has been acquired and in possession of NLCIL and the proposed project site doesn't displaces any human settlement or any public properties such as roads, Public utilities, Government buildings etc. Due to theproposed project there will be number of beneficial impacts in the local area such as,

- Increased direct and indirect employment opportunities for local residents.
- Development of local infrastructures such as roads, communication access,
- Appreciation in the land value,
- Increased volume of local business in the area
- Increased business opportunities for local residence in various ancillary industries such as transportation etc.

During operation phase there will not be any major adverse impact on the local people.

4.4.8.2 Mitigation Measures

- Preference to eligible local youths for employment opportunities in the proposed project.
- Socioeconomic development programs will be implemented in the area under Corporate Social Responsibility programs by the plant during the operation phase.
- Development of social infrastructure by various CSR activities.
- The CSR Programs undertaken will be focused on the livelihood empowerment, Health promotion, Education promotion, Infrastructure development programs, etc.

SIPCOT
09 AUG 2018
CHENNAI - 600 032

ABSTRACT

Land Alienation - Tiruvallur District - Gummudipoondi Taluk - Manallur Village - S.No.203/1, etc. - An extent of 203.35.5 hectare out of total extent of 219.14.5 hectare and Soorapoondi Village - S.No.1, etc. - An extent of 79.72.5 Hectare - Alienation in favour of State Industries Promotion Corporation of Tamil Nadu for the formation of Multipurpose Special Economic Zone / Industrial Park - Orders - Issued.

Revenue and Disaster Management Department, Land Disposal Wing, LD 5(2) Section

G.O.(Ms) No.285 **Dated 3.8.2018**

விளம்பி வருடம், ஆடி 18

திருவள்ளுவர் ஆண்டு **2049**

Read:-

1. From the District Revenue Officer, Tiruvallur letter No.14888/ 2008/B2, dated 28.12.2010, 28.10.2011 and 7.11.2014.
2. From the Additional Chief Secretary / Commissioner of Land Administration Letter No.B3/17048/09, dated 26.9.2014 and 16.12.2014.

In the letter second read above, the Additional Chief Secretary and Commissioner of Land Administration has stated that, the District Revenue Officer, Tiruvallur has reported as follows:-

a) In G.O (Ms) No.264, Revenue (LD7) Department dated 23.05.2008, the Government have issued orders for in principle allotment of 500 acres of Government Poramboke lands in Manallur and Soorapoondi Villages of Gummidipoondi Taluk, Thiruvallur District for the purpose of formation of multipurpose SEZ and Industrial Park and also 25 acres for the purpose of Housing Developing Schemes.

b) On behalf of the requisitioning agency the Principal Secretary / Chief Managing Director / State Industries Promotion Corporation of Tamil Nadu has given an application in the specific format, an undertaking to abide by the conditions to be imposed and consent to pay the land cost.

c) The land proposed for alienation and its classification are as detailed below.

Manallur Village :

Sl. No	S.No.	Extent in hectares	Classification	Remarks
1.	203/1	1.45.0	Punjai Anadeenam	Vacant
2.	203/3	0.33.0	Punjai Anadeenam	Black Top Road
	203/5	0.11.0	Punjai Anadeenam	Mud Road
3.	204/1	0.19.0	Punjai Anadeenam	Mud Road
	204/2	3.75.0	Punjai Anadeenam	Vacant
4.	207/1	0.28.5	Kallaankuthu	Mud Road
	207/2	3.44.0	Kallaankuthu	Percolation pond
5.	208	3.38.5	Kallaankuthu	Vacant
6.	209/1	2.76.5	Kallaankuthu	Vacant
	209/2	0.32.5	Kallaankuthu	Black Top Road
	209/3	0.74.5	Kallaankuthu	Vacant
7.	210/1	0.20.0	Kallaankuthu	Vacant
	210/2	0.17.5	Kallaankuthu	Black Top Road
	210/3	3.81.0	Kallaankuthu	Vacant
8.	211	4.54.0	Kallaankuthu	Vacant
9.	212/1	0.29.0	Kallaankuthu	Vacant
	212/2	0.23.5	Kallaankuthu	Black Top Road
	212/3	2.88.0	Kallaankuthu	Vacant
10.	213	3.01.5	Kallaankuthu	Mango – 228, Gowva – 1, Teak – 1, Sappotta – 5, Ucaliptus – 38, Mango saplings – 192, coconut – 24, well, oil Engine
11.	214	2.81.5	Kallaankuthu	Mango saplings – 210
12.	215	3.37.5	Kallaankuthu	Naga tree – 5, Banana, Coconut – 92, Teak – 48

13.	216/1	1.98.5	Kallaankuthu	Vacant
	216/2	0.37.0	Kallaankuthu	Black Top Road
	216/3	0.72.0	Kallaankuthu	Mango Tree – 34, Amla – 37, Coconut - 5, Small Concrete building with bore well
14.	217/1	0.28.0	Kallaankuthu	Vacant
	217/2	0.18.0	Kallaankuthu	Black Top Road
	217/3	3.55.5	Kallaankuthu	Vacant
15.	218/1	3.24.5	Kallaankuthu	Vacant
	218/2	0.22.0	Kallaankuthu	Black Top Road
	218/3	0.34.0	Kallaankuthu	Vacant
16.	219/1	3.69.5	Kallaankuthu	Vacant
17.	220/1	3.76.0	Kallaankuthu	Vacant
18.	223/1	4.24.0	Kallaankuthu	Villiyar colony & Pathway to Sanaputhur village
	223/4	0.69.0	Kallaankuthu	Vacant
19.	224	4.09.5	Kallaankuthu	Govt-Kalam, Mango
20.	225/1	3.73.5	Kallaankuthu	Vacant
21.	226/1	3.78.5	Kallaankuthu	Vacant
22.	227/1	2.82.5	Kallaankuthu	Vacant
	227/2	0.31.0	Kallaankuthu	Black Top Road
	227/3	0.87.0	Kallaankuthu	Vacant
23.	228	4.04.0	Kallaankuthu	Vacant
24.	229	4.05.0	Kallaankuthu	Vacant
25.	230	4.01.5	Kallaankuthu	Vacant
26.	231	4.04.5	Kallaankuthu	Vacant
27.	232	2.39.0	Kallaankuthu	Vacant
28.	233/1	2.14.5	Kallaankuthu	Vacant
29.	233/2	0.22.5	Kallaankuthu	Black Top Road
30.	234/1	2.08.5	Kallaankuthu	Vacant
	234/2	0.38.0	Kallaankuthu	Black Top Road
	234/3	1.58.0	Kallaankuthu	Vacant
31.	235/3	2.22.0	Kallaankuthu	Mango – 22, Neem – 21, Coconut–3, Cashew – 16, Kattuva–2, Building – 2

32.	236	4.14.5	Kallaankuthu	Vacant
33.	237/1	0.06.5	Kallaankuthu	Vacant
	237/2	0.09.5	Kallaankuthu	Black Top Road
	237/3	3.92.5	Kallaankuthu	Vacant
34.	238	4.04.5	Kallaankuthu	Nagai – 1, Gowva – 16, Coconut–107, Borewell – 1
35.	239	4.06.5	Kallaankuthu	Coconut – 31, Gowva – 72, Mango saplings – 459, Amla - 58
36.	240	3.28.0	Kallaankuthu	Vacant
37.	241	4.05.0	Kallaankuthu	Vacant
38.	242	4.04.5	Kallaankuthu	Vacant
39.	243	4.01.0	Kallaankuthu	Vacant
40.	244	4.18.5	Kallaankuthu	Vacant
41.	245	2.81.5	Kallaankuthu	Banyan – 2, Neem – 29, Pungan -19, palm – 1, Coconut – 41, Mango – 29, Sappota – 19
42.	248	1.76.0	Kallaankuthu	Mango, Eucaliptus
43.	249	4.04.0	Kallaankuthu	Mango, Teak and Borewell
44.	250	3.77.0	Kallaankuthu	Vacant
45.	252	3.36.0	Kallaankuthu	Vacant
46.	253	4.06.5	Kallaankuthu	Vacant
47.	270/1	13.69.0	Kallaankuthu	Vacant
	270/4	0.41.0	Kallaankuthu	Hindu Mayanam
	270/5	0.31.0	Kallaankuthu	Christian Mayanam
	270/6	0.67.5	Kallaankuthu	Black Top Road
	270/7	1.18.5	Kallaankuthu	Vacant
	270/8	1.19.0	Kallaankuthu	Vacant
48.	273	4.85.0	Kuttai	Vacant
	274/1	24.58.5	Unassessed waste	Vacant
	274/27	0.91.0	Unassessed waste	House site assignment area
	274/28	0.96.5	Unassessed waste	Black Top Road
		10.47.0	Unassessed waste	Vacant
	Total	**219.14.5**		

Soorapoondi Village :

Sl. No.	S.No.	Extent in hectares	Classification	Remarks
1.	1	4.53.5	Kallaankuthu	Vacant
2.	2	3.21.5	Kallaankuthu	Vacant
3.	3	3.53.5	Kallaankuthu	Vacant
4.	4	4.18.0	Kallaankuthu	Mango
5.	5	2.93.0	Kallaankuthu	Mango
6.	6/2	4.27.0	Kallaankuthu	Mango
7.	9/1	0.07.5	Nanjai Anadeenam	Mango - 5
8.	9/3	0.18.0	Nanjai Anadeenam	Mango - 9
9.	9/5	0.15.5	Nanjai Anadeenam	Mango - 7
10.	9/6	0.14.5	Nanjai Anadeenam	Mango - 7
11.	9/11	0.22.5	Nanjai Anadeenam	Mango – 20
12.	10/4	0.16.0	Nanjai Anadeenam	Mango - 8
13.	10/9	0.15.5	Nanjai Anadeenam	Mango - 7
14.	12/2	0.16.0	Nanjai Anadeenam	Mango - 8
15.	12/3	0.15.0	Nanjai Anadeenam	Mango - 7
16.	12/4	0.14.0	Nanjai Anadeenam	Mango - 7
17.	12/5	0.15.0	Nanjai Anadeenam	Mango - 7
18.	12/6	0.15.5	Nanjai Anadeenam	Mango - 7
19.	12/7	0.15.5	Nanjai Anadeenam	Mango - 7
20.	12/8	0.15.5	Nanjai Anadeenam	Mango - 7
21.	12/9	0.15.5	Nanjai Anadeenam	Mango – 7
22.	12/10	0.22.0	Nanjai Anadeenam	Mango - 11
23.	12/11	0.04.5	Nanjai Anadeenam	Mango - 2
24.	12/12	0.02.0	Nanjai Anadeenam	Mango - 2
25.	12/13	0.01.5	Nanjai Anadeenam	Mango - 2
26.	12/14	0.03.5	Nanjai Anadeenam	Mango – 4
27.	12/15	0.22.0	Nanjai Anadeenam	Mango – 11
28.	12/16	0.04.5	Nanjai Anadeenam	Mango – 4
29.	12/17	0.07.0	Nanjai Anadeenam	Mango – 7
30.	13/1	0.31.5	Nanjai Anadeenam	Mango – 31
31.	13/2	0.79.5	Nanjai Anadeenam	Mango – 79
32.	13/3	0.03.5	Nanjai Anadeenam	Mango – 4
33.	13/4	0.15.0	Nanjai Anadeenam	Mango – 14
34.	13/5	0.05.5	Nanjai Anadeenam	Mango – 5
35.	13/6	0.04.5	Nanjai Anadeenam	Mango – 4
36.	13/7	0.05.0	Nanjai Anadeenam	Mango - 5
37.	13/8	0.05.0	Nanjai Anadeenam	Mango – 5
38.	13/9	0.04.5	Nanjai Anadeenam	Mango – 4
39.	15	3.79.0	Punjai Anadeenam	Vacant

40.	16/1	2.79.0	Punjai Anadeenam	Percolation pond and well
41.	37/1	1.54.0	Punjai Anadeenam	Vacant
42.	38	3.94.0	Kallaankuthu	Well - 1
43.	39	3.82.0	Kallaankuthu	Vacant
44.	40	3.15.5	Kallaankuthu	Vacant
45.	41	3.65.5	Kallaankuthu	Vacant
46.	42	3.98.5	Kallaankuthu	Vacant
47.	43	3.46.5	Kallaankuthu	Vacant
48.	44	4.29.0	Kallaankuthu	Vacant
49.	45	3.09.0	Kallaankuthu	Vacant
50.	46	2.78.0	Kallaankuthu	Vacant
51.	47	4.28.0	Kallaankuthu	Vacant
52.	48	4.19.0	Kallaankuthu	Vacant
53.	49	2.28.5	Kallaankuthu	Vacant
54.	56/2	1.48.0	Kallaankuthu	Eucaliptus tree & 2 Concrete house.
	Total	**79.72.5**		

d) The statutory A1-Notices have been published in Manallur and Soorapoondi Villages on 15.8.2009 and 18.4.2010 respectively and no objections have been received.

e) The statements of Village Administrative Officer / Public of the Manallur and Soorapoondi have been obtained.

f) The filled in questionnaire in Form I to VII with recommendation of the District Revenue Officer, Tiruvallur thereon have been enclosed.

g) The resolution of the concerned Village Panchayat have been obtained.

h) The District Revenue Officer, Thiruvallur has inspected the suit lands on 5.2.10 and 16.8.14 and reported the following ground realities in suit lands.

- In land measuring an extent of 4.24.0 Hectare in S.No.223/1 around 65 families belongs to Irular (Villiyar) community have been living for the past 25 years and resettlement and rehabilitation of this families are difficult process.
- A percolation pond is situated in S.No.207.
- In S.No.270/4 and 270/5, a Hindu Mayanam and Christian Burial ground are situated and being utilized by public. Further an encroachment by way of concrete building is also exist in S.No.270/1.

- Admist of proposed Poramboke lands, patta lands measuring an extent of 0.18.0 Hectare in S.No.226/2, 0.81.5 Hectare in S.No.235/1, 1.60.0 Hectare in S.No.235/2 and an extent of 0.93.0 Hectare in S.No.233/3 exist.

- A black Top road (Thar road) bisects the proposed land. This road has been utilized by the public of Madarpakkam to approach Sanaputhur Village. Though, it is not a plan marked detail, on ground reality, it is under the usage of public.

- There are various kinds of trees, such as Mango, Coconut, Gouva, Neem, Palm trees, etc standing in the suit land, for which the tree value has been worked out as Rs.19,19,253/-

- Apart from this, no other Structures, Places of worship, monuments are exists. No HT/LT line passing through the suit land.

2. As regards the fixation of land cost, the District Revenue Officer, Tiruvallur has collected the sale statistics from the concerned Sub-Registrar's Office for the period from 01.07.2013 to 31.07.2014. During this period, 50 sales have taken place and all the sales have been discarded for various reasons, except the sale in Sl.No.19, where in, an extent of 0.98 acre in S.No.262/3C was sold to Rs.7,84,000/- vide Document No.6785/2011 Dated 26.12.2013. Accordingly, the value of 1.00 acre of land works out to Rs.8,00,000/- per acre.

3. The revised Guide Line Value as on 01.04.2012 has also been registered as Rs.8,00,000/- per acre. Based on this, the tentative land cost for the proposed land is worked out as follows:

Value of 1.00 acre of land	=Rs.	8,00,000/-
Value of 1.00 Hectare of land	=Rs.	19,77,000/-
Value of 293.72.0 Hectare of land	=Rs.	58,06,84,440/-
12% Notional increase for 2013	=Rs.	6,50,36,657/-
	=Rs.	64,57,21,097/-
12% Notional increase for 2014	=Rs.	7,74,86,532/-
Total	=Rs.	72,32,07,629/-
Tree value	=Rs.	19,19,253/-
Total	=Rs.	72,51,26,882/-

4. Finally, the District Revenue Officer, Tiruvallur has recommended the proposal for alienation of land to an extent of 213.99.5 Hectare of Government Poramboke lands

in S.No.203/1 etc., of Mannallur Village and an extent of 79.72.5 Hectare of Government Poramboke lands in S.No.1 etc., of Soorapoondi Village, Gummidipoondi Taluk, Tiruvallur District, in favour of SIPCOT on collection of Double the land cost and other charges with usual terms and conditions as laid down under RSO 24(6), for the purpose of formation of SEZ/IT Park.

5. The Additional Chief Secretary and Commissioner of Land Administration has stated that among the lands identified for alienation, an extent of 4.24.0 Hectare of land in S.No.223/1 has been excluded from the alienation, for the reason that a Villiyar (Irular) colony exists on this land with 65 families and the land is also situated at the edge of the project area. Similarly, an extent of 0.91.0 Hectare of land in S.No.274/27 has also been excluded from the alienation, as it forms a residential area and is situated at the corner of the project area. It is seen from the combined sketch, a Kuttai (Chintala Gunta) measuring an extent of 4.85.0 Hectare in S.No.273 is also seen at one end of the project site and have been proposed for alienation. This part of the land may also be excluded as it is a water course and is essential to maintain the ground water level. Further, there are patta lands also spread over the project area, for which, the requisitioning agency has got an "in principle" order to go in for acquisition.

6. The Additional Chief Secretary and Commissioner of Land Administration has further stated that, in this case, the District Revenue Officer, Tiruvallur has recommended for alienation, on collection of Double the land cost. But, as per the Guide Lines issued in Government Letter (Ms) No.477 Revenue Department, dated.23.8.07, Single Market Value is being fixed and collected from the SIPCOT for the Government lands alienated to implement their project. Hence, single market value has been adopted for fixing the land cost for the proposed lands and the Additional Chief Secretary / Commissioner of Land Administration has stated that originally, the SIPCOT has sought for alienation of 219.14.5 hectare of Government Poramboke lands in S.No.203/1 etc of Manallur Village and 79.72.5 hectare of Government Poramboke lands in Soorapoondi Village, Gummidipoondi Taluk, Tiruvallur District for formation of Special Economic Zone / Industrial Park.

7. Among the lands identified for alienation, the lands situated in the following Survey Numbers have been suggested to be excluded from alienation for the reason noted therein:-

Sl.No.	S.No.	Classification	Extent (in hectares)	Reason for exclusion
1.	223/1	Kalankuthu	4.24.0	Villiyar Colony and Pathway to Sanaputhur Village
2.	274/27	Unassessed Waste	0.91.0	Residential area assignment of House site
3.	273	Kuttai	4.85.0	Water Course
		Total	**10.00.0**	

8. Accordingly, the Additional Chief Secretary/ Commissioner of Land Administration has forwarded the proposal to the Government for alienation of land to an extent of 209.14.5 hectare as against the original extent of 219.14.5 hectare in Manallur Village and an extent of 79.72.5 hectare of land in Soorapoondi Village in favour of SIPCOT.

9. The District Collector, Tiruvallur has inspected the lands in question and recommended to exclude the lands in S.No.223/1, 274/27 and 273. Further, he has also opted to retain the lands in which pathway leading to Sanaputhur Village for the reason that the restriction of Public on this road may cause inconvenience to public and also stated that relocation of mayanam and cemetery is not advisable as people are using these places and may cause inconvenience and also adversely affect their sentimental feeling. Hence, he has suggested to exclude the following Survey Numbers, the total area of 15.79.0 hectare of land from the original extent of 219.14.5 hectare.

Sl.No.	S.No	Classification	Extent (in hecatre)	Present Use
1.	203/5	Dry Assessed Waste	0.11.0	Sanaputhur Village Road to Agriculture land Road
2.	204/1	Dry Assessed Waste	0.19.0	
3.	207/1	Kallanguthu	0.28.5	
4.	203/3	Dry Assessed Waste	0.33.0	Sanaputhur Village to Gummidipoondi link Tar Road
5.	209/2	Kallanguthu	0.32.5	
6.	210/2	Kallanguthu	0.17.5	
7.	212/2	Kallanguthu	0.23.5	
8.	216/2	Kallanguthu	0.37.0	
9.	217/2	Kallanguthu	0.18.0	
10.	218/2	Kallanguthu	0.22.0	
11.	227/2	Kallanguthu	0.31.0	
12.	233/2	Kallanguthu	0.22.5	
13.	234/2	Kallanguthu	0.38.0	
14.	237/2	Kallanguthu	0.09.5	
15.	270/6	Kallanguthu	0.67.5	
16.	274/28	Un Assessed Waste	0.96.5	Mannalur to Pannar Road
17.	270/4	Kallanguthu	0.41.0	Hindu mayanam
18.	270/5	Kallanguthu	0.31.0	Christian Cemetry
19.	274/27	Un assessed Waste	0.91.0	Residential Area (part)
20.	223/1	Kallanguthu	4.24.0	Villiyar Colony and Sanaputhur Village Road
21.	273	Kuttai	4.85.0	Kuttai
		Total	**15.79.0**	

10. The Additional Chief Secretary and Commissioner of Land Administration has stated that, the reasons brought out by the District Collector, Tiruvallur for retaining the above lands are worth consideration as the ground reality and because of Public inconvenience to be caused, the existing road might be retained and also the mayanam as well. Further, the formation of road by separate subdivision on the above lands will not affect the project. Hence, the Additional Chief Secretary/ Commissioner of Land Administration has recommended the proposal to Government as formulated by the District Collector, Tiruallur for issuing necessary orders in favour of SIPCOT for the formation of Special Economic Zone / Industrial Park.

11. The Government, after careful examination, have decided to accept the proposal of District Revenue Officer, Tiruvallur as recommended by the Additional Chief Secretary / Commissioner of Land Administration and accordingly order to alienate the land to an extent of 203.35.5 Hectare (219.14.5-15.79.0) out of total extent of 219.14.5 Hectare in S.No.203/1, etc. of Manallur Village and an extent of 79.72.5 Hectare of land in S.No.1, etc. of Soorapoondi Village, Gummidipoondi Taluk, Tiruvallur District in favour of State Industries Promotion Corporation of Tamil Nadu for the formation of multipurpose Special Economic Zone / Industrial Park on collection of Single Market Value or Guide Line Value whichever is higher as the land cost prevailing on the date of alienation after adjusting the amount of Rs.70 crores paid by State Industries Promotion Corporation of Tamil Nadu with usual terms and conditions as laid down under RSO 24 as annexed to this order with the following special conditions.

Conditions:

(i) Stone charges, sub division charges and tree value of Rs.8,83,882.00 should be collected from the requisitioning body.

(ii) The requisitioning body should abide by all the conditions imposed by the Government.

(iii) The land should be used only for the purpose for which it is alienated.

(iv) The requisitioning body should return the land or part thereof to the Revenue Department if it is no longer required.

Special Conditions:

a) The "in principle order" issued for this project on 23.05.2008 requires major revision. Administrative Sanction has to be issued by the Industries Act for the patta lands which have to be acquired. The District Collector has to co-ordinate this exercise with the requisitioning body.

b) The District Collector, Tiruvallur shall issue the Inevitability Certificate at the time of land acquisition of patta lands.

12. The Additional Chief Secretary / Commissioner of Land Administration and the District Collector, Tiruvallur District are requested to take further action as per the orders issued in paragraph 11 above and the District Collector, Tiruvallur District is also instructed to make necessary changes in the Revenue Records within a month.

(BY ORDER OF THE GOVERNOR)

ATULYA MISRA
PRINCIPAL SECRETARY TO GOVERNMENT

To

The Additional Chief Secretary /Commissioner of
Land Administration, Chepauk, Chennai-5.
The District Collector, Tiruvallur District.
State Industries Promotion Corporation of Tamil Nadu (SIPCOT)
19-A, Rukmani Lakshmipathy Road,
Egmore, Chennai - 600 008.

Copy to

The Industries Department, Secretariat, Chennai-9.
The E& F Department, Secretariat, Chennai-9.
The Rural Development and Panchayat Raj Department, Secretariat, Chennai-9.
The Finance (Revenue and Disaster Management) Department,
Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Minister
(Revenue and Disaster Management), Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Chief Minister, Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Deputy Chief Minister,
Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Minister (Industries),
Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Minister, (Forest), Secretariat, Chennai-9.
The Special Personal Assistant to Hon'ble Minister,
(MA & RD , Impn. Spl. Prog.) Secretariat, Chennai-9.
The Private Secretary to Principal Secretary to Government,
(Revenue and Disaster Management Department), Secretariat, Chennai-9.
Stock file /Spare Copy.

//Forwarded by Order//

3.8.2018.
Section Officer

3.8.18

Annexure
Conditions laid down under RSO 24(6)

(i) **Condition for the grant of State land**:-

(1) The land shall be used by the State Industries Promotion Corporation of Tamil Nadu for the formation of Multipurpose Special Economic Zone / Industrial Park and for no other purpose.

(2) The Government may resume the land wholly or in part with any buildings there on in the event of the infringement of any of the conditions of the grant. In the event of such resumption, no compensation shall be payable for any improvements that may have been effected or other works that may have been executed on the land by the grantee and the grantee shall not be entitled to the repayment of any amount that may have been paid to the Government for the grant. If there are buildings on the land the Government may direct the grantee to remove them.

The land, if utilized for commercial purposes, when the grant is made free of land value, the beneficiary shall be liable to pay the market value of the land either totally or for the portion converted into commercial purposes as decided by the Government.

(3) The Government may resume the land wholly or in part, with any buildings thereon if in the opinion of the Government the land is required for a public purpose or for conducting mining operations. In the event of such resumption or in the event of the acquisition of the land for any reason, the compensation payable for the land and trees, shall in no case exceed the amount paid for them by the grantee or their value at the time of resumption or acquisition whichever may be less.

(4) In the event of resumption under condition (3), if there are buildings on the land the Government shall pay compensation for them in accordance with the provisions of conditions (5).

(5) In the event of the resumption of the land under condition (3) or in the event of the acquisition of the land for any reason the compensation payable for buildings or other improvements shall in no case exceed the amount paid for them by the grantee at the time of grant or their value at the time or resumption or acquisition whichever may be less together with the initial cost or the value at the time of resumption or acquisition, whichever may be less of any buildings erected or other improvements effected on the land by grantee in accordance with the terms of the grant. The amount of any grant made by the Government towards the cost of the buildings or other improvements shall be deducted from the compensation payable under this condition.

(6) In the event of the grantee refusing to remove the buildings, when so directed under condition (2), the Government may remove them and realize the cost of the removal by the sale of the materials.

(7) In the event of the voluntary relinquishment of the land by the grantee, no compensation shall be payable for any improvements that may have been effected or for works that may have been executed on the land by the grantee but the grantee shall be entitled to the repayment of any amount that may have been paid to the Government, for the grant or the value of the land at the time of relinquishment, whichever may be less.

(8) The Government reserve to themselves the right to all sandalwood trees and their branches and roots which exist at the time of grant as well as those which may grow subsequently on the land and the Government shall be at liberty to cut or dig out any such trees or their roots and branches and remove them from the land and dispose of them at their pleasure. The grantee shall not be entitled to cut or remove them or cause them to be or removed without permission of the collector of the district.

(9) The grantee shall take all reasonable measures to the satisfaction of the Collector of the district for the protection of the sandalwood trees from theft or damage and for the careful protection of the immature trees growing on the land.

(10) The grantee shall take steps to see that the marks made by the officers of the Government on the sandalwood trees are preserved and are not tampered with.

(11) In the event of the infringement of, or failure to observe, any of the conditions (8) to (10), the grantee shall pay to the Government such compensation as it determined by the Collector of the district for any loss or damage caused by such infringement or failure on his part. The Government shall also be at liberty to resume the land and re-enter on it and the whole land shall thereupon vest absolutely in the Government. In that case the grantee shall not be entitled to any compensation whatever.

Note:- When lands are placed at the disposal of a person, an institution or a local body in the districts noted below, the conditions (8) to (11) above relating to the reservation of sandalwood trees should be scored out:-

Chengalpattu, Thanjavur, Chennai

When the lands are placed at the disposal of the institution on payment of the cost of the land, the said cost should be paid within a period of 30 days from the

date of issue of orders. In cases of failure, compound interest at the prevailing rates will have to be paid by the beneficiary, till the cost of the land is fully paid.

G.O.Ms.No.3410, Revenue, dated 7.9.1956
B.P.Ms.No.1316, dated 20.9.1956
G.O.Ms.No.3646, Revenue, dated 26.7.1957
B.P.Ms.No.1009, dated 2.8.1957

These conditions are not intended to be exhaustive and it is open to the authority competent to sanction such grants to impose such additional conditions as it may think fit. The conditions need not be very stringent when land is granted on payment of value. Where the disposal of land is ordered free of charge to local bodies for public purposes, an additional condition should be inserted reserving the right to the Government to collect the value of the land in the event of the local bodies deriving a substantial income from it. Whenever it is proposed to place land at the disposal of a school, the question whether the land is in a locality accessible to members of all communities should be examined. One of the conditions of grant should be that the school shall be open to members of all communities. In the case of grants of land for school playgrounds and other purposes where the erection of any expensive buildings would be inconsistent to the object of the grant, the further condition should be imposed that the grant shall be liable to forfeiture without any compensation if buildings are erected on the land without the previous sanction of the State Government or other competent authority. In all cases a condition should be imposed prohibiting the construction without the previous permission of the collector or buildings other than those to be specified and providing that no compensation shall be payable in the event of resumption or acquisition or any building erected without such permission. If the condition is considered unsuitable in any particular case, e.g. where the extent is petty and there is a building already on the site, the reasons for omitting the condition should be fully explained. In order that these conditions, which should be set out in full in every case, may be duly enforced a register of all land granted should be maintained in every village and Taluk office in the form prescribed in the village and Taluk accounts.

(12) In cases where the land granted is more than 50 cents in extent, the grantee shall plant and maintain at least 5 suitable trees per acre within one year from the date of grant.

Govt.Memo.No.608121/60-28, Revenue, dated 13.8.1963,
B.P.Ms.No.1833, dated 30.9.1963.

(ii) Lands acquired at the cost of the grantee:- In the case of land acquired at the cost of private institutions or associations under the provision of the Land Acquisition Act, for educational or other public purposes and placed at the disposal of

the institutions or associations, the following conditions should be imposed in the place of conditions; (1) to (7) in the previous sub-paragraph:-

(1) The land shall be used for ..... and for no other purpose.

(2) The Government may resume the land wholly or in part, with any buildings thereon, if, in their opinion, the land is required for a public purpose or for conducting mining operations. In the event of such resumption, the compensation payable for the land and trees shall be the amount paid for them by the grantee at the time of the acquisition, including the 30 percent solatium, or the value all the time of resumption together with 30 percent thereof, whichever may be less. If there are buildings on the land, the Government shall pay compensation for them in accordance with provision of condition (3).

(3) In the event of the resumption of the land under condition (2) the compensation payable for the buildings and other improvements shall be the amount paid for them by the grantee at the time of the acquisition including the 30 percent solatium or their value at the time of resumption by the Government together with 30 percent thereof, whichever may be less, together with the initial cost of the value at the time of resumption, whichever may be less, of any buildings erected and other improvement effected on the land by the grantee in accordance with the terms of the grant plus 15 percent of such cost or value.

(4) In the event of the infringement of any of the conditions of the alienation, or in the event of the voluntary relinquishment of the land by the grantee, the Government may resume the land if it is required for a public purpose or if the Government considered the land should be returned to the original owner. If the Government decide not to exercise its power and inform the grantee accordingly, the latter may dispose of the land in any manner he likes, subject to his repaying to the Government the amount of any grant made by them towards the cost of the lands and of the buildings or other improvements. In the event of the resumption of the land under this condition, the compensation payable to the grantee shall be the value of the land at the time of acquisition (less the 30 percent awarded for compulsory acquisition) or its value at the time of resumption whichever may be less, together with the value of buildings and other improvements, at the time of resumption. If there are buildings on the land, which the Government do not require the grantee shall remove them at his cost. In the event of the grantee refusing to remove the buildings, the Government may remove them and realize the cost of the removable by the sale of the materials.

(5) The amount of any grant made by the Government towards the cost of the land of the buildings or other improvements shall be deducted from the compensation payable under conditions (2), (3) and (4).

Note:- The following should be added at the end of the order of placing at the disposal of land above the signature of the officer executing the grant:-

" In witness whereof, I, (name and designation) acting for and on behalf of and by order and direction of the Governor of Tamil Nadu have hereunto set my hand this ..... day of .....

B.P.Press 124, dated 14.11.1941
G.O.Ms.3410, Revenue, dated 7.9.1956
B.P.Ms.No. 1316, dated 20.9.1956

Before ordering resumption of the land, the concerned authority shall give a reasonable opportunity to the beneficiary and hear him, if necessary. However, in the case of emergency, the land may be resumed by the competent authority specifically recording the reasons there for.

ATULYA MISRA
PRINCIPAL SECRETARY TO GOVERNMENT

//True copy//

3.8.2018.
Section Officer

3.8.18

திருவள்ளூர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறைகள்
முன்னிலை : திருமதி.மகேஸ்வரி ரவிக்குமார்., இ.ஆ.ப

ந.க.எண்.12162 /2020/அ2 நாள்: 7.09.2020.

பொருள்: முன் நுழைவு அனுமதி - நில உரிமை மாற்றம்- திருவள்ளூர் மாவட்டம் - கும்மிடிப்பூண்டி வட்டம் - வாணியமல்லி கிராமம் - புல எண். 1 மற்றும் பல - மொத்த பரப்பு 274.68.0 ஹெக்டேரில் 253.58.0 ஹெக்டேர் கல்லாங்குத்து மற்றும் பல வகைப்பாடு கொண்ட நிலத்தினை சிப்காட் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைக்க - முன் நுழைவு அனுமதி வழங்கி உத்திரவிடுதல் - தொடர்பாக.

பார்வை:
1. மேலாண்மை இயக்குநர் தமிழ்நாடு தொழில் வளர்ச்சிக் கழகம் அவர்களது கடிதம் எண்.LA/Addl.Lands/GMPD/TK/2019 நாள்:20.09.2019.
2. G.O.Ms.No.241, Revenue and Disaster Management department (Land Disposal Wing, LD-5(1)) dated:16.02.2020.
3. மேலாண்மை இயக்குநர், SIPCOT, சென்னை அவர்களின் நேர்முக கடித எண். Sipcot/LA/Addl Lands/GMPD TK-2019 நாள்:24.06.2020.
4. கும்மிடிப்பூண்டி வட்டாட்சியர் அவர்களின் அறிக்கை ந.க.632/2020/அ1. நாள்.08.08.2020.
5. பொன்னேரி வருவாய் கோட்டாட்சியர் அவர்களின் ந.க.எண்.1490/2020/அ2, நாள்:14.08.2020.

உத்தரவு:-

திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், வாணியமல்லி கிராமம், புல எண்கள். 1 மற்றும் சில புலங்களில் மொத்த பரப்பு 274.68.0 ஹெக்டேரில் 253.58.0 ஹெக்டேர் கல்லாங்குத்து மற்றும் பல வகைப்பாடு கொண்ட நிலத்தினை சிப்காட் தொழிற் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைப்பதற்கு நில உரிமை மாற்றம் (Land Alienation) செய்து தரக்கோரி பார்வை ஒன்றில்ட காணும் கடிதத்தில் சிப்காட் தொழில் நிறுவனத்தின் மேலாண்மை இயக்குநர் கோரியுள்ளார்.

2) இந்நேர்வில், பார்வை நான்கு மற்றும் ஐந்தில் காணும் கடிதங்களில், கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் தங்களது அறிக்கையை கீழ்கண்டவாறு சமர்பித்துள்ளனர்.

3) திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.15 வாணியமல்லி கிராமத்தில் சிப்காட் நிறுவனம் நில உரிமை மாற்றம் செய்யவுள்ள அரசு புறம்போக்கு நிலங்கள் கிராம கணக்கில் கீழகண்டவாறு தாக்கலாகியுள்ளது.

வ. எண்	புல எண்	புதிய புல எண்/ உட்பிரிவு	வகைபாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	நில உரிமை மாற்றம் செய்யவுள்ள விஸ்தீரணம்		புலத்தில் உள்ள விபரங்கள்
					ஹெக்டேர்	ஏக்கர்	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	1	1	கல்லாங்குத்து	3.62.0	3.62.0	8.94	பள்ளம்
2	2	2	கல்லாங்குத்து	4.05.5	4.05.5	10.02	பள்ளம்
3	3/1	3/1	கல்லாங்குத்து	3.33.5	3.33.5	8.24	மா செடிகள்-50 (3 வருடம்)
4	4	4	கல்லாங்குத்து	4.24.5	4.24.5	10.49	மா செடிகள்-112 (4 வருடம்) தென்னை மரங்கள்-40 (4 வருடம்) தளம் வீடு-2, ஓடு வீடு-1, போர்-1
5	5	5	கல்லாங்குத்து	4.32.0	4.32.0	10.67	மா செடிகள்-82 (2 வருடம்) போர்-3 தளம் வீடு -4
6	6/1	6/1	கல்லாங்குத்து	2.13.0	2.13.0	5.26	மா செடிகள், -84 தென்னை -38 தளம் வீடு-1,
7	7/1	7/1	அனாதீனம்	0.40.0	0.40.0	0.99	ரோடு
8	7/9	7/9	அனாதீனம்	1.13.0	1.13.0	2.79	தைலம் மரங்கள்-10 (வருடம் -2) ஓடு வீடு-5
9	10/1	10/1	கல்லாங்குத்து	0.20.0	0.20.0	0.49	வழி
10	10/2	10/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00	தைலம் மரங்கள் - 62 (வருடம் -10)
11	10/4	10/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00	தைலம் மரங்கள்-42 (வருடம் 10)
12	10/5	10/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00	தைலம் மரங்கள்
13	11/1	11/1	கல்லாங்குத்து	1.38.5	1.38.5	3.42	தைலம் மரங்கள் - 28 (6 வருடம்) கிணறு
14	11/2	11/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00	தைலம் -36 மரங்கள் (5 வருடம்)
15	11/3	11/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00	தைலம் மரங்கள்-42 (5 வருடம்)
16	12	12	கல்லாங்குத்து	3.10.5	3.10.5	7.67	தைலம் மரங்கள், -40 (5 வருடம்) ஓடு வீடு-2,
17	13	13	கல்லாங்குத்து	5.43.0	5.43.0	13.41	பள்ளம்
18	14	14	கல்லாங்குத்து	5.76.5	5.76.5	14.24	பள்ளம்

19	15	15	கல்லாங்குத்து	4.14.0	4.14.0	10.23	பள்ளம்
20	16	16	கல்லாங்குத்து	3.74.0	3.74.0	9.24	மா செடிகள்-150 (7 வருடம்) ஓடு வீடு-1, போர்-1
21	17	17	கல்லாங்குத்து	2.92.0	2.92.0	7.21	மா செடிகள்-220) 7 வருடம், ஓடு வீடு-1, போர்-1
22	18/1	18/1	கல்லாங்குத்து	2.80.0	2.80.0	6.92	மா செடிகள்-54 (5 வருடம்) பலா மரங்கள்-5, போர்-2
23	19	19	கல்லாங்குத்து	3.54.0	3.54.0	8.74	மா செடிகள் (வீடு -2)
24	20	20	கல்லாங்குத்து	4.74.0	4.74.0	11.70	பள்ளம்
25	24	24	கல்லாங்குத்து	2.02.5	2.02.5	5.00	தைலம் செடிகள் (3 வருடம்)
26	26/1	26/1	கல்லாங்குத்து	2.23.5	2.23.5	5.52	மா செடிகள், 80 (3 வருடம்)
27	26/2	26/2	கல்லாங்குத்து	0.31.0	0.31.0	0.77	மா செடிகள் 30 (3 வருடம்)
28	27/1	27/1	கல்லாங்குத்து	0.50.0	0.50.0	1.24	மா மரங்கள், போர்-1
29	27/2	27/2	கல்லாங்குத்து	3.26.0	3.26.0	8.05	காலி மனை மற்றும் ரோடு
30	27/3	27/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா செடிகள், 50 (2 வருடம்)
31	28/1	28/1	கல்லாங்குத்து	0.56.0	0.56.0	1.38	ரோடு
32	28/3	28/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00	ஓடு வீடு-1, மா செடிகள்-30 வருடம் -2)
33	28/4	28/4	கல்லாங்குத்து	0.63.0	0.63.0	1.56	தேக்கு மரம்-10 (4 வருடம்)
34	28/5	28/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00	காலி
35	28/6	28/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00	காலி
36	28/7	28/7	கல்லாங்குத்து	0.74.0	0.74.0	1.83	க்காலி
37	28/8	28/8	கல்லாங்குத்து	0.07.0	0.07.0	0.17	மாசெடிகள்-20, போர்-1
38	31/2	31/2	கல்லாங்குத்து	0.94.0	0.94.0	2.32	பள்ளம்
39	31/3	31/3	கல்லாங்குத்து	0.16.0	0.16.0	0.40	பள்ளம்
40	31/4	31/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00	பள்ளம்
41	36	36	மேடு	5.53.0	5.53.0	13.66	காலி,பள்ளம்
42	38/1	38/1	மேடு	1.35.0	1.35.0	3.33	பள்ளம்
43	39/3	39/3	தோப்பு	0.31.0	0.31.0	0.77	காலி
44	40/7	40/7	கல்லாங்குத்து	0.08.0	0.08.0	0.20	காலி
45	41/3	41/3	கல்லாங்குத்து	0.19.5	0.19.5	0.48	காலி
46	41/4	41/4	அனாதீனம்	0.38.5	0.38.5	0.95	காலி
47	41/12	41/12	அனாதீனம்	0.06.5	0.06.5	0.16	காலி

48	41/13	41/13	அனாதீனம்	0.01.0	0.01.0	0.02	காலி
49	41/20	41/20	கல்லாங்குத்து	0.44.5	0.44.5	1.10	காலி
50	41/22	41/22	அனாதீனம்	0.11.5	0.11.5	0.28	காலி
51	42/17	42/17	அனாதீனம்	0.07.5	0.07.5	0.19	காலி
52	47/1	47/1	அனாதீனம்	0.22.5	0.22.5	0.56	காலி
53	50/5	50/5	அனாதீனம்	0.26.5	0.26.5	0.65	காலி
54	59/1	59/1	அனாதீனம்	0.69.5	0.69.5	1.72	காலி
55	61/1	61/1	அனாதீனம்	0.13.0	0.13.0	0.32	காலி
56	61/3	61/3	அனாதீனம்	0.25.5	0.25.5	0.63	காலி
57	61/13	61/13	மேடு	0.15.0	0.15.0	0.37	காலி
58	62/1	62/1	மேடு	1.09.5	1.09.5	2.70	காலி
59	62/10	62/10	மேடு	0.44.0	0.44.0	1.09	காலி
60	63/1	63/1	அனாதீனம்	0.58.0	0.58.0	1.43	காலி
61	64/1	64/1	மேடு	0.06.0	0.06.0	0.15	காலி
62	89/1	89/1	அனாதீனம்	0.26.5	0.26.5	0.65	காலி தைலம் செடிகள் 30- (2 வருடம்)
63	89/9	89/9	அனாதீனம்	0.17.5	0.17.5	0.43	தைலம் செடிகள்
64	90/6	90/6	அனாதீனம்	0.49.0	0.49.0	1.21	காலி
65	94/9	94/9	அனாதீனம்	0.23.0	0.23.0	0.57	காலி
66	98/2	98/2	கல்லாங்குத்து	2.99.5	2.99.5	7.40	காலி
67	142/1	142/1	அனாதீனம்	0.23.0	0.23.0	0.57	காலி
68	175/2	175/2	அனாதீனம்	1.74.0	1.74.0	4.30	தைலம் -40 செடிகள் - 3 வருடம்
69	175/3	175/3	அனாதீனம்	1.74.0	1.74.0	4.30	தைலம் -26 செடிகள்-3 வருடம்
70	175/4	175/4	அனாதீனம்	1.75.0	1.75.0	4.32	தைலம் செடிகள்-28 (2 வருடம்)
71	176/1	176/1	அனாதீனம்	0.10.5	0.10.5	0.26	தைலம் செடிகள்-30
72	176/2	176/2	அனாதீனம்	0.90.0	0.90.0	2.22	தைலம் -30 செடிகள்
73	176/3	176/3	கல்லாங்குத்து	2.92.0	2.92.0	7.21	தைலம்-25 செடிகள்
74	177	177	கல்லாங்குத்து	5.31.0	5.31.0	13.12	தைலம் செடிகள்
75	178/1	178/1	கல்லாங்குத்து	5.04.5	5.04.5	12.46	பள்ளம் தைலம் செடிகள் 26 (2 வருடம்)
76	179	179	கல்லாங்குத்து	4.21.5	4.21.5	10.41	பள்ளம் தைலம் செடிகள் 42 (2 வருடம்)
77	180/1	180/1	கல்லாங்குத்து	0.27.0	0.27.0	0.67	மா -20 செடிகள் (2 வருடம்)
78	180/2	180/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா -20 செடிகள் (2 வருடம்)

79	180/3	180/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 20 செடிகள் (2 வருடம்)
80	180/4	180/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 20 செடிகள் (2 வருடம்)
81	180/5	180/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 20 செடிகள் (2 வருடம்)
82	180/6	180/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 28 செடிகள் (2 வருடம்)
83	181/1	181/1	கல்லாங்குத்து	0.78.5	0.78.5	1.94	மா 26 செடிகள் (2 வருடம)
84	181/2	181/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 22 செடிகள் (2 வருடம்)
85	181/3	181/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 26 செடிகள் (2 வருடம்)
86	181/4	181/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா 24 செடிகள் (2 வருடம்)
87	182	182	கல்லாங்குத்து	3.70.0	3.70.0	9.14	பள்ளம்
88	183	183	கல்லாங்குத்து	2.55.0	2.55.0	6.30	பள்ளம்
89	184	184	கல்லாங்குத்து	2.66.5	2.66.5	6.58	தைலம் செடிகள் 43 - (வருடம் -5)
90	185	185	கல்லாங்குத்து	3.71.0	3.71.0	9.16	காலி மனை
91	188/2	188/2	அனாதீனம்	1.34.5	1.34.5	3.32	
92	188/3	188/3	கல்லாங்குத்து	0.38.0	0.38.0	0.94	மா செடிகள் - 100
93	188/4	188/4	கல்லாங்குத்து	0.15.5	0.15.5	0.38	மா செடிகள் - 100
94	188/5	188/5	கல்லாங்குத்து	0.59.0	0.59.0	1.46	மா செடிகள் - 100
95	189/1	189/1	அனாதீனம்	1.19.5	1.19.5	2.95	பள்ளம்
96	189/2	189/2	அனாதீனம்	1.19.0	1.19.0	2.94	பள்ளம்
97	189/3	189/3	அனாதீனம்	0.26.5	0.26.5	0.65	பள்ளம்
98	189/4	189/4	அனாதீனம்	1.25.0	1.25.0	3.09	பள்ளம்
99	197/2	197/2	அனாதீனம்	1.06.0	1.06.0	2.62	காலி
100	198/1	198/1	அனாதீனம்	0.85.5	0.85.5	2.11	காலி
101	199	199	கல்லாங்குத்து	3.95.0	3.95.0	9.76	காலி, பள்ளம்
102	200	200	கல்லாங்குத்து	3.34.0	3.34.0	8.25	பள்ளம்
103	201	201	கல்லாங்குத்து	3.95.5	3.95.5	9.77	பள்ளம்
104	202	202	கல்லாங்குத்து	4.17.5	4.17.5	10.31	பள்ளம்
105	203	203/1	கல்லாங்குத்து	5.91.5	4.29.5	10.60	பள்ளம், காலிமனை
106	204/6	204/6	அனாதீனம்	0.28.0	0.28.0	0.69	பள்ளம்
107	204/10	204/10	அனாதீனம்	0.71.5	0.71.5	1.77	பள்ளம்
108	205/2	205/2	அனாதீனம்	1.35.5	1.35.5	3.35	பள்ளம்
109	206	206	அனாதீனம்	2.87.0	2.87.0	7.09	பள்ளம்

110	207/1	207/1	கல்லாங்குத்து	2.03.0	2.03.0	5.01	பள்ளம்
111	207/2	207/2	கல்லாங்குத்து	0.54.5	0.54.5	1.35	காலி மனை
112	207/3	207/3	கல்லாங்குத்து	0.14.5	0.14.5	0.36	காலி மனை
113	207/4	207/4	கல்லாங்குத்து	0.45.5	0.45.5	1.12	காலி மனை
114	207/5	207/5	கல்லாங்குத்து	0.25.5	0.25.5	0.63	காலி மனை
115	207/6	207/6	கல்லாங்குத்து	0.10.5	0.10.5	0.26	காலி மனை
116	207/7	207/7	கல்லாங்குத்து	0.32.5	0.32.5	0.80	காலி மனை
117	207/8	207/8	கல்லாங்குத்து	0.48.0	0.48.0	1.19	காலி மனை
118	207/9	207/9	கல்லாங்குத்து	0.51.5	0.51.5	1.27	காலி மனை
119	208/1	208/1	கல்லாங்குத்து	4.98.5	4.98.5	12.31	மா செடிகள் - 100 - 2 தளம் வீடுகள்
120	208/2	208/2	கல்லாங்குத்து	0.12.0	0.12.0	0.30	மா செடிகள்
121	208/3	208/3	கல்லாங்குத்து	0.03.0	0.03.0	0.07	மா செடிகள்
122	208/4	208/4	கல்லாங்குத்து	0.07.5	0.07.5	0.19	மா செடிகள்
123	208/5	208/5	கல்லாங்குத்து	0.19.0	0.19.0	0.47	மா செடிகள்
124	208/6	208/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00	மா செடிகள்
125	209	209	கல்லாங்குத்து	2.52.5	2.52.5	6.24	மா செடிகள் 50 (2 வருடம்)
126	210	210	கல்லாங்குத்து	3.36.0	3.36.0	8.30	3-வீடு மா செடிகள் 150 (2-வருடம்)
127	211	211	கல்லாங்குத்து	2.89.0	2.89.0	7.14	தைலம் -90 (3 வருடம்)
128	212	212	கல்லாங்குத்து	1.14.0	1.14.0	2.82	தைலம் -85 (3 வருடம்)
129	213	213	கல்லாங்குத்து	3.36.0	3.36.0	8.30	தைலம் 120 (3 வருடம்)
130	214	214	கல்லாங்குத்து	2.85.5	2.85.5	7.05	தைலம் 110 (3 வருடம்)
131	215	215	கல்லாங்குத்து	3.92.0	3.92.0	9.68	தைலம் 45 (3 வருடம்)
132	216	216	கல்லாங்குத்து	5.08.5	5.08.5	12.56	தைலம் 65 (3 வருடம்)
133	217/1	217/1	கல்லாங்குத்து	2.46.0	2.46.0	6.08	காலி மனை
134	218	218	கல்லாங்குத்து	4.22.0	4.22.0	10.42	பள்ளம்
135	219	219	கல்லாங்குத்து	3.60.5	3.60.5	8.90	பள்ளம்
136	220	220	கல்லாங்குத்து	4.59.5	4.59.5	11.35	பள்ளம்
137	221	221	கல்லாங்குத்து	3.85.5	3.85.5	9.52	தைலம் -56 செடிகள் (2 வருடம்)
138	222	222	கல்லாங்குத்து	1.85.0	1.85.0	4.57	தைலம் 80 செடிகள் (2 வருடம்)
139	223	223	கல்லாங்குத்து	8.01.5	8.01.5	19.80	தைலம் 84 செடிகள் (2 வருடம்)

140	224	224	கல்லாங்குத்து	3.74.5	3.74.5	9.25	தைலம் 73 செடிகள் (2 வருடம்)
141	225	225	கல்லாங்குத்து	5.56.5	5.56.5	13.75	தைலம் 65 செடிகள் (2 வருடம்)
142	226	226	கல்லாங்குத்து	5.80.0	5.80.0	14.33	தைலம் 43 செடிகள் (2 வருடம்)
143	228/1	228/1	அனாதீனம்	0.20.0	0.20.0	0.49	தைலம் 83 செடிகள் (2 வருடம்)
144	233/16	233/16	அனாதீனம்	0.15.5	0.15.5	0.38	தைலம் 38 செடிகள் (2 வருடம்)
145	233/17	233/17	அனாதீனம்	0.05.0	0.05.0	0.12	காலி மனை
146	233/18	233/18	அனாதீனம்	0.09.0	0.09.0	0.22	காலி மனை
147	233/19	233/19	அனாதீனம்	0.07.5	0.07.5	0.19	காலி மனை
				256.57.5	**253.58.0**	**626.34**	

4) மேற்படி புலங்களை சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக வாணியமல்லி கிராமத்தில் அ1 நோட்டீஸ் மற்றும் பொது விளம்பரம் பிரசுரம் 02.03.2020 அன்று பிரசுரம் செய்யப்பட்டதில் கிராம பொது மக்களிடமிருந்து எழுத்துப் பூர்வமாக ஆட்சேபணைகள் ஏதும் வரப்பெறவில்லை.

5) மேற்படி நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்ட நிலங்களில் எவ்வித புராதண சின்னங்களோ, வழிபாட்டுத் தலங்களோ ஏதும் இல்லை. மேற்படி புலங்கள் சிலவற்றில் பத்தி-3-ல் கலம் 8-ல் குறிப்பிடப்பட்டுள்ளவாறு தைல மரங்கள், தேக்கு மரங்கள், மா மரங்கள், தென்னை மற்றும் செம்மரங்கள் இருப்பது புலத்தணிக்கையில் தெரியவந்துள்ளது. மேற்படி மரங்களுக்கு வனத்துறையினரால் நிர்ணயிக்கப்படும் மரமதிப்பினை கேட்புத் துறையினரிடமிருந்து வசூல் செய்ய வேண்டும். மேலும், புல எண்கள்.7, 10-ல் உயர் மின் அழுத்த கம்பிவடம் செல்கின்றன. நில உரிமை மாற்றம் செய்யும் புலங்களில் உள்ள மின்கம்பங்கள் கேட்புத்துறையின் சொந்த செலவிலேயே மாற்றி அமைத்து கொள்ளவோ அல்லது அகற்றி கொள்ளவோ வேண்டும் என கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி கோட்டாட்சியர் தங்களது அறிக்கையில் தெரிவித்துள்ளனர்.

<u>நில மதிப்பு:</u>

6) சிப்காட் தொழிற் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைக்க திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், வாணியமல்லி கிராமம், புல எண்கள்.1 மற்றும் பல மொத்த பரப்பு 253.58.0 ஹெக்டேர் நிலத்திற்கு மட்டும் நில மதிப்பு நிர்ணயம்

செய்ய பத்திரப்பதிவு இணைய தளத்தில் இருந்து அரசின் வழிகாட்டி மதிப்பினை பரிசீலணை செய்ததில் வாணியமல்லி கிராமத்தில் நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு அருகாமையில் உள்ள புல எண்.204/3 -ல் ஏக்கர் 1 க்கு ரூ. 5,36,000/- (சென்ட் ரூ.5360/-) என நில மதிப்பாக நிர்ணயம் செய்யப்பட்டுள்ளது.

7) மேலும், நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு நிலமதிப்பு நிர்ணயம் செய்யும் பொருட்டு கும்மிடிப்பூண்டி சார்பதிவாளர் அலுவலகத்தில் இருந்து விற்பனை புள்ளி விவரங்கள் ஓறாண்டுக்கு 01.10.2018 முதல் 31.10.2019 வரை சேகரிக்கப்பட்டது. அதில் பத்திரப்படி பத்திர எண்.3574/2019-ன்படி வாணியமல்லி கிராமம் புல எண்.204/3-ல் 0.40 சென்ட் நிலம் மொத்த விற்பனை ரூ.2,14,400/- க்கு விற்பனை ஆகியுள்ளது. மேற்படி விற்பனை மதிப்பினை பரிசீலனை செய்ததில் சென்ட் 1-க்கு விற்பனை மதிப்பு ரூ.5,360/- ஆகிறது. ஏக்கர் ஒன்றிக்கு மதிப்பு ரூ.5,36,000/- என ஆகிறது. இந்த விற்பனை மதிப்பும் அரசு வழிகாட்டி மதிப்பும், ஒன்றாகவே உள்ளது. எனவே, இந்த மதிப்பினிலேயே நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு நில மதிப்பு நிர்ணயம் செய்ய மாதிரி புலமாக தேர்வு செய்யப்பட்டது. அதன் அடிப்படையில் நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள 253.58.0 ஹெக்டேர் (626.34 ஏக்கர்) நிலத்திற்கான நிலமதிப்பு ஏக்கர் ஒன்றுக்கு ரூ.5,36,000/- வீதம் கணக்கீடு செய்தால் ரூ.33,57,18,240/- (ரூபாய் முப்பத்தி மூன்று கோடியே ஐம்பத்து ஏழு இலட்சத்து பதினெட்டாயிரத்து இரணூற்று நாற்பது மட்டும்) நில மதிப்பாக நிர்ணயம் செய்யலாம் என கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் பரிந்துரை செய்துள்ளனர்.

8) மேலாண்மை இயக்குநர், சிப்காட் நிறுவனம் அவர்களது நில உரிமை மாற்றம் கோரும் மனு மற்றும் கும்மிடிப்பூண்டி வட்டாட்சியர், பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர்களது அறிக்கைகள் கவனமாகப் பரிசீலனை செய்யப்பட்டன.

9) மேலாண்மை இயக்குநர், சிப்காட் நிறுவனம் அவர்கள், பார்வை மூன்றில் காணும் நேர்முக கடிதத்தில் திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், வாணியமல்லி கிராமம், புல எண்கள்.1 மற்றும் சில புலங்களில், பரப்பளவு 253.58.0 ஹெக்டேர் கல்லாங்குத்து மற்றும் பல வகைபாடு கொண்ட நிலத்தினை சிப்காட் நிறுவனம் மூலம் "மாநெல்லூர் தொழில் நகரம் " அமைக்க முன்நுழைவு அனுமதி வழங்க கோரியுள்ளார்.

10) மேற்படி நில உரிமை மாற்றம் கோரிக்கை மனு குறித்து கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் தங்களது அறிக்கையில் சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக வாணியமல்லி கிராமத்தில் "அ1" விளம்பரம் செய்யப்பட்டதில் பொதுமக்களிடம் இருந்து

எழுத்துபூர்வமான ஆட்சேபனை வரப்பெறவில்லை எனவும், மேற்படி புலங்களில் புராதான சின்னங்களோ ஏதும் இல்லை என்றும் தெரிவித்துள்ளனர், மேலும், மேற்படி புலங்களில் சிலவற்றில் பத்தி-3-ல் கலம் 8-ல் குறிப்பிடப்பட்டுள்ளவாறு தைல மரங்கள், தேக்கு மரங்கள், மா மரங்கள், தென்னை மற்றும் செம்மரங்கள் இருப்பது புலத்தணிக்கையில் தெரியவந்துள்ளது. மேற்படி மரங்களுக்கு வனத்துறையினரால் நிர்ணயிக்கப்படும் மரமதிப்பினை கேட்புத் துறையினரிடமிருந்து வசூல் செய்ய வேண்டும். மேலும் சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டள்ள நிலத்திற்கு 626.34 ஏக்கர் ஒன்றுக்கு ரூ.5,36,000/- வீதம் கணக்கீடு செய்தால் ரூ.33,57,18,240/- என நிலமதிப்பு நிர்ணயம் செய்யப்பட்டுள்ளது எனவும் மேற்படி நில மதிப்பினை வசூல் செய்து கொண்டு சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்யலாம் எனப் பரிந்துரை செய்துள்ளனர்.

11) "அரசாணை நிலை எண். 241, வருவாய் மற்றும் பேரிடர் மேலாண்மைத்துறை (L.D.S.(1)) துறை நாள். 16.02.2020- யில் ஆட்சேபனையற்ற புறம்போக்கு நிலங்களை அரசு சார்ந்த நிறுவனங்களுக்கு, நிர்ணயிக்கப்படும் நிலமதிப்பினை செலுத்துவதற்கு கேட்புத் துறையின் சம்மதத்துடன் முன்நுழைவு அனுமதி வழங்க மாவட்ட ஆட்சியருக்கு அதிகாரம் பின் வருமாறு வழங்கப்பட்டுள்ளது"

" Powers for grant of enter upon permission is deligated to the District Collectors to State Government undertakings for all Unobjectionable Promboke lands without considering without monetary limits, after getting undertaking from the concerned State Public Sector Undertakings with reference to payment of land cost as per RSO"

12) இந்நேர்வில், பார்வை ஒன்றில் காணும் கடிதத்தில் நிர்வாக இயக்குநர், சிப்காட் அவர்கள் நில உரிமை மாற்றம் வழங்கப்படும் போது அரசு நிர்ணயிக்கும் நிலமதிப்பினை செலுத்த சம்மதம் வருவாய் நிலை ஆணை 24, 24A, 10 படிவத்தில் தெரிவித்துள்ளார். எனவே நிர்வாக இயக்குநர், சிப்காட் நிறுவனம், சென்னை அவர்களது சம்மதத்தினை ஏற்று பார்வை 2ல் காணும் அரசாணை பத்தி (iv)ல் தெரிவித்துள்ளவாறு திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், வாணியமல்லி கிராமத்தில் புல எண்கள்.1 மற்றும் சில புலங்கள் 253.58.0 ஹெக்டேர் கல்லாங்குத்து மற்றும் பல வகைபாடு கொண்ட கீழ்க்கண்ட நிலத்தினை வருவாய் நிலை ஆணை எண்-24 (ஏ) யில் கண்ட வழக்கமான மற்றும் கீழ்கண்ட நிபந்தனைகளுடன் சிப்காட் நிறுவன மேலாண்மை இயக்குநருக்கு முன்நுழைவு அனுமதி வழங்கி உத்தரவிடப்படுகிறது.

வ. எண்	புல எண்	புதிய புல எண்/ உட்பிரிவு	வகைபாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	முன்நுழைவு அனுமதி வழங்கப்படும் விஸ்தீரணம்	
					ஹெக்டேர்	ஏக்கர்
1	1	1	கல்லாங்குத்து	3.62.0	3.62.0	8.94
2	2	2	கல்லாங்குத்து	4.05.5	4.05.5	10.02
3	3/1	3/1	கல்லாங்குத்து	3.33.5	3.33.5	8.24
4	4	4	கல்லாங்குத்து	4.24.5	4.24.5	10.49
5	5	5	கல்லாங்குத்து	4.32.0	4.32.0	10.67
6	6/1	6/1	கல்லாங்குத்து	2.13.0	2.13.0	5.26
7	7/1	7/1	அனாதீனம்	0.40.0	0.40.0	0.99
8	7/9	7/9	அனாதீனம்	1.13.0	1.13.0	2.79
9	10/1	10/1	கல்லாங்குத்து	0.20.0	0.20.0	0.49
10	10/2	10/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00
11	10/4	10/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00
12	10/5	10/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00
13	11/1	11/1	கல்லாங்குத்து	1.38.5	1.38.5	3.42
14	11/2	11/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00
15	11/3	11/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00
16	12	12	கல்லாங்குத்து	3.10.5	3.10.5	7.67
17	13	13	கல்லாங்குத்து	5.43.0	5.43.0	13.41
18	14	14	கல்லாங்குத்து	5.76.5	5.76.5	14.24
19	15	15	கல்லாங்குத்து	4.14.0	4.14.0	10.23
20	16	16	கல்லாங்குத்து	3.74.0	3.74.0	9.24
21	17	17	கல்லாங்குத்து	2.92.0	2.92.0	7.21
22	18/1	18/1	கல்லாங்குத்து	2.80.0	2.80.0	6.92
23	19	19	கல்லாங்குத்து	3.54.0	3.54.0	8.74
24	20	20	கல்லாங்குத்து	4.74.0	4.74.0	11.70
25	24	24	கல்லாங்குத்து	2.02.5	2.02.5	5.00
26	26/1	26/1	கல்லாங்குத்து	2.23.5	2.23.5	5.52
27	26/2	26/2	கல்லாங்குத்து	0.31.0	0.31.0	0.77
28	27/1	27/1	கல்லாங்குத்து	0.50.0	0.50.0	1.24
29	27/2	27/2	கல்லாங்குத்து	3.26.0	3.26.0	8.05
30	27/3	27/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00
31	28/1	28/1	கல்லாங்குத்து	0.56.0	0.56.0	1.38
32	28/3	28/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00
33	28/4	28/4	கல்லாங்குத்து	0.63.0	0.63.0	1.56
34	28/5	28/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00
35	28/6	28/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00
36	28/7	28/7	கல்லாங்குத்து	0.74.0	0.74.0	1.83
37	28/8	28/8	கல்லாங்குத்து	0.07.0	0.07.0	0.17
38	31/2	31/2	கல்லாங்குத்து	0.94.0	0.94.0	2.32

39	31/3	31/3	கல்லாங்குத்து	0.16.0	0.16.0	0.40
40	31/4	31/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00
41	36	36	மேடு	5.53.0	5.53.0	13.66
42	38/1	38/1	மேடு	1.35.0	1.35.0	3.33
43	39/3	39/3	தோப்பு	0.31.0	0.31.0	0.77
44	40/7	40/7	கல்லாங்குத்து	0.08.0	0.08.0	0.20
45	41/3	41/3	கல்லாங்குத்து	0.19.5	0.19.5	0.48
46	41/4	41/4	அனாதீனம்	0.38.5	0.38.5	0.95
47	41/12	41/12	அனாதீனம்	0.06.5	0.06.5	0.16
48	41/13	41/13	அனாதீனம்	0.01.0	0.01.0	0.02
49	41/20	41/20	கல்லாங்குத்து	0.44.5	0.44.5	1.10
50	41/22	41/22	அனாதீனம்	0.11.5	0.11.5	0.28
51	42/17	42/17	அனாதீனம்	0.07.5	0.07.5	0.19
52	47/1	47/1	அனாதீனம்	0.22.5	0.22.5	0.56
53	50/5	50/5	அனாதீனம்	0.26.5	0.26.5	0.65
54	59/1	59/1	அனாதீனம்	0.69.5	0.69.5	1.72
55	61/1	61/1	அனாதீனம்	0.13.0	0.13.0	0.32
56	61/3	61/3	அனாதீனம்	0.25.5	0.25.5	0.63
57	61/13	61/13	மேடு	0.15.0	0.15.0	0.37
58	62/1	62/1	மேடு	1.09.5	1.09.5	2.70
59	62/10	62/10	மேடு	0.44.0	0.44.0	1.09
60	63/1	63/1	அனாதீனம்	0.58.0	0.58.0	1.43
61	64/1	64/1	மேடு	0.06.0	0.06.0	0.15
62	89/1	89/1	அனாதீனம்	0.26.5	0.26.5	0.65
63	89/9	89/9	அனாதீனம்	0.17.5	0.17.5	0.43
64	90/6	90/6	அனாதீனம்	0.49.0	0.49.0	1.21
65	94/9	94/9	அனாதீனம்	0.23.0	0.23.0	0.57
66	98/2	98/2	கல்லாங்குத்து	2.99.5	2.99.5	7.40
67	142/1	142/1	அனாதீனம்	0.23.0	0.23.0	0.57
68	175/2	175/2	அனாதீனம்	1.74.0	1.74.0	4.30
69	175/3	175/3	அனாதீனம்	1.74.0	1.74.0	4.30
70	175/4	175/4	அனாதீனம்	1.75.0	1.75.0	4.32
71	176/1	176/1	அனாதீனம்	0.10.5	0.10.5	0.26
72	176/2	176/2	அனாதீனம்	0.90.0	0.90.0	2.22
73	176/3	176/3	கல்லாங்குத்து	2.92.0	2.92.0	7.21
74	177	177	கல்லாங்குத்து	5.31.0	5.31.0	13.12
75	178/1	178/1	கல்லாங்குத்து	5.04.5	5.04.5	12.46
76	179	179	கல்லாங்குத்து	4.21.5	4.21.5	10.41
77	180/1	180/1	கல்லாங்குத்து	0.27.0	0.27.0	0.67
78	180/2	180/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00
79	180/3	180/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00
80	180/4	180/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00
81	180/5	180/5	கல்லாங்குத்து	0.81.0	0.81.0	2.00

82	180/6	180/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00
83	181/1	181/1	கல்லாங்குத்து	0.78.5	0.78.5	1.94
84	181/2	181/2	கல்லாங்குத்து	0.81.0	0.81.0	2.00
85	181/3	181/3	கல்லாங்குத்து	0.81.0	0.81.0	2.00
86	181/4	181/4	கல்லாங்குத்து	0.81.0	0.81.0	2.00
87	182	182	கல்லாங்குத்து	3.70.0	3.70.0	9.14
88	183	183	கல்லாங்குத்து	2.55.0	2.55.0	6.30
89	184	184	கல்லாங்குத்து	2.66.5	2.66.5	6.58
90	185	185	கல்லாங்குத்து	3.71.0	3.71.0	9.16
91	188/2	188/2	அனாதீனம்	1.34.5	1.34.5	3.32
92	188/3	188/3	கல்லாங்குத்து	0.38.0	0.38.0	0.94
93	188/4	188/4	கல்லாங்குத்து	0.15.5	0.15.5	0.38
94	188/5	188/5	கல்லாங்குத்து	0.59.0	0.59.0	1.46
95	189/1	189/1	அனாதீனம்	1.19.5	1.19.5	2.95
96	189/2	189/2	அனாதீனம்	1.19.0	1.19.0	2.94
97	189/3	189/3	அனாதீனம்	0.26.5	0.26.5	0.65
98	189/4	189/4	அனாதீனம்	1.25.0	1.25.0	3.09
99	197/2	197/2	அனாதீனம்	1.06.0	1.06.0	2.62
100	198/1	198/1	அனாதீனம்	0.85.5	0.85.5	2.11
101	199	199	கல்லாங்குத்து	3.95.0	3.95.0	9.76
102	200	200	கல்லாங்குத்து	3.34.0	3.34.0	8.25
103	201	201	கல்லாங்குத்து	3.95.5	3.95.5	9.77
104	202	202	கல்லாங்குத்து	4.17.5	4.17.5	10.31
105	203	203/1	கல்லாங்குத்து	5.91.5	4.29.5	10.60
106	204/6	204/6	அனாதீனம்	0.28.0	0.28.0	0.69
107	204/10	204/10	அனாதீனம்	0.71.5	0.71.5	1.77
108	205/2	205/2	அனாதீனம்	1.35.5	1.35.5	3.35
109	206	206	அனாதீனம்	2.87.0	2.87.0	7.09
110	207/1	207/1	கல்லாங்குத்து	2.03.0	2.03.0	5.01
111	207/2	207/2	கல்லாங்குத்து	0.54.5	0.54.5	1.35
112	207/3	207/3	கல்லாங்குத்து	0.14.5	0.14.5	0.36
113	207/4	207/4	கல்லாங்குத்து	0.45.5	0.45.5	1.12
114	207/5	207/5	கல்லாங்குத்து	0.25.5	0.25.5	0.63
115	207/6	207/6	கல்லாங்குத்து	0.10.5	0.10.5	0.26
116	207/7	207/7	கல்லாங்குத்து	0.32.5	0.32.5	0.80
117	207/8	207/8	கல்லாங்குத்து	0.48.0	0.48.0	1.19
118	207/9	207/9	கல்லாங்குத்து	0.51.5	0.51.5	1.27
119	208/1	208/1	கல்லாங்குத்து	4.98.5	4.98.5	12.31
120	208/2	208/2	கல்லாங்குத்து	0.12.0	0.12.0	0.30
121	208/3	208/3	கல்லாங்குத்து	0.03.0	0.03.0	0.07
122	208/4	208/4	கல்லாங்குத்து	0.07.5	0.07.5	0.19
123	208/5	208/5	கல்லாங்குத்து	0.19.0	0.19.0	0.47
124	208/6	208/6	கல்லாங்குத்து	0.81.0	0.81.0	2.00

125	209	209	கல்லாங்குத்து	2.52.5	2.52.5	6.24
126	210	210	கல்லாங்குத்து	3.36.0	3.36.0	8.30
127	211	211	கல்லாங்குத்து	2.89.0	2.89.0	7.14
128	212	212	கல்லாங்குத்து	1.14.0	1.14.0	2.82
129	213	213	கல்லாங்குத்து	3.36.0	3.36.0	8.30
130	214	214	கல்லாங்குத்து	2.85.5	2.85.5	7.05
131	215	215	கல்லாங்குத்து	3.92.0	3.92.0	9.68
132	216	216	கல்லாங்குத்து	5.08.5	5.08.5	12.56
133	217/1	217/1	கல்லாங்குத்து	2.46.0	2.46.0	6.08
134	218	218	கல்லாங்குத்து	4.22.0	4.22.0	10.42
135	219	219	கல்லாங்குத்து	3.60.5	3.60.5	8.90
136	220	220	கல்லாங்குத்து	4.59.5	4.59.5	11.35
137	221	221	கல்லாங்குத்து	3.85.5	3.85.5	9.52
138	222	222	கல்லாங்குத்து	1.85.0	1.85.0	4.57
139	223	223	கல்லாங்குத்து	8.01.5	8.01.5	19.80
140	224	224	கல்லாங்குத்து	3.74.5	3.74.5	9.25
141	225	225	கல்லாங்குத்து	5.56.5	5.56.5	13.75
142	226	226	கல்லாங்குத்து	5.80.0	5.80.0	14.33
143	228/1	228/1	அனாதீனம்	0.20.0	0.20.0	0.49
144	233/16	233/16	அனாதீனம்	0.15.5	0.15.5	0.38
145	233/17	233/17	அனாதீனம்	0.05.0	0.05.0	0.12
146	233/18	233/18	அனாதீனம்	0.09.0	0.09.0	0.22
147	233/19	233/19	அனாதீனம்	0.07.5	0.07.5	0.19
				256.57.5	**254.95.5**	**629.73**

13) நிபந்தனைகள்:

1. கல் கட்டணம், உட்பிரிவுக் கட்டணம், போன்ற இதரக் கட்டணங்களை கேட்புத்துறை செலுத்த வேண்டும்.
2. அரசு விதிக்கும் அனைத்து நிபந்தனைகளுக்கும் கேட்புத்துறை கட்டுப்படுதல் வேண்டும்.
3. எந்த நோக்கத்திற்காக நில உரிமை மாற்ற முன்நுழைவு அனுமதி வழங்கப்படுகிறதோ அதற்காக மட்டுமே குறிப்பிட்ட நிலத்தினை பயன்படுத்த வேண்டும்.
4. எதிர்காலத்தில் குறிப்பிட்ட புலமோ அல்லது அதன் ஒரு பகுதியோ கேட்புத்துறைக்கு தேவையில்லை என்றால் அதனை அரசு வருவாய்த் துறையிடம் கேட்புத்துறை திரும்ப ஒப்படைக்க வேண்டும்.
5. வனத்துறையினரால் நிர்ணயக்கும் மரக்கிரயத்தினை கேட்பு நிறுவனம் செலுத்த வேண்டும்.

6. அரசு நில உரிமை மாற்றம் செய்து பிறப்பிக்கப்படும் உத்தரவின் போது நிர்ணயிக்கப்படும் நிலமதிப்பே இறுதியானது.
7. நில உரிமை மாற்றம் செய்யும் புலங்களில் உள்ள மின்கம்பங்கள் நிறுவனத்தின் சொந்த செலவிலேயே மாற்றி அமைத்து கொள்ளவோ அல்லது அகற்றி கொள்ளவோ வேண்டும்.
8. பொது மக்கள் பயன்படுத்தும் சாலைகள் ஏதேனும் இருப்பின், பொதுமக்களுக்கு பாதிப்பு ஏற்படாத வகையில் பராமரிக்கவோ அல்லது மாற்றி அமைக்கவோ வேண்டும்.
9. நில உரிமை மாற்றம் செய்யப்படும் நிலங்களுக்கு இடையில் நீர்நிலை புறம்போக்கு நிலங்கள் இருப்பின், அதனை ஆக்கரமணம் செய்யாமல் அதன் தன்மை மாறாமல் பராமரிக்கவேண்டும்.

3/4

மாவட்ட ஆட்சித்தலைவர்,
திருவள்ளூர்.

பெறுநர்

மேலாண்மை இயக்குநர்,
சிப்காட்,
19A ருக்குமணி லட்சுமிபதி சாலை,
எழுப்பூர், சென்னை- 600 008.

நகல்:

1. முதன்மைச் செயலர்/நில நிர்வாக ஆணையர், சேப்பாக்கம், சென்னை -5.
2. வருவாய் கோட்டாட்சியர், பொன்னேரி.
3. வட்டாட்சியர், கும்மிடிப்பூண்டி.

திருவள்ளூர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறைகள்
முன்னிலை : திருமதி.மகேஸ்வரி ரவிக்குமார்., இ.ஆ.ப

ந.க.எண்.12162/2020/அ2. நாள்: 7.09.2020.

பொருள்: முன் நுழைவு அனுமதி - நில உரிமை மாற்றம்- திருவள்ளூர் மாவட்டம் - கும்மிடிப்பூண்டி வட்டம் - சூரப்பூண்டி கிராமம் - புல எண்.64 மற்றும் பல - மொத்த பரப்பு 121.44.0 ஹெக்டேரில் 108.06.0 ஹெக்டேர் கல்லாங்குத்து, புஞ்சை அனாதீனம், மேடு வகைப்பாடு நிலத்தினை சிப்காட் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைக்க - முன் நுழைவு அனுமதி வழங்கி உத்திரவிடுதல் - தொடர்பாக.

பார்வை:
1. மேலாண்மை இயக்குநர், SIPCOT, சென்னை அவர்களின் கடித எண். Sipcot/LA/Addl Lands/GMPD TK-2019 நாள்:20.09.2019.
2. G.O.Ms.No.241, Revenue and Disaster Management department (Land Disposal Wing, LD-5(1)) dated:16.02.2020.
3. மேலாண்மை இயக்குநர், SIPCOT, சென்னை அவர்களின் நேர்முக கடித எண். Sipcot/LA/Addl Lands/GMPD TK-2019 நாள்:24.06.2020.
4. கும்மிடிப்பூண்டி வட்டாட்சியர் அவர்களின் அறிக்கை ந.க479/2020/அ1.நாள்.03.08.2020.
5. பொன்னேரி வருவாய் கோட்டாட்சியர் அவர்களின் ந.க.எண்.1491/2020/அ2, நாள்:10.08.2020.

உத்தரவு:-

திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், சூரப்பூண்டி கிராமம், புல எண்கள். 64 மற்றும் சிலவற்றில் விஸ்தீரணம் 108.06.0 ஹெக்டேர் கல்லாங்குத்து, புஞ்சை அனாதீனம், மேடு வகைபாடு கொண்ட நிலங்களை சிப்காட் தொழிற் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைப்பதற்கு நில உரிமை மாற்றம் (Land Alienation) செய்து தரக்கோரி பார்வை ஒன்றில் காணும் கடிதத்தில் சிப்காட் தொழில் நிறுவனத்தின் மேலாண்மை இயக்குநர் கோரியுள்ளார்.

2) இந்நேர்வில், பார்வை நான்கு மற்றும் ஐந்தில் காணும் கடிதங்களில், கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் தங்களது அறிக்கையை கீழ்கண்டவாறு சமர்பித்துள்ளனர்.

3) கும்மிடிப்பூண்டி வட்டம், எண்.10 சூரப்பூண்டி கிராமத்தில் சிப்காட் நிறுவனம் நில உரிமை மாற்றம் கோரியுள்ள அரசு புறம்போக்கு நிலங்கள் கிராம கணக்கில் கீழ்கண்டவாறு தாக்கலாகியுள்ளது.

வ. எண்	புல எண்	புதிய உட்பிரிவு எண்	வகைபாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	நில உரிமை மாற்றம் செய்ய பரிந்துரை செய்யப்பட்டுள்ள விஸ்தீரணம்		புலத்தின் உள்ள மரங்கள் விபரங்கள்
					ஹெக்டேர்	ஏக்கர்	
1	65	65/1	கல்லாங்குத்து	3.36.5	1.61.5	3.99	தைலம் தோப்பு
2	156/1	156/1	புஞ்சை அனாதீனம்	0.80.5	0.80.5	1.99	தைலம் மரங்கள் - 350 (3 வருடம்)
3	181	181	கல்லாங்குத்து	3.09.5	3.09.5	7.64	தைலம் மரங்கள் 2550 (3 வருடம்)
4	182	182	கல்லாங்குத்து	4.30.0	4.30.0	10.62	தைலம் மரங்கள் 3260 (3 வருடம்)
5	183	183	கல்லாங்குத்து	4.49.0	4.49.0	11.09	தைலம் மரங்கள் - 1100, மா மரங்கள் - 760 (10 வருடம்), வேர்கடலை, தேக்கு- 100 (5 வருடம்) சொட்டு நீர் பாசனம் மற்றும் குழாய்கிணறு
6	184	184	கல்லாங்குத்து	4.01.5	4.01.5	9.92	மா மரங்கள்- (10 வருடம்), தைலம், வேர்கடலை, தேக்கு- 50 (5 வருடம்) மற்றும் குழாய்கிணறு
7	185	185	கல்லாங்குத்து	4.06.0	4.06.0	10.03	வேர்கடலை மற்றும் பனை மரங்கள்-103 (10 வருடம்)
8	186	186	கல்லாங்குத்து	2.10.5	2.10.5	5.20	பள்ளம்
9	187	187	கல்லாங்குத்து	2.49.0	2.49.0	6.15	பள்ளம்
10	188	188	கல்லாங்குத்து	3.59.0	3.59.0	8.87	பள்ளம்
11	189/1	189/1	கல்லாங்குத்து	3.32.5	3.32.5	8.21	பள்ளம்
12	190	190	கல்லாங்குத்து	4.00.5	4.00.5	9.89	பள்ளம்
13	192	192	கல்லாங்குத்து	3.52.0	3.52.0	8.69	தைலம் மரங்கள், பள்ளம்
14	213	213	மேடு	3.73.5	3.73.5	9.23	தைலம் மரங்கள்- 3550 (3 வருடம்)
15	214	214	மேடு	3.86.0	3.86.0	9.53	தைலம் மரங்கள்- 3835 (3 வருடம்)
16	215	215	மேடு	4.20.5	4.20.5	10.39	தைலம் மரங்கள்- 1500 (3 வருடம்)
17	216	216	கல்லாங்குத்து	3.65.0	3.65.0	9.02	தைலம் மரங்கள்- 4000 (3 வருடம்)
18	217	217	கல்லாங்குத்து	3.20.5	3.20.5	7.92	மா மரங்கள் -2415 (10 வருடம்), தைலம் மரங்கள் (3 வருடம்)

19	218	218	கல்லாங்குத்து	3.13.0	3.13.0	7.73	தைலம் மரங்கள்-3312 (3 வருடம்)
20	219	219	கல்லாங்குத்து	3.14.0	3.14.0	7.76	தைலம் மரங்கள் - 3350 (3 வருடம்)
21	220	220	கல்லாங்குத்து	3.67.5	3.67.5	9.08	தைலம் மரங்கள் - 3880 (3 வருடம்)
22	221	221	மேடு	3.70.5	3.70.5	9.15	தைலம் மரங்கள்-500 (3 வருடம்)
23	222	222	மேடு	4.21.0	4.21.0	10.40	தைலம் மரங்கள்-800 (3 வருடம்)
24	223	223/1	மேடு	3.58.5	2.38.0	5.88	தைலம் மரங்கள்-1800 (3 வருடம்)
25		223/3	மேடு		1.07.0	2.64	
26	224	224/1	மேடு	3.28.0	3.16.5	7.82	தைலம் மரங்கள்-462 (3 வருடம்)
27		224/3	மேடு		0.04.0	0.10	
28	225	225	கல்லாங்குத்து	2.88.0	2.88.0	7.11	தைலம் மரங்கள் - 3000 (3 வருடம்)
29	226	226	கல்லாங்குத்து	2.30.5	2.30.5	5.69	தைலம் மரங்கள் (4 வருடம்)
30	227	227/1	கல்லாங்குத்து	4.11.0	1.74.5	4.31	தைலம் மரங்கள்-895 (4 வருடம்)
31		227/3			2.24.0	5.53	
32	228	228/1	மேடு	4.53.0	1.15.0	2.84	தைலம் மரங்கள் - 743 (4 வருடம்), குடிசை வீடு
33		228/3	மேடு		3.26.0	8.05	
34	229	229/1	மேடு	4.17.5	0.19.0	0.47	தைலம் மரங்கள் (4 வருடம்), குடிசை வீடு, கிணறு
35		229/3	மேடு		3.90.0	9.63	
36	230/1	230/1	மேடு	2.82.0	2.82.0	6.97	தைலம் மரங்கள் - 803 (4 வருடம்), குடிசை வீடு, முள்வேலி, பனை-100, குழாய்கிணறு மற்றும் மின் இணைப்பு கட்டிடம்
37	235	235	கல்லாங்குத்து	2.98.5	2.98.5	7.37	மா மரங்கள்-50 (10 வருடம்), பனை மரங்கள்-100 (5 வருடம்), தைலம் மரங்கள-340 (4 வருடம்)
					108.06.0	266.91	

4) மேற்படி புலங்களை சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக சூரப்பூண்டி கிராமத்தில் அ1 நோட்டீஸ் மற்றும் பொது விளம்பரம் பிரசுரம் 15.11.2019 அன்று பிரசுரம் செய்யப்பட்டதில் கிராம பொது மக்களிடமிருந்து எழுத்துப் பூர்வமாக ஆட்சேபணைகள் ஏதும் வரப்பெறவில்லை.

5) மேற்படி நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்ட நிலங்களில் எவ்வித புராதண சின்னங்களோ, வழிபாட்டுத் தலங்களோ ஏதும் இல்லை. மேற்படி புலங்கள் சிலவற்றில் பத்தி 3-ல் கலம்-8-ல் குறிப்பிடப்பட்டுள்ளவாறு தைல மரங்கள், தேக்கு மரங்கள், மா மரங்கள், தென்னை மற்றும் செம்மரங்கள் இருப்பது புலத்தணிக்கையில் தெரியவந்துள்ளது. மேற்படி மரங்களுக்கு வனத்துறையினரால் நிர்ணயிக்கப்படும் மரமதிப்பினை கேட்புத் துறையினரிடமிருந்து வசூல் செய்ய வேண்டும். மேலும், புல எண்கள்.223-ல் 5 மின் கம்பங்கள், 224-ல் 5 மின் கம்பங்கள், 228-ல் 4 மின் கம்பங்கள், 235-ல் 6 மின் கம்பங்கள் என மொத்தம் 20 குறைந்த மின் அழுத்த கம்பங்கள் செல்கின்றன. நில உரிமை மாற்றம் செய்யும் புலங்களில் உள்ள மின்கம்பங்கள் கேட்புத்துறையின் சொந்த செலவிலேயே மாற்றி அமைத்து கொள்ளவோ அல்லது அகற்றி கொள்ளவோ வேண்டும் என கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி கோட்டாட்சியர் தங்களது அறிக்கையில் தெரிவித்துள்ளனர்.

நில மதிப்பு:

6) சிப்காட் தொழிற் நிறுவனம் மூலம் மாநெல்லூர் தொழில் நகரம் அமைக்க திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், சூரப்பூண்டி கிராமம், புல எண்கள்.64 மற்றும் பல மொத்த பரப்பு 108.06.0 ஹெக்டேர் நிலத்திற்கு மட்டும் நில மதிப்பு நிர்ணயம் செய்ய பத்திரப்பதிவு இணைய தளத்தில் இருந்து அரசின் வழிகாட்டி மதிப்பினை பரிசீலணை செய்ததில் வாணியமல்லி கிராமத்தில் நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு அருகாமையில் உள்ள புல எண்.204/3 -ல் ஏக்கர் 1 க்கு ரூ. 5,36,000/- (சென்ட் ரூ.5360/-) என நில மதிப்பாக நிர்ணயம் செய்யப்பட்டுள்ளது.

7) மேலும், நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு நிலமதிப்பு நிர்ணயம் செய்யும் பொருட்டு கும்மிடிப்பூண்டி சார்பதிவாளர் அலுவலகத்தில் இருந்து விற்பனை புள்ளி விவரங்கள் ஓறாண்டுக்கு 01.10.2018 முதல் 31.10.2019 வரை சேகரிக்கப்பட்டது. அதில் பத்திரப்படி பத்திர எண்.3574/2019-ன்படி வாணியமல்லி கிராமம் புல எண்.204/3-ல் 0.40 சென்ட் நிலம் மொத்த விற்பனை ரூ.2,14,400/- க்கு விற்பனை ஆகியுள்ளது. மேற்படி விற்பனை மதிப்பினை பரிசீலனை செய்ததில் சென்ட் 1-க்கு விற்பனை மதிப்பு ரூ.5,360/- ஆகிறது. ஏக்கர் ஒன்றிக்கு மதிப்பு ரூ.5,36,000/- என ஆகிறது. இந்த விற்பனை மதிப்பும் அரசு வழிகாட்டி மதிப்பும், ஒன்றாகவே உள்ளது. எனவே, இந்த மதிப்பினிலேயே நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களுக்கு நில மதிப்பு நிர்ணயம் செய்ய மாதிரி புலமாக தேர்வு செய்யப்பட்டது. அதன்

அடிப்படையில் நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள 108.06.0 ஹெக்டேர் (266.91 ஏக்கர்) நிலத்திற்கான நிலமதிப்பு ஏக்கர் ஒன்றுக்கு ரூ.5,36,000/- வீதம் கணக்கீடு செய்தால் ரூ.14,30,63,760/- (ரூபாய் பதிநான்கு கோடியே முப்பது இலட்சத்து அறுபத்தி மூன்றாயிரத்து எழுநூற்றி அறுபது மட்டும்) நில மதிப்பாக நிர்ணயம் செய்யலாம் என கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் பரிந்துரை செய்துள்ளனர்.

8) மேலாண்மை இயக்குநர், சிப்காட் நிறுவனம் அவர்களது நில உரிமை மாற்றம் கோரும் மனு மற்றும் கும்மிடிப்பூண்டி வட்டாட்சியர், பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர்களது அறிக்கைகள் கவனமாகப் பரிசீலனை செய்யப்பட்டன.

9) மேலாண்மை இயக்குநர், சிப்காட் நிறுவனம் அவர்கள், பார்வை மூன்றில் காணும் நேர்முக கடிதத்தில் திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், சூரப்பூண்டி கிராமம், புல எண்கள்.64 மற்றும் சில புலங்களில், பரப்பளவு 108.06.0 ஹெக்டேர் கல்லாங்குத்து, புஞ்சை அனாதீனம், மேடு வகைபாடுகள் கொண்ட நிலத்தினை சிப்காட் நிறுவனம் மூலம் "மாநெல்லூர் தொழில் நகரம் " அமைக்க முன்நுழைவு அனுமதி வழங்க கோரியுள்ளார்.

10) மேற்படி நில உரிமை மாற்றம் கோரிக்கை மனு குறித்து கும்மிடிப்பூண்டி வட்டாட்சியர் மற்றும் பொன்னேரி வருவாய் கோட்டாட்சியர் ஆகியோர் தங்களது அறிக்கையில் சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக சூரப்பூண்டி கிராமத்தில் அ1 விளம்பரம் செய்யப்பட்டதில் பொதுமக்களிடம் இருந்து எழுத்துபூர்வமான ஆட்சேபனை வரப்பெறவில்லை எனவும், மேற்படி புலங்களில் விலையுயர்ந்த மரங்களோ, புராதான சின்னங்களோ ஏதும் இல்லை என்றும் தெரிவித்துள்ளனர், மேலும், மேற்படி புலங்களில் சிலவற்றில் பத்தி-3-ல் கலம்-8-ல் குறிப்பிடப்பட்டுள்ளவாறு தைல மரங்கள், தேக்கு மரங்கள், மா மரங்கள், தென்னை மற்றும் செம்மரங்கள் இருப்பது புலத்தணிக்கையில் தெரியவந்துள்ளது. மேற்படி மரங்களுக்கு வனத்துறையினரால் நிர்ணயிக்கப்படும் மரமதிப்பினை கேட்புத் துறையினரிடமிருந்து வசூல் செய்ய வேண்டும். மேலும் சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டள்ள நிலத்திற்கு 266.91 ஏக்கர் ஒன்றுக்கு ரூ.5,36,000/- வீதம் கணக்கீடு செய்தால் ரூ.14,30,63,760/- என நிலமதிப்பு நிர்ணயம் செய்யப்பட்டுள்ளது எனவும் மேற்படி நில மதிப்பினை வசூல் செய்து கொண்டு சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்யலாம் எனப் பரிந்துரை செய்துள்ளனர்.

11) "அரசாணை நிலை எண். 241, வருவாய் மற்றும் பேரிடர் மேலாண்மைத்துறை (L.D.S.(1)) துறை நாள். 16.02.2020- யில் ஆட்சேபனையற்ற புறம்போக்கு நிலங்களை அரசு சார்ந்த நிறுவனங்களுக்கு, நிர்ணயிக்கப்படும் நிலமதிப்பினை செலுத்துவதற்கு கேட்புத் துறையின் சம்மதத்துடன் முன்நுழைவு அனுமதி வழங்க மாவட்ட ஆட்சியருக்கு அதிகாரம் பின் வருமாறு வழங்கப்பட்டுள்ளது"

" Powers for grant of enter upon permission is deligated to the District Collectors to State Government undertakings for all Unobjectionable Promboke lands without considering without monetary limits, after getting undertaking from the concerned State Public Sector Undertakings with reference to payment of land cost as per RSO"

12) இந்நேர்வில், பார்வை ஒன்றில் காணும் கடிதத்தில் நிர்வாக இயக்குநர், சிப்காட் அவர்கள் நில உரிமை மாற்றம் வழங்கப்படும் போது அரசு நிர்ணயிக்கும் நிலமதிப்பினை செலுத்த சம்மதம் வருவாய் நிலை ஆணை 24, 24A, 10 படிவத்தில் தெரிவித்துள்ளார். எனவே நிர்வாக இயக்குநர், சிப்காட் நிறுவனம், சென்னை அவர்களது சம்மதத்தினை ஏற்று பார்வை 2ல் காணும் அரசாணை பத்தி (iv)ல் தெரிவித்துள்ளவாறு திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், சூரப்பூண்டி கிராமத்தில் புல எண்கள்.64 மற்றும் சில புலங்கள் 108.06.0 ஹெக்டேர் கல்லாங்குத்து, புஞ்சை அனாதீனம், மேடு வகைபாடுகள் கொண்ட கீழ்க்கண்ட நிலத்தினை வருவாய் நிலை ஆணை எண்-24 (ஏ) யில் கண்ட வழக்கமான மற்றும் கீழ்கண்ட நிபந்தனைகளுடன் சிப்காட் நிறுவன மேலாண்மை இயக்குநருக்கு முன்நுழைவு அனுமதி வழங்கி உத்தரவிடப்படுகிறது.

வ. எண்	புல எண்	புதிய உட்பரிவு எண்	வகைபாடு	மொத்த வீஸ்தீரணம் (ஹெக்டேர்)	முன்நுழைவு அனுமதி வழங்கப்படும் விஸ்தீரணம்	
					ஹெக்டேர்	ஏக்கர்
1	65	65/1	கல்லாங்குத்து	3.36.5	1.61.5	3.99
2	156/1	156/1	புஞ்சை அனாதீனம்	0.80.5	0.80.5	1.99
3	181	181	கல்லாங்குத்து	3.09.5	3.09.5	7.64
4	182	182	கல்லாங்குத்து	4.30.0	4.30.0	10.62
5	183	183	கல்லாங்குத்து	4.49.0	4.49.0	11.09
6	184	184	கல்லாங்குத்து	4.01.5	4.01.5	9.92
7	185	185	கல்லாங்குத்து	4.06.0	4.06.0	10.03
8	186	186	கல்லாங்குத்து	2.10.5	2.10.5	5.20
9	187	187	கல்லாங்குத்து	2.49.0	2.49.0	6.15
10	188	188	கல்லாங்குத்து	3.59.0	3.59.0	8.87
11	189/1	189/1	கல்லாங்குத்து	3.32.5	3.32.5	8.21
12	190	190	கல்லாங்குத்து	4.00.5	4.00.5	9.89
13	192	192	கல்லாங்குத்து	3.52.0	3.52.0	8.69
14	213	213	மேடு	3.73.5	3.73.5	9.23
15	214	214	மேடு	3.86.0	3.86.0	9.53
16	215	215	மேடு	4.20.5	4.20.5	10.39
17	216	216	கல்லாங்குத்து	3.65.0	3.65.0	9.02
18	217	217	கல்லாங்குத்து	3.20.5	3.20.5	7.92

19	218	218	கல்லாங்குத்து	3.13.0	3.13.0	7.73
20	219	219	கல்லாங்குத்து	3.14.0	3.14.0	7.76
21	220	220	கல்லாங்குத்து	3.67.5	3.67.5	9.08
22	221	221	மேடு	3.70.5	3.70.5	9.15
23	222	222	மேடு	4.21.0	4.21.0	10.40
24	223	223/1	மேடு	3.58.5	2.38.0	5.88
25		223/3	மேடு		1.07.0	2.64
26	224	224/1	மேடு	3.28.0	3.16.5	7.82
27		224/3	மேடு		0.04.0	0.10
28	225	225	கல்லாங்குத்து	2.88.0	2.88.0	7.11
29	226	226	கல்லாங்குத்து	2.30.5	2.30.5	5.69
30	227	227/1	கல்லாங்குத்து	4.11.0	1.74.5	4.31
31		227/3			2.24.0	5.53
32	228	228/1	மேடு	4.53.0	1.15.0	2.84
33		228/3	மேடு		3.26.0	8.05
34	229	229/1	மேடு	4.17.5	0.19.0	0.47
35		229/3	மேடு		3.90.0	9.63
36	230/1	230/1	மேடு	2.82.0	2.82.0	6.97
37	235	235	கல்லாங்குத்து	2.98.5	2.98.5	7.37
					108.06.0	266.91

13) நிபந்தனைகள்:

1. கல் கட்டணம், உட்பிரிவுக் கட்டணம், போன்ற இதரக் கட்டணங்களை கேட்புத்துறை செலுத்த வேண்டும்.
2. அரசு விதிக்கும் அனைத்து நிபந்தனைகளுக்கும் கேட்புத்துறை கட்டுப்படுதல் வேண்டும்.
3. எந்த நோக்கத்திற்காக நில உரிமை மாற்ற முன்நுழைவு அனுமதி வழங்கப்படுகிறதோ அதற்காக மட்டுமே குறிப்பிட்ட நிலத்தினை பயன்படுத்த வேண்டும்.
4. எதிர்காலத்தில் குறிப்பிட்ட புலமோ அல்லது அதன் ஒரு பகுதியோ கேட்புத்துறைக்கு தேவையில்லை என்றால் அதனை அரசு வருவாய்த் துறையிடம் கேட்புத்துறை திரும்ப ஒப்படைக்க வேண்டும்.
5. வனத்துறையினரால் நிர்ணயக்கும் மரக்கிரயத்தினை கேட்பு நிறுவனம் செலுத்த வேண்டும்.
6. அரசு நில உரிமை மாற்றம் செய்து பிறப்பிக்கப்படும் உத்தரவின் போது நிர்ணயிக்கப்படும் நிலமதிப்பே இறுதியானது.

7. நில உரிமை மாற்றம் செய்யும் புலங்களில் உள்ள மின்கம்பங்கள் நிறுவனத்தின் சொந்த செலவிலேயே மாற்றி அமைத்து கொள்ளவோ அல்லது அகற்றி கொள்ளவோ வேண்டும்.
8. பொது மக்கள் பயன்படுத்தும் சாலைகள் ஏதேனும் இருப்பின், பொதுமக்களுக்கு பாதிப்பு ஏற்படாத வகையில் பராமரிக்கவோ அல்லது மாற்றி அமைக்கவோ வேண்டும்.
9. நில உரிமை மாற்றம் செய்யப்படும் நிலங்களுக்கு இடையில் நீர்நிலை புறம்போக்கு நிலங்கள் இருப்பின், அதனை ஆக்கரமணம் செய்யாமல் அதன் தன்மை மாறாமல் பராமரிக்கவேண்டும்.

மாவட்ட ஆட்சித்தலைவர்,
திருவள்ளூர்.

பெறுநர்
மேலாண்மை இயக்குநர்,
சிப்காட்,
19A ருக்குமணி லட்சுமிபதி சாலை,
எழும்பூர், சென்னை- 600 008.

நகல்:
1. முதன்மைச் செயலர்/நில நிர்வாக ஆணையர், சேப்பாக்கம், சென்னை -5.
2. வருவாய் கோட்டாட்சியர், பொன்னேரி.
3. வட்டாட்சியர், கும்மிடிப்பூண்டி.

8370/F3

008370

ABSTRACT

Industries Department - Land Acquisition – Tiruvallur District – Gummidipoondi Taluk – Madarpakkam, Sanaputhur & Vaniamalli Village – 61.19.0 hectares, (151.13 acre) of Patta – Acquisition of lands required for SIPCOT to establish Bulk Drug Park – Administrative Sanction – Approved – Orders issued.

INDUSTRIES (MIG.2) DEPARTMENT

15 MAR 2021

G.O. (Ms) No.94

Dated:26.02.2021
சார்வரி வருடம் – மாசி 14
திருவள்ளுவர் ஆண்டு 2052

Read:

1. The Managing Director, SIPCOT, Letter No. LNBDP/ GMPD/ 2020, dated 07.10.2020.
2. From the District Collector, Tiruvallur letter No. 21074/2020/F3, dated 20.10.2020.
3. From the Commissioner of Land Administration (FAC) Letter No. M1-08-779-2020, dated 06.11.2020.
4. From the District Collector, Tiruvallur Letter No. 21074/2020/F3, dated 23.02.2021.

*****

ORDER:

In the reference 3rd read above, the Commissioner of Land Administration (FAC) has stated as follows:

i. The District Collector, Tiruvallur has sent a proposal for according administrative sanction for acquisition of land measuring an extent of 61.19.0 Hectares, (151.13 acre) of Patta lands in Survey No.31/1 etc., at Madarpakkam, Sanaputhur & Vaniamalli Villages, Gummidipoondi Taluk, Tiruvallur District under the provisions of Tamil Nadu Acquisition of lands for Industrial Purposes Act, 1997 for establishing Bulk Drug Park by SIPCOT.

ii. The proposal reveals that the Ministry of Chemical and Fertilizers, Department of Pharmaceuticals, Government of India issued guidelines under "Promotion of Bulk Drug Parks" on 27.07.2020 to promote setting up of Bulk Drug Parks in the Country for providing easy access to world class Common Infrastructure Facilities to bulk drug units. The total financial outlay of the scheme is Rs.3000 crore and three bulk drug parks will be supported and maximum grant in aid for one park will be limited to Rs.1000 crore. The Government of India has invited proposals from all States willing to develop Bulk Drug Parks and the State which is scoring highest marks based on the guidelines will be selected for the financial assistance. The proposed park shall not be less than 1000 acres in area and the State shall get 2.5 marks for every additional 250 acres of land, over and above 1000 acres of minimum stipulated land.

iii. In order to promote the development of pharmaceutical sector, the Government of Tamil Nadu intends to promote a Greenfield Bulk Drug Park through SIPCOT by availing grant of Rs.1000 crore from the Ministry of Chemicals and Fertilizers, Department of Pharmaceuticals, Government of India, under Promotion of Bulk Drug Parks Scheme towards creating of common infrastructure facilities to support bulk drug units.

iv. The Project is proposed to be developed in an encumbrance free land parcel of 2025.04 acres at Manallur in Gummidipoondi Taluk, Tiruvallur District. It shall be developed with all basic infrastructure like roads, storm water drains, water supply, solid waste management along with Common Infrastructure Facilities (CIF) as required to support the Bulk Drug Park. Further, it is reported that, SIPCOT is already in possession of 1789.62 acres at Manallur and 3 other Villages. Now, the requisitioning body i.e. SIPCOT has sent requisition for acquisition of 148.92 acres of patta lands, 86.51 acres of Government poromboke lands for alienation.

v. It has been reported that the survey numbers with extent thereon furnished by the Chairman and Managing Director, SIPCOT have been reconciled with the revenue accounts and the actual extent required to be acquired is 151.13 acres and regarding poramboke lands which fall under unobjectionable category, pending alienation, enter upon

permission can be granted by the District Collector in exercise of powers conferred on the District Collector vide G.O. (Ms) No.241, Revenue & Disaster Management Department, dated 16.05.2020.

vi. The details of lands proposed for acquisition for according administrative sanction in Madarpakkam, Sanaputhur & Vaniamalli Village Gummidipoondi Taluk, Tiruvallur District for Bulk Drug Park by SIPCOT is as follows:

SL. No.	Name of the Village	classification		Extent in Hect,
		Wet	Dry	
1.	Vaniamalli	4.72.5	2.43.0	7.15.5
2.	Madharpakkam	0.61.0	20.07.5	20.68.5
3.	Sanaputhur	0.00.0	33.35.0	33.35.0
4.	Total - Patta lands	5.33.5	55.85.5	61.19.0 Hectares or 151.13 Acres

vii. The Managing Director, SIPCOT has requested to acquire the patta lands through private negotiation considering the urgent need of land establishing Bulk Drug Park.

viii. Regarding funds, the Managing Director, SIPCOT has stated that funds will be deposited immediately when required.

3. In this regard, the District Collector, Tiruvallur has now furnished the following:

i. Inspection Report
ii. Clearance certificate from Tamil Nadu Urban Land Ceiling Department.
iii. 5.33.5 Hectares, of Wet lands involved in this acquisition
iv. Inevitability certificate.
v. Tentative value for the acquisition lands based on the Guide Line Value (GLV).

4. Finally, the Commissioner of Land Administration (FAC) has recommended the proposal furnished by the District Collector, Tiruvallur for according administrative sanction for acquisition of 61.19.0 Hectares (151.13 acres) of dry and wet patta lands comprising in Survey Numbers 31/1 and etc., of Madarpakkam, Sanaputhur & Vaniamalli Villages, Gummidipoondi Taluk, Tiruvallur District for Bulk Drug Park by SIPCOT under the provision of Tamil Nadu acquisition of lands for

Industrial Purposes Act, 1997 or through Private negotiation and requested the Government to issue necessary orders.

Sl. No.	Name of the Village	classification		Extent in Hect,
		Wet	Dry	
1.	Vaniamalli	4.72.5	2.43.0	7.15.5
2.	Madharpakkam	0.61.0	20.07.5	20.68.5
3.	Sanaputhur	0.00.0	33.35.0	33.35.0
	Total - Patta lands	5.33.5	55.85.5	61.19.0 Hectares or 151.13 Acres

5. The Government after careful examination, accept the recommendation of Commissioner of Land Administration and hereby accord administrative sanction for acquisition of said 61.19.0 hectares (151.13 acres) of dry and wet patta lands comprising in S.Nos.31/1 and etc., of Madarpakkam, Sanaputhur & Vaniamalli Villages, Gummidipoondi Taluk, Tiruvallur District under the Tamil Nadu Acquisition of Land for Industrial Purposes Act, 1997 or through Private Negotiation for establishing Bulk Drug Park by SIPCOT, subject to the following general conditions:

i. Proposal for alienation of the Government poramboke lands in favour of SIPCOT shall be sent to the Government in Revenue Department through the Commissioner of Land Administration, Chennai-5.

ii. To alienate the Government poramboke lands in favour of SIPCOT, consent of the respective Panchayat shall also be obtained.

iii. If any water bodies are found in the above said poramboke lands, NOC shall be obtained from the respective Executive Engineer (WRO), Public Works Department.

iv. If any Canals / Waterways are found in the above said poramboke lands, SIPCOT may be requested to build a stone wall so as not to obstruct the water flow and desilt, to build bridges and develop infrastructure facilities so that the effluent from the industries is not muddled up with the water course.

v. While acquisition, if any objections are received from the local public, genuineness of such objections shall be well examined and appropriate action shall be pursued before

issuance of notification under section 3(2) of Tamil Nadu Acquisition of Land for Industrial Purposes Act, 1997 (Tamil Nadu Act 10 of 1999).

vi. Further, SIPCOT shall be permitted to purchase the lands during the Land Acquisition proceedings under private negotiation with the Land Owners / Interested persons.

vii. The land Reforms Clearance Certificate to the effect that the patta lands proposed for acquisition are not attracted under the provisions of Tamil Nadu Land Reforms Act, 1961 shall be obtained from the concerned authority, if any.

(BY ORDER OF THE GOVERNOR)

N.MURUGANANDAM
PRINCIPAL SECRETARY TO GOVERNMENT

To
The Principal Secretary /Commissioner of Land Administration (FAC),
Chepauk, Chennai 600 005.
The Commissioner of Revenue Administration,
Chepauk, Chennai 600 005.
The Managing Director, SIPCOT, Egmore, Chennai 600 008.
The District Collector, Tiruvallur District.
The District Revenue Officer, Tiruvallur District.
The Principal Accountant General (CA), Chennai 600 018.
The Accountant General (Audit), Chennai 600 018.
The District Treasury Officer, Tiruvallur District.
The Sub Treasury Officer, Tiruvallur District.

Copy to:
The Revenue (Ser.I/LA.II) Department, Secretariat, Chennai -9.
The Finance (BGII/BGI/Ind./CMPC) Department, Secretariat, Chennai -9.
Industries (OP-II) Department, Secretariat, Chennai -9.
SF/SCs.

//Forwarded by Order//

SECTION OFFICER

26.2.2021

Item No.1: **Court No.1**

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

(Through Video Conference)

Appeal No. 13 of 2019 (SZ)

IN THE MATTER OF:

P. Sundaravathanam
S/o. Shri Periyasamy N
Virudhachalam Taluk, Cuddalore District.
Tamil Nadu – 607 802 and Anr.

... Appellant(s)

Versus

Union of India
The Ministry of Environment, Forest & Climate Change
Through its Secretary, Indira Parayavaran Bhawan,
Jorbagh Road, Aligunj, New Delhi – 110 003 and Ors.

...Respondent(s)

For Appellant(s): Mr. Ritwick Dutta along with
Mr. Saurabh Sharma and
Mr. G. Stanley Hebzon Singh.

For Respondent(s): Mrs. Me. Saraswathy for R1.
Dr. D. Shanmuganathan for R2.
Mr. S. Sai Sathya Jith for R3.
Mr. Arjun Suresh for R4.

Judgment Pronounced on: 31st May 2022.

CORAM:

HON'BLE Mr. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

O R D E R

Judgment pronounced through Video Conference. The Appeal is disposed of vide separate Judgment.

Pending interlocutory application, if any, shall stand disposed of.

Sd/-
Justice K. Ramakrishnan, JM

Sd/-
Dr. Satyagopal Korlapati, EM

Appeal No.13/2019 (SZ)
31st May 2022. Mn.

Item No.1: **Court No.1**

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

(Through Video Conference)

Appeal No. 13 of 2019 (SZ)

IN THE MATTER OF:

1) **P. Sundaravathanam**
S/o. Shri Periyasamy N
Aged about 62 years
R/o. 8/59, 3rd Street, Veppankurichi,
Post Vedakkuvellore, Neyveli,
Virudhachalam Taluk, Cuddalore District.
Tamil Nadu – 607 802.

2) **R. Raju**
S/o. Shri Ranganathan
Aged about 45 years,
R/o 202, North Street, Mumudichozhagan Village,
Kathazai Post, Virudhachalam Taluk,
Cuddalore District, Tamil Nadu – 606 103.

... Appellant(s)

Versus

1) **Union of India**
The Ministry of Environment, Forest & Climate Change
Through its Secretary,
Indira Parayavaran Bhawan,
Jorbagh Road, Aligunj,
New Delhi – 110 003.

2) **State of Tamil Nadu**
Through its Chief Secretary
Government of Tamil Nadu
Secretariat, Chennai,
Tamil Nadu – 600 009.

3) **Tamil Nadu Pollution Control Board**
Through its Member Secretary
76, Mount Salai,
Guindy, Chennai – 600 032.

4) **M/s. NLC India Limited**
Represented by its Chairman
Mudnai, Kunankurichi,
Uthangal Village, Virudhachalam Taluk,
Cuddalore District, Tamil Nadu.

...Respondent(s)

For Appellant(s): Mr. Ritwick Dutta along with
Mr. Saurabh Sharma and
Mr. G. Stanley Hebzon Singh.

For Respondent(s): Mrs. Me. Saraswathy for R1.
Dr. D. Shanmuganathan for R2.
Mr. S. Sai Sathya Jith for R3.
Mr. Arjun Suresh for R4.

Judgment Reserved on: 10th May 2022.

Judgment Pronounced on: 31st May 2022.

CORAM:

HON'BLE Mr. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

Whether the Judgment is allowed to be published on the Internet – Yes/No

Whether the Judgment is to be published in the All India NGT Reporter – Yes/No

J U D G M E N T

Delivered by Justice K. Ramakrishnan, Judicial Member

1. The above appeal has been filed by the appellant against the grant of Environmental Clearance (EC) in favour of the 4th Respondent – M/s. NLC India Limited for their second expansion of the Thermal Power Plant having a capacity of 2 x 660 MW Super Critical Lignite-based Plant by the 1st Respondent/Ministry of Environment, Forests & Climate Change (hereinafter referred to as ***"MoEF&CC"***) vide their proceedings No. J-13012/11/2016-IA.I (T) dated 29.10.2018, under Section 16 of National Green Tribunal Act, 2010.

2. It is alleged in the appeal memorandum that the 4th Respondent had obtained Environmental Clearance for their Thermal Power Station – II for (4 x 210 MW) on 05.01.1983 and they obtained their first expansion of 2 x 250 MW on 09.01.2003. Thereafter, the 4th Respondent had applied for their second expansion of Super Critical Lignite-based Plant adjacent to

its operating Thermal Power Station – II having a capacity of 2 x 600 MW to the 1st Respondent and they issued Terms of Reference on 23.03.2017.

3. On 19.12.2017, the 4th Respondent prepared the Draft EIA Report and submitted to the Tamil Nadu Pollution Control Board, Cuddalore District and public hearing was conducted on 15.02.2018 at Community Hall, Block – 29, Neyveli Township, Virudhachalam Taluk, Cuddalore District. Thereafter, the 4th Respondent had prepared the Final EIA Report in June 2018 and submitted their application for Environmental Clearance along with the Final EIA Report on 13.08.2018. On 30.08.2018, the project was appraised by the Re-Constituted Expert Appraisal Committee of Thermal Power Projects in its 20th Meeting held on 30.08.2018, evidenced by Annexure – A2 and the project was recommended on the said meeting by the Expert Appraisal Committee and the MoEF&CC had issued the Environmental Clearance vide Annexure – A1, Proceedings dt. 29.10.2018 which was challenged by the appellant on the following grounds:-

- There was no proper Environmental Impact Assessment conducted.
- No Cumulative Impact Assessment was conducted for this project.
- The Terms of Reference issued were not properly complied with.
- The air quality was not properly assessed.
- No impact assessment was conducted within 10 Kms area on the basis of the existing units within that area.
- The necessary particulars were not provided in the public domain along with the EIA Report thereby, public were denied access to the entire report.
- There was violation of siting criteria and the siting criteria guidelines produced as Annexure – A4.
- The existence of ecologically sensitive areas were not mentioned.
- Further, lot of Reserve Forest and River were situated within 25 Kms of the existing power plant.
- The project was situated in agricultural area and there are other industrial estates situated which was mentioned in Section 3.10.2.5.

- The directions issued by the **Sarpanch, Grampanchayat Tiroda Vs. The Ministry of Environment and Forests (Appeal No.3 of 2011) and T. Muruganandham & Ors. Vs. Union of India & Ors. (Appeal No.50 of 2012)** regarding the Cumulative Impact Assessment and Carrying Capacity has not been properly assessed before recommending and granting the Environmental Clearance for this project.
- It is violating the National Energy Requirement Policy, evidenced by Annexure – A6.
- The questions raised regarding health assessment and non-providing employment of the people in the project impact area and non-providing of sufficient CSR Projects were not properly considered.
- No proper Hydro-geological study was conducted regarding the impact of drawal of water for this project and its impact on the neighbouring areas.
- The Ambient Air Quality mentioned was not proper.
- There was no proper application of mind by the authorities.
- The nature of availability of water provided is also not correct.

4. The appellant relied on the decision reported in **Utkarsh Mandal Vs. Union of India[1], Samata Vs. Union of India[2],** and **Samarth Trust Vs. Union of India[3]** of the Hon'ble High Court of Delhi in support of their case.

5. So, the Environmental Clearance granted is not proper and they prayed for setting aside the Environmental Clearance granted on the above grounds.

6. The 1st Respondent filed counter contending that the proposal for grant of Environmental Clearance was deliberated by the Expert Appraisal Committee for Thermal Sector in the meeting held on 30.08.2018. The EAC comprising of domain experts of different fields, after detailed

[1] **2009 X AD (Delhi) 365**
[2] **2014 All India NGT Reported (1) (SZ) 1**
[3] **Writ Petition (Civil) No.9317 of 2009**

deliberations on the proposed expansion and taking note of the confirmations given by the Project Proponent, recommended for grant of Environmental Clearance (EC) for expansion of 2x660 MW Supercritical Lignite based Thermal Power Plant subject to compliance of certain terms and conditions for implementation of various environmental safeguards. After taking cognizance of environmental concerns and the mitigation measures proposed by the EAC, the Environmental Clearance (EC) for expansion of 2x660 MW Supercritical Lignite based Thermal Power Plant was granted by the Ministry to the 4th Respondent on 29.10.2018. The averment that there was no application of mind etc. is not correct. Pursuant to the submission of the draft EIA, a notice intimating the holding of a public hearing, was published on 12.01.2018 in two newspapers viz., "The New Indian Express" in English and "Dinamani" in Tamil languages which are widely circulated in the region. In the notice, it was informed that a public hearing would be held on 15.02.2018 at 10:30 a.m. at the Community Hall, Block-29, Neyveli Township, Cuddalore, Tamil Nadu - 7. As as per the provisions of EIA Notification, 2006 and amendments thereof, the Public Hearing for the proposed expansion was conducted by Tamil Nadu State Pollution Control Board on 15.02.2018 at the notified designated place. The draft EIA was available to the general public before conduct of the public hearing along with the ToR and its point wise compliance. The project proponent duly clarified various issues raised by the general public during the Public Hearing and the same have been included in the EIA report. So, the allegation that the Public Hearing was a sham and false one and hence, denied. The EIA report was prepared in accordance with the ToR granted to NLCIL by the Ministry and point-wise compliance of the conditions of ToR has been incorporated in the EIA report. Earlier, the proposed site for the expansion of 2x660 MW Supercritical Lignite based Thermal Power Plant was visited by the Sub-committee of the EAC prior to grant of ToR to relook into the suitability of the project including to verify the use of common facilities of the existing power plants in the proposed expansion. Besides, guidelines of a generic structure, as per the EIA Notification, 2006 have also been followed while preparing the EIA/EMP report which have been duly verified and found to be in order

before appraisal of the project. So, the averment that there was no proper application of mind and the EIA Report was not prepared on the basis of the ToR issued was not correct. The dictum laid down in the decisions relied on by the appellant are not applicable to the facts of this case. The ToR was issued strictly in compliance with the EIA Notification, 2006 and the 4th Respondent had carried out the environmental study within the radius of 10 Kms. The area of the study was restricted to 10 Km only because it was not a critically polluted area and there were no environmentally sensitive areas situated within that area. None of the reserve forest mentioned by the appellant were categorized or notified as ecologically sensitive areas. The existing Thermal Power Plants were mentioned in the EIA Report and impact of the same has been considered. No other industrial area situated within the radius of 10 Kms. The Environmental Clearance (EC) was granted based on the fact that the 4th Respondent shall install FGD and DENOX system as stipulated under clause 11 and 12 of the Environmental Clearance (EC). This is also mentioned that these facilities will have to be installed to ensure that SOx and NOx shall be met as per the notification dated 07.12.2015. The height of the stack has been properly fixed. The particulate emission shall not exceed 30 mg/Nm3 which was more stringent than the regular norm of 50 mg/Nm3 as per the standard provided by the Central Pollution Control Board and the 1st Respondent. Necessary conditions have been imposed depending upon the nature of disposal of fly ash generated. They are achieving 100% utilization of the fly ash as regards the present units are concerned. They have denied the allegation of non-implementation of the ZLD System and the pollution control mechanism provided was not sufficient. The Ambient Air Quality study conducted by the project proponent shows that it is within the limit. As per the present environmental norms, the 4th Respondent have to install and connect OEQMS pertaining to each stack as part of CEMS to ensure online monitoring of emission from the proposed plant. Though a representation was sent on 24.01.2019, the appellant filed the appeal immediately before this Tribunal. They denied the allegation that the Expert Appraisal Committee has not properly assessed the project and they prayed for dismissal of the appeal.

7. The 3rd Respondent filed counter contending that the 4th Respondent industry had proposed for expansion by setting up of 2 x 600 MW Supercritical Lignite-based Thermal Power Plant – II Expansion adjacent to existing 7 x 210 MW (TSP-II) and 2 x 250 MW (TPS-II Expansion) power plants. They obtained Terms of Reference issued by the 1st Respondent/MoEF&CC for the above proposed expansion. They submitted the draft Environmental Impact Assessment report and a public hearing were organized by the Tamil Nadu Pollution Control Board, Cuddalore on 15.02.2018. The MoEF&CC had issued Environmental Clearance on 29.10.2018 on the basis of the documents submitted and recommendations made by the Expert Appraisal Committee. As per the EIA report, there were no ecologically sensitive areas within 25 Kms. The existing power plants such as TPP - I, TPP - I expansion, TPP - II, TPP – II Expansion of NCL India Ltd. are continuously monitored by the Pollution Control Board. The site was inspected on 14.02.2019 by the Tamil Nadu Pollution Control Board officials and found that earth leveling works for the construction of administrative building was being carried out. The 4th Respondent industry was instructed to carry out any construction activities only after obtaining Consent to Establishment from the Board. They submitted online application for Consent to Establishment which was returned for want of particulars. So, they prayed for accepting their contentions and passing appropriate orders.

8. The 4th Respondent filed reply affidavit contending that the appeal is not maintainable and the reasons stated are not sufficient for setting aside the Environmental Clearance granted for the project. The 4th respondent is a Central Public Sector Undertaking (CPSU) and a limited company incorporated in the year 1956. It was categorized as a Navratna Company and falls under the administrative control of the Ministry of Coal, Government of India. They operate four opencast Lignite mines, five Lignite-based Thermal Power Stations and one Coal-based thermal power plant. The Coal - based thermal power plant is operated through its joint venture with the Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) viz., NLC Tamil Nadu Power Limited. Apart

from the above thermal power plants, they are actively setting up renewable energy based power plants such as wind and solar based plants. The 4th Respondent was set up by the Government of India to ensure that the electricity demands of the State of Tamil Nadu and the neighboring States such as Andhra Pradesh, Kerala, Telangana and Union Territory of Puducherry are met. They initiated plans to set up a second expansion of its existing thermal power station viz. TPS –II having a capacity of 2 X 660 MW Supercritical Lignite - based thermal power station which was expected to generate 9250.56 Million units (MU) per year at 80% PLF. The subject plant is to be set up in an area of 608 Acres owned by the 4th Respondent which falls within the existing TPS - II complex and is proposed to be set up adjacent to the existing TPS - II plant. Out of the 608 Acres of barren land with shrubs, the main expansion plant is to be constructed in an area of 52 Acres and the greenbelt pertaining to the subject plant is to be put up in an area of 160 Acres. The total project cost is Rs.8,733.49 crores. A sum of Rs. 1123.71 crores is apportioned towards capital costs for Environmental Management Plan and a sum of Rs. 140.46 crores is towards recurring costs which is in addition to the total project cost. The proposed subject plant is going to be the first Lignite - based 660 MW Supercritical Power Plant in India. They proposed to engage the services of 850 persons during the construction stage of the Subject Plant and 1000 persons during the operation stage of the Plant. In the thermal power generation, chemical energy of fuel (in the present case, lignite) is first converted into thermal energy during combustion which is then converted into mechanical energy through a turbine and thereafter, finally into electrical energy through a generator. They use pulverized fuel combustion technology, apart from using steam pressure over and above the critical pressure of 221 bar i.e., exceeding 240 bar and the steam temperature i.e. both super heat & reheat is $\geq 595^0$ C. There are various air pollution control mechanism provided such as installing Electrostatic Precipitators (ESP), Flue Gas De - Sulfurisation (FGD) and DENOX Systems to reduce the levels of PM, SO2, NOx and Mercury (Hg). They are using the latest technology and adhering to the environmental norms. Since the project falls under Category A of the Environmental Impact Assessment

Notification, 2006, they submitted an application for environmental clearance in Form - I with Pre - Feasibility Report (PFR) and Proposed ToR studies with the 1st Respondent vide its proposal bearing reference number IA / TN / THE / 60765/2016 dated 30.11.2016. The details of alternative sites were also listed in the said report. The sub-committee of the Central Level Expert Appraisal Committee (EAC) had visited the site on 04/02/2017 and 05/02/2017 and certain compliances was sought and necessary action was taken by the 4th Respondent and informed the EAC about the compliance of the directions. The present site was approved by the EAC after discussions and after considering the environmental conditions and proximity to the existing TPS - II. Thereafter, the Terms of Reference (ToR) was issued on 23/03/2017 which was informed to the 4th Respondent under reference letter No. J - 13012/11/2016- IA. II (T). After complying with the Terms of Referene and preparation of the draft EIA Report, they addressed the District Environmental Engineer, TNPCB, Cuddalore on 20/12/2017 along with the draft EIA Report and Executive Summary in English and Tamil. The 4th Respondent had hired the services of M/s. Hubert Enviro Care Systems (P) Ltd to carry out the comprehensive Environmental Impact Assessment (EIA) study with regard to the subject project as mandated under the EIA Notification, 2006 which is accredited with the National Accreditation Board for Education and Training which is a constituent board of the Quality Council of India. On the basis of the request made by the 4th Respondent, Tamil Nadu Pollution Control Board had published the date of public hearing in two dailies dated 12/01/2018 viz. The New Indian Express (English) and Dinamani (Tamil). The date of meeting was schedule as 15/02/2018 at 10:30 a.m. at the Community Hall, block 29, Neyveli Township and the public hearing was conducted on that day, and various queries were raised by the public and the same were responded by the project proponent. The draft EIA as well as the ToR were available with the public during the public hearing and every apprehension raised by the participants in the public hearing were explained by the project proponent. Pursuant to the public hearings, the consultants have finalized the EIA Report on 15/06/2018 and the same was uploaded in the web portal of the 1st Respondent on 15/06/2018 to

the extent of 20 MB, as the uploading capacity was limited to that much only. They received an email from the MoEF&CC seeking certain Essential Details Sought (EDS) on 17/07/2018 and the same was complied with by the 4th Respondent on 27/07/2018 by uploading the documents. They received the acknowledgment of receipt of the Essential Details Sought (EDS) on 13.08.2018. They have narrated the critical points covered in the EIA are as follows:-

"(i) There are no notified ecologically sensitive areas within 10 km from the core of the Subject Plant. It is relevant to state that the ToR did not require a study of 25 km. Radius and hence, the Consultant, in accordance with the ToR had only carried out its study to 10 km or 15 km. Radius, as the case may be.

(ii) The Subject Plant is not being put up in a critically polluted area.

(iii) The Subject Plant is being put up on barren land with shrubs and the same is classified for 'Industrial Use' and not on agricultural land.

(iv) The source of water for the Subject Plant shall be the water pumped out during mining operations from the basket of lignite mines including Mine III of the Fourth Respondent and the recycled water from the effluent and sewage treatment plants.

(v) The height of stack was originally envisaged at 275 meters which is now reduced to 150 meters pursuant to notification, S.O. 3337 (E) dated 28/06/2018. It is submitted that the reduction to 150 m is also due to the stringent environmental norms to install various air pollution control devices such as ESPs, FGDs and DENOX systems.

(vi) The lignite transportation shall be by pipe conveyor system which is also suitable for an environmentally sensitive area.

(vii) The ash generated from the lignite obtained from all the mines, including Mine III and burned will be supplied to nearby manufacturers of building material, cement and for land filling of low-lying areas as per the guidelines issued by the first respondent.

(viii) The gypsum from the FGD which is not classified as hazardous under the Hazardous and other Wastes Trans boundary (Management and Movement) Rules 2016, Notification No. G.S.R No. 395 (E) dated: 04.04.2016 (2016 Rules) would also be marketed or disposed to cement plant or used for backfilling in the mines.

(ix) From the data collected from the 12 air quality monitoring stations in and around the Subject Plant during the period March - May 2017, the particulate matters were within the National Ambient Air Quality Standards (NAAQ Standards). Further, the maximum concentration of criteria pollutants such as Sulfur oxide (SO2), Nitrogen Oxide (NOx), Lead (Pb), Sulfur Dioxide (CO), Ammonia (NH3), Benzene (C6H6), Perylene (C20H12), Arsenic (AS) and Nickel (Ni), were also well within the NAAQ Standards for Industrial, Commercial and Residential areas in all the monitoring stations during the entire period of study. It is also relevant to state that the TOR had only required the Fourth Respondent to carry out studies for one non - monsoon season and the same was accordingly carried out during summer season viz. March to May when the climate is most oppressive.

(x) Even after considering the operation of the Subject Plant by applying the AERMOD process, the ambient air quality with regard to PM, SO2 and NOx will be within the NAAQ Standards.

(xi) From the data collected from five sampling locations with regard to surface water, the same fall under category 'B' of IS 2296: 1992 of Surface Water Standards. The Chloride content and the Sulphate content of surface water are within the limits of IS 2296: 1992 of Surface Water Standards. Likewise, the Chloride content and the Sulphate content of ground water is also within the desirable limits of the IS 10500 : 2012.

(xii) As per the Seismic study, the Subject Plant falls in Zone II which is safe."

9. It is further contended that the Expert Appraisal Committee had considered the project on 30.08.2018 and after elaborate discussions with the project proponent and their consultant, they have decided to recommend the project and on that basis, the 1st Respondent had issued the impugned Environmental Clearance on 29.10.2018. This was published in New Indian Express (English) and Daily Thanthi (Tamil) on 4/11/2018. They have also given the detailed reply in the above lines in Para-wise. They also given the details of Terms of Reference and its compliance in a tabular form which reads as follows:-

S. No.	***Terms of Reference***	***Compliance***
1	*Compliance and implementation status of the sub committee recommendations made during the site visit on 04 – 05th February 2017 shall be submitted*	*1. MoEF&CC Sub Committees site visit (4-5th February, 2017) observation is enclosed as Annexure 7.* *2. Proponent reply to the committee observation is enclosed as Annexure 7A.*
2	*PP Shall submit a request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry fly ash to enhance its utilization level.*	*Proponent has submitted the request to CSIR (Lr. No. NLCIL/D(P&P)/ 113/TPS-II Exp./ENVT/2017 dated 19.01.2017) and remainder letter submitted to CSIR (Lr. No. DGM/Envt./ Fly ash/2018 dated 27.04.2018 (meeting with CSIR officials from Bhopal is expected) Letter submitted to CSIR is enclosed as Annexure 13.*
5.	*Carbon Footprint Study shall be carried out from a reputed institute for existing plant as well as for the proposed project.*	*Carbon Footprint study has been conducted by Environment Engineer, Department of Pondicherry Engineering College, Pondicherry Central University. Report is enclosed as Annexure 19*
7	*Need based assessment study/skill mapping shall be conducted for all the villages located in and around 10 km radius from the project site. Accordingly, a long term CSR activities shall specifically include improving and providing modern methods of irrigation, organic farming, skill development for the local people.*	*Based on SIA Study recommendation, CSR plan will cover implementation of modern methods of irrigation, Organic farming, skill development for the local people and towards this 0.25% i.e. Rs.23.1 Crore of the proposed expansion project cost is earmarked as the budget.*
9	*Detailed and time bound action plan for phasing out of the existing unit i.e. TPS-I along with waste management plan shall be submitted and shall be inline with the construction and Demolition Waste Management Rules, 2016*	*It is proposed to phase out the existing TPS – I when the (NNTPS 2 x 500 MW) units are commissioned. The time schedule for phasing out (Letter sent to CPCB Lr. No.002/GM/TPS-I/CPCB/2018 is enclosed as Annexure 20. While decommissioning the existing unit, the waste management plant will be prepared and handled in line with Construction and Demolition Management Waste Rules, 2016.*
10	*The selected location is low lying area and requires filling up upto 2 m depth with borrow materials.*	*The topography of the selected location varies from 47 to 57 m MSL, which will be levelled to a common base level using*

	Details of borrow materials or filling materials viz., source, total quantity to be used, etc. should be provided.	*the soil removed from higher elevation and hence there is no additional material required for this work. If at all any additional filling materials is required pond ash from nearby ash pond will be used.* *Details are given in EIA Report, Chapter 4 Section 4.3.1*
12	*Vision document specifying prospective long term plan of the project shall be formulated and submitted*	*The vision of the project is derived from the vision of the parent company. The long term vision of the proposed power project is sustainable power generation maintaining high standards of efficiency, environment performance and financial strength, over the design life (25 years) and extended life of the project through suitable renovation and modernization programmes from time to time. The long term plan will be covering environmental protection, pollution control and CSR activities.*
14	*The project proponent to identify minimum three potential sites based on environment, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sits in this regard shall be submitted.*	*As it is an expansion project utilizing available land area which is in possession of NLCIL, identification of minimum 3 potential sites does not arise.*
32	*Hydro-geological study to the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.*	*Optimum Ground water development plan for the multi-layer coastal aquifer system of Neyveli Hydro-geological Basin conducted by Central Ground Water Board, SECR, Chennai and concluded as follows: Based on the present Hydro-geological study, it is concluded that the aquifers of the Neyveli Hydro-geological Basin spread over an area of 3500 Sq. Km are safe with the present rate of pumping and as such no threat of sea water intrusion exists. In addition, IIT – Madras has prepared Environment Management Plan on the mine water generation and disposal and its impacts on ground water, surface water and soil for mine – II expansion, which covers Hydro-geological study of the area. As per the recommendation of the IIT – Madras Hydro-geological Study, Chennai Testing laboratory studied groundwater & surface water and soil quality. Report is enclosed in Annexure – 14.*
33	*Detailed Studies on the impacts of the ecology including fisheries of the River/ Estuary/ Sea due to the proposed withdrawal of water discharge of treated waste water into the River/Sea etc. shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of*	*The waste water generated from the proposed project is recycling and reused in utilities and ash pond. Hence, there is no discharge of effluent.*

	intake and outfall shall be clearly specified along with depth of water drawal and discharge into open sea.	
34	*Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account f inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with the letter/ document stating firm allocation of water.*	*Water requirement is water pumped out from the NLCIL mines including mine – III through TPS-II reservoir. Hence, the concept of lean season does not arise.* *Also the water is sourced from NLCIL own mine's the question of competing downstream user doesn't arise.*
35	*Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.*	*The typical rainwater harvesting system is attached Annexure 11. All the rainwater from road rains, roof top drains, would be collected in the rainwater pit. The collected water would be recharged into the ground. All the buildings will be provided with rainwater harvesting arrangement.*
40	*Socio-economic study of the study area comprising of 10 Km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.*	*Socio-economic study report is enclosed as Annexure 9.*
49	*In case of expansion projection, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs.)*	*AAQ monitoring being carried out 104 measurements at 13 locations and results are well within the NAAQ standards, 2009. Results are given in EIA Report, Chapter – 3, Table 3-8.* *In addition, continuous one no online AAQ data monitoring and 13 Semi Automatic monitoring is being carried out as per CPCB guidelines and measured data is being regularly sent to TNPCB/MoEF&CC, Regional Office.*
51	*Cumulative Impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should be shown on the location map. The cumulative study should also include impacts on water, soil, and socio economics.*	*Impacts due to the proposed project is predicted using AERMOD model. Details are provided in Chapter – 4, Section 4.4. The existing baseline concentration covers all the existing emission sources, which has been monitored for the operating units and the contribution due to the proposed project it was assessed through AERMOD and the resulting concentration is within the prescribed standards.*
52	*Radioactive and heavy metal contents of coal to be sourced shall be examined and submitted along*	*The radioactive and heavy metal content report conducted by BARC is enclosed as Annexure – 24.*

	with laboratory reports.	
55	*Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on Ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.*	*The transportation is through piped conveyor and no dust pollution is anticipated. Details are provided in Chapter – 2, Section 2.6.2*
61	*Detailed scheme for raising green belt of native species of appropriate width (50 to 100m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha. with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for Co_2 and other gaseous pollutants and hence a stratified greenbelt should be developed.*	*Greenbelt layout is enclosed as Annexure – 6. Three tier greenbelt of 50 to 100 mts is envisaged as per CPCB guidelines with shrub layer beneath tree layer would serve as an effective sieve for dust and sink for Co_2 and other gaseous pollutants. The tree species will be short listed and the recommendation of DFO, Cuddalore and CPCB guidelines. Greenbelt details are provided in Chapter – 9.*

10. They also contended that the dictum laid down in the decisions relied on by the appellant are not applicable to the facts of this case. They also given the answers regarding the siting criteria alleged by the appellant in a tabular form as follows:-

S. No.	***Appellant's reference to the purported sitting guidelines***	***Response***
(i)	*Ecologically and / or otherwise sensitive areas: preferably 5 Km; Depending on the Geo-Climatic conditions the requisite distance may be decided appropriated by the agency.*	*There are no ecologically sensitive areas, a declared by the Government, in 10 Kms radius. It is pertinent to stage that as per Paragraph 4.2.4 of the IL & FS Report, the Ecological Sensitive areas are listed and none of the said areas fall within 10 Kms. Of the subject plant.*
(ii)	*Coastal areas: Preferably Half a Kilometre from High Tide Line (HTL)*	*There are no coastal areas in a radius of 10 Km*
(iii)	*Flood Plain of the Riverine System: Preferably half a kilometre away from flood plan or modified flood plain affected by the dam in the upstream or by flood control system*	*There is no riverine system within half a km distance from the subject project site. Further, there are no notified rivers. It is also relevant to state that the subject plant will not be discharging any effluent not consume any water from rivers or lakes.*
(vi)	*Transport / Communication system: Preferably half a way km away from the Highway and Railway line*	*The Nearest Highway Road is 1.5 Km from the project site.*

Guidelines based on the selection of site of coal based Thermal Power Plants set by the MoEF.

Locations of the Thermal Power Stations are avoided within 25 Km of the outer periphery of the following:

S. No.	*Appellant's reference to the purported sitting guidelines*	*Response*
(v)	*Metropolitan cities*	*There is no Metropolitan City within 25 Km radius. Chennai is the only nearest Metropolitan City which is more than 200 Kms.*
(vi)	*Natural park and wildlife sanctuaries*	*There are no natural parks or wildlife sanctuaries in 25 a km radius.*
(vii)	*Ecologically sensitive areas like (Tropical forest, biosphere reserve, important lake, and coastal areas rich in coral formation);*	*There are no ecologically sensitive area in 25 Km radius. In specific terms, there are no tropical forests, biosphere reserve, important lake, and coastal areas rich in coral formation. Reserve forests referred to in the EIA are not notified as ecologically sensitive.*
(viii)	*The sites should be chosen in such way that chimneys of the power plants does not fall within the approach funnel of runway of the nearest airport.*	*No chimney or tower would be constructed within the approach funnel of a runway of the nearest airport. Further, nearest airports from the project plant are:-* *(i) Neyveli Airstrip (non-functional – 2.5 Km ENE)* *(ii) Pondicherry airport – 62.2 Km (NE)*
(ix)	*Those sites should be chosen which are at least 500 m away from the flood plain of river system*	*The project plant is not near a flood plan of a river system.*
(x)	*Location of the sites are avoided in the vicinity (say 10 km) of places of Archaeological, historical, cultural / religious/ tourist importance and defence installations.*	*There are none in a 10 Km radius.*
(xi)	*Forest or prime agricultural lands are avoided for setting up of power houses or ash disposal.*	*The proposed project plant is not being set up on forest land or agricultural land. It is submitted that land was earlier acquired and under possession of the Fourth Respondent and the subject plant is proposed to be put up on land classified as "Barren Land' by Special Tahsildar, Land Acquisition.*

11. There are no ecologically sensitive areas like National Park/Wildlife Sanctuary/Biosphere Reserve/Tropical Forest/Lake and coastal areas situated within 10 Km radius of the project area. They have conducted all the necessary studies including health study and socio-economic study as required under the ToR and provided the same in the EIA Report. This area is not a critically polluted area, as in the case of SIPCOT area

and the SIPCOT is situated about 40 Km from the project site. They have given the water consumption rate, availability of water within their premises and as such, there is no necessity for conducting any Hydro-geological study. They have denied all the concerns made by the appellant regarding the probable pollution and also given the details of the pollution control mechanism and mitigating measures taken by them to resolve all the issues which were raised in the public hearing. They further contended that the authorities have properly applied their mind and appraised the project and rightly recommended, based on which, the Environmental Clearance was granted by the 1st Respondent. So, they prayed for dismissal of the appeal.

12. The appellant filed rejoinder to the statements submitted by the 1st Respondent more or less reiterating the contentions raised by them in the appeal memorandum.

13. Heard the learned counsels Mr. Ritwick Dutta along with Mr. Saurabh Sharma and Mr. G. Stanley Hebzon Singh for the appellant, Mrs. Me. Saraswathy for the MoEF&CC, Dr. D. Shanmuganathan for the State Department, Mr. S. Sai Sathya Jith for the State Pollution Control Board and Mr. Arjun Suresh for the project proponent/4th Respondent.

14. The learned counsel appearing for the appellant argued that it is a critically polluted area and there was no Cumulative Impact Assessment study conducted. There was no Hydro-geological Impact Study for drawal of water conducted and the concerns raised in the public hearing were not answered properly. Further, the EIA Report was not prepared in tune with the ToR issued and they have not conducted any independent Hydro-geological study as required and they only copy pasted the report prepared by the Government Department in this regard. The baseline of air pollution and sound pollution shown are not correct. The EIA Report shows the quality of water in that area having high TDS and they have not mentioned anything about the mitigation measures that they are going to take to resolve the issue. The noise level in some area was higher than the standard prescribed. They have not conducted the impact assessment study covering 25 Km, including

SIPCOT industrial area. The health impact that is likely to be caused on account of the Lignite-based Thermal Power Plant was not properly appreciated. The grievance raised in the public hearing was that on account of the operation of the existing Lignite-based Thermal Power Plant by the 4th Respondent, Kidney related diseases have been increased and that aspect has not been appraised by the 4th Respondent at all. The social impact assessment of the project on the socio-economic aspect of the local people and the grievance of the people for not providing employment for the persons from whom the lands were acquired which was promised by the 4th Respondent and the grievance of the people of the project impact area has not been addressed and that was not considered in the appraisal and no specific recommendations were issued in this regard. That shows the non-application of mind.

15. The learned counsel appearing for the appellant had relied on the dictum laid down in the decisions reported in **T. Muruganandham & Ors. Vs. Union of India & Ors.**[4], **Sarpanch, Grampanchayat Tiroda Vs. The Ministry of Environment and Forests**[5], **Alaknanda Hydro Power Company Ltd. Vs. Anuj Joshi & Ors.**[6], **Utkarsh Mandal Vs. Union of India**[7], **Samata Vs. Union of India**[8], and **Samarth Trust Vs. Union of India**[9] of the Hon'ble High Court of Delhi and **Uma Maheswar Dahagama Vs. Union of India & Ors.**[10] of this Tribunal confirmed by the Hon'ble Apex Court in **National Thermal Power Corporation Limited (NTPC) Vs. Uma Maheshwar Dahagama**[11] and also the necessity of protection of water bodies and extraction of ground water as observed by the Principal Bench of National Green Tribunal, New Delhi in **Lt. Col. Sarvadaman Singh Oberoi Vs. Union of India & Ors.**[12] dated 10.05.2009.

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[4] **Appeal No.50 of 2012**
[5] **Appeal No.3 of 2011**
[6] **(2014) 1 SCC 769**
[7] **2009 X AD (Delhi) 365**
[8] **2014 All India NGT Reported (1) (SZ) 1**
[9] **Writ Petition (Civil) No.9317 of 2009**
[10] **Appeal No.46 of 2016**
[11] **Civil Appeal No.1846 of 2021**
[12] **M.A. No.26 of 2019 in O.A. No.325 of 2015**

16. The learned counsel appearing for the State Pollution Control Board submitted that their role is very limited and they have conducted public hearing on the basis of the Draft EIA Report submitted and forwarded the minutes along with the discussions and queries to the MoEF&CC as required under the EIA Notification, 2006. When they inspected the area and found that the 4th Respondent is proceeding with their work without getting Consent to Establish, they directed them not to proceed with the work without obtaining Consent to Establish. It is further submitted that subsequently they obtained Consent to Establish as well.

17. The learned counsel appearing for the MoEF&CC argued that necessary particulars were called for even before issuing the ToR and the Sub Committee had inspected the area and only after compliance of the directions issued by the project proponent and after the compliance report was received, they recommended for ToR on the basis of which, the 1st Respondent had issued the ToR. The public hearing was conducted and thereafter, the final EIA Report was submitted and that was appraised by the Expert Appraisal Committee and they have recommended the project and accordingly, the MoEF&CC has issued the Environmental Clearance. They have considered all the aspects and necessary conditions have been imposed.

18. The learned counsel appearing for the 4th Respondent submitted that all necessary details were furnished and there is no necessity to conduct any separate Hydro-geological Study, as they have no intention to tap any groundwater from any other sources than their own independent source of tapping water available in the closed mines which was available in excess and even during critical water shortage period, they have supplied from the existing pits to Chennai to meet the water scarcity in that area. Further, none of the impacts on ground water in that area was due to their activity. They are conducting health camps and also having primary health centres to provide free medical aid to the people of the project impact area. Further, using their Corporate Social Responsibility Fund, they have even promised to provide dialysis unit in the Government Hospital to meet the demand of the people in that locality and as such, a facility was not available there. Kidney related diseases were not due to

impact of the activities of the unit. All necessary studies have been conducted and it is on that basis, that the EIA Report was prepared by an accredited agency and that was properly appreciated and appraised by the Expert Appraisal Committee and necessary details required were furnished by the project proponent even during the course of appraisal and the public hearing grievance were addressed properly and as such, the submissions made by the counsel for the appellant that there was no application of mind and the EIA Report is defective etc. are not correct. The learned counsel also submitted that they are prepared to abide by any conditions imposed by this Tribunal, as they want to be more environment friendly project and they do not want anything happening in the health affairs of the people in that area. They were also providing necessary green belt and in fact, they received several awards for being environment friendly unit and showing commitment in protecting the environment. So, they prayed for dismissal of the application.

19. Considered the pleadings, submissions made by the learned counsel appearing for the parties and the written submissions submitted by the parties.

20. The points that arise for consideration are:-

a. Whether the Environmental Clearance granted for the second expansion of 2x 660 MW Super Critical Lignite based Thermal Power Plant of the 4th Respondent unit is liable to set aside for any of the reasons stated in the appeal memorandum and the submissions made by the learned counsel for the appellant at the time of hearing?
b. Whether there are any further directions (if any) to be issued applying the *"Precautionary Principle"* and *"Sustainable Development"* for protecting the environment and to mitigate the possible pollution and also remove the apprehension raised by the public at the time of public hearing?
c. Relief and costs.

POINTS:-

21. It is an admitted fact that the 4th Respondent is operating the Thermal Power Plant using Lignite Coal as fuel and they have already established two units as Stage – I and II and they applied for expansion of Thermal Power Station – II for additional capacity of 2 x 600 MW Super Critical Lignite-based Thermal Power Station and after conducting appraisal by the Expert Appraisal Committee and on the basis of the Expert Appraisal Committee's recommendation, the MoEF&CC had granted the subject Environmental Clearance under challenge to the 4th Respondent for this project. The grant of Environmental Clearance was challenged on the ground that there was no Cumulative Impact Assessment Study conducted taking into consideration the polluted industries situated within the radius of 25 Kms, no Hydro-geological Study was conducted, the fact of presence of high TDS and Alkaline nature of the water in that area has not been considered, the impact of the expansion on socio-economic conditions and health impact caused on account of the operation of the existing Thermal Power Plant owned by the 4th Respondent, the grievances raised in the public hearing were not considered and discussed and no remedial measures have been provided. Further, there was no independent Hydro-geological Study conducted but they have only extracted the study conducted by the Government agency in this regard, some years back.

22. As regards the Cumulative Impact Assessment Study is concerned, even according to the appellant, they have no case that the 4th Respondent had omitted any of the polluting industries situated within the distance of 25 Kms which will have an impact on environment on account of allowing the present expansion. The Cumulative Impact Assessment is relevant only at a time when the new project is to be established in a place where there are cluster of polluted industries operating and no proposal to establish such type of industries in that area and in such circumstances, the impact of newly proposed industry or expansion in an area which is already having impact of pollution due to the existence of other polluted industries. In such circumstances, the Cumulative Impact Assessment is

relevant for the purpose of considering whether the environment will sustain the probable pollution that is likely to be caused on account of the proposed unit and in order to make sustainable, what are all the precautionary measures to be taken by the proposed industry applying the principles of *"Sustainable Development"* and *"Precautionary Principle"* and the EIA Report must reflect these aspects for the purpose of consideration and appraisal by the Expert Appraisal Committee and the issuing authority.

23. Admittedly, in this case, the project area is neither a critically polluted area nor are there any other polluted industries or cluster of industries situated. So, under such circumstances, there is no necessity for conducting Cumulative Impact Assessment of Ambient Air Quality, as has been observed in the decisions reported in **T. Muruganandham & Ors. Vs. Union of India & Ors.**[13], **Sarpanch, Grampanchayat Tiroda Vs. The Ministry of Environment and Forests**[14], **Alaknanda Hydro Power Company Ltd. Vs. Anuj Joshi & Ors.**[15], **Uma Maheswar Dahagama Vs. Union of India & Ors.**[16] of this Tribunal confirmed by the Hon'ble Apex Court in **National Thermal Power Corporation Limited (NTPC) Vs. Uma Maheshwar Dahagama**[17] and **Samata Vs. Union of India**[18]**.**

24. The EIA Report prepared by an accredited agency appointed by the 4th Respondent had shown all the existing industries and coal mines which are situated within the complex of the 4th Respondent which were shown by the appellant also in the written submissions, as the existing polluted industries within a radius of 10 Kms and there was no case for the appellant that they have omitted any of the existing industries within that area which were not included for the purpose of conducting Cumulative Impact Assessment by the project proponent.

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[13] **Appeal No.50 of 2012**
[14] **Appeal No.3 of 2011**
[15] **(2014) 1 SCC 769**
[16] **Appeal No.46 of 2016**
[17] **Civil Appeal No.1846 of 2021**
[18] **2014 All India NGT Reported (1) (SZ) 1**

25. Further, the appellant had noted the exceedance of noise level in some areas with a marginal increase relied on by the appellant from the Table 3.9 provided in the EIA Report (Internal Page No.119) which reads as follows:-

S. No	*Location*	*Distance (km) from Project boundary*	*Noise level in dB(A) Leq*		*CPCB Standard*		*Environmental Setting*
			Day	*Night*	*Lday (Ld)*	*Lnight (LN)*	
1.	*Project Site*	*Within Site*	*54.8*	*49.6*	*75*	*70*	*Industrial*
2.	*Periyakappankulam*	*4.35*	*50.1*	*44.6*	*55*	*45*	*Residential*
3.	*Kunankurichi*	*0.78*	*49.6*	*43.2*	*55*	*45*	*Residential*
4.	*Umangalam*	*1.33*	*52.0*	*45.8*	*55*	*45*	*Residential*
5.	*Uttangal*	*0.72*	*54.9*	*40.2*	*65*	*55*	*Commercial*
6.	*Edaikuppam*	*1.14*	*47.6*	*43.1*	*55*	*45*	*Residential*
7.	*Vridhagirikuppam*	*1.22*	*46.0*	*38.9*	*55*	*45*	*Residential*
8.	*Mudanai*	*1.24*	*50.8*	*47.8*	*55*	*45*	*Residential*
9.	*Edatteru*	*2.14*	*46.3*	*49.3*	*55*	*45*	*Residential*
10.	*Kotteri*	*4.72*	*44.9*	*40.7*	*55*	*454*	*Residential*

26. It may be mentioned here that only in three areas, there is a slight variation and it cannot be attributable to the industrial activity alone. There may be other reason for increase. So under such circumstances, it cannot be said that the increase is due to industrial activity of the 4th Respondent alone and allowing further expansion will have more impact in that area.

27. It is true that a reading of the relevant portion of Dinagaran's report of general Hydro-geological Study in that area, it will be seen that they have almost reproduced in verbatim without any change in the EIA Report. But that alone will not be sufficient to discredit the study conducted by an accredited agency. A reading of the EIA Report will go to show that this has been taken as a baseline study for the purpose of understanding the Hydro-geological status in that area and they also mentioned in the report that since the project proponent has their own source of water for their requirement which they are going to take from the abandoned mines or closed mines which is in excess than what is required for them, there is no necessity for them to draw water from any of the water bodies from outside or to get the water from other sources by outsourcing. The Hydro-geological Study will be relevant only if the project proponent has not having their own source of water but they will have to take water

from outside either from the nearby water body or by outsourcing so as to assess the impact of drawal of such water for their project on such water bodies. In this case, since they have got their own facility of getting water, there is no necessity to conduct any Hydro-geological Study at the drawing location of the water for their project. So under such circumstances, this cannot be taken as a ground for setting aside the Environmental Clearance, as the same has been properly explained.

28. The impact of ash pond has been studied and further mentioned that since they have made an arrangement for disposal of the dry fly ash generated immediately, there will not be much impact on the same.

29. Further, there was no health impact study conducted and the grievance raised by the public on this aspect has not been considered is one of the grounds raised. It may be mentioned here that in the public hearing, several persons have raised the question of increasing Kidney disease in that area including a doctor. But there was no specific instances mentioned as a cause for Kidney disease relating to any of the activities of the project proponent. Merely because, there is an increase in Cancer or Kidney disease in a particular area, unless the probable cause for such disease is related to the activities of the project proponent, it cannot be said that there is a nexus between the disease and the activity of the project proponent.

30. The further contention raised was that the medical facilities provided are not sufficient and the quality of medicines provided are not meeting the standard. Except the bare allegations, there is no relevant data available to establish this aspect. Further, at the time of appraisal, when the Expert Appraisal Committee found that the minutes of the public meeting was not properly signed by the authority who conducted the same, it has been returned and only after getting it corrected, they appraised the same. Further, the project proponent had given detailed answers in tabular form to the Expert Appraisal Committee regarding the public grievance raised and the answers for the same by the Project Proponent and those things were made available along with the EIA Report which was considered by the Expert Appraisal Committee before it is being

recommended and on the basis of the recommendations, the MoEF&CC has decided to grant Environmental Clearance.

31. There is no dispute regarding the fact that the project proponent is conducting number of health camps and they are primary health centres established by them where the people from the project impact area are being treated. It is also submitted by the learned counsel appearing for the Project Proponent that there was a demand for providing dialysis machine in the Government Hospital which the project proponent had decided to sponsor.

32. In order to remove the apprehension of the people in that locality on health issues, we feel that applying the "*Precautionary Principle*", the Project Proponent can be directed to conduct a health survey with the help of a reputed institution to assess the health impact in that area and further remedial measures (if any) to be taken to meet the situation, on the basis of the recommendations made by such agency who has been deputed for that purpose and that will meet the ends of justice.

33. Further, they have provided greenbelt, but a perusal of the nature of species planted, we feel that certain modifications can be made in respect of the species that are being planted for that purpose. They are using Eucalyptus as one of the species which is not conducive for environment. So, they may avoid using Eucalyptus and other species of such nature which are likely to extract more water and accelerate the depletion of groundwater level in that area. Instead they may go for plantation of native species which are conducive for that area including Bamboo and that will not accelerate the depletion of groundwater in that area.

34. They must also provide greenbelt along the boundary of the unit with sufficient width in three tiers as stipulated in the Environmental Clearance so that the impact of air and sound pollution will be reduced on account of the barrier that will be created by the existence of greenbelt along the boundary. Further, they must also increase the amount for health related activities by utilizing their CSR Fund and CER Fund for

this purpose for removing the apprehension of health impact on the people in that locality.

35. We have perused the file produced by the MoEF&CC relating to the Environmental Clearance granted and also the EIA Report submitted by the Project Proponent along with the replies given by them for the grievances raised in the public hearing and also the conditions imposed in the Environmental Clearance and the recommendations made by the Expert Appraisal Committee and we are satisfied that there was proper application of mind, proper appraisal of the project by the Expert Appraisal Committee before recommending the project and the MoEF&CC in granting the Environmental Clearance.

36. We do not find any reason to doubt the genuineness of the appraisal made by the authorities in deciding to grant Environmental Clearance and none of the grounds alleged by the appellant are really available to set aside the Environmental Clearance granted in favour of the 4th Respondent. However, applying the "*Precautionary Principle*" and also to remove the apprehension of the people in that locality, we feel that certain directions can be given to be complied with by the Project Proponent as follows:-

a. The Project Proponent/4th Respondent is directed to conduct a health survey in the villages of project impact area to ascertain the impact of activities on the health issues by an accredited agency approved by the MoEF&CC and on the basis of the recommendations made by them, they are directed to carry out the recommendations and provide such facility which are recommended by them to meet the situation and to remove the apprehensions of the people in that locality.

b. The Project Proponent/4th Respondent is directed to increase the CSR Fund, if permissible under law for the purpose of conducting more medical camps and also to provide more facilities in the Primary Health Clinics established by them and also extend their CSR Fund for other Government Hospitals to increase the facility of meeting the probable Kidney disease that is being increased in that

area by providing necessary infrastructure to meet the same. They are also directed to ensure the quality of medicine supplied in Primary Health Clinics as part of their CSR activity.

c. As regards the greenbelt is concerned, instead of using Eucalyptus and other species which are not conducive to protect environment, they are directed to use native plants and also consider the proposal of planting fast growing Bamboo species in that area and the development of greenbelt must be along the boundary with sufficient density and also in three tier so as to avoid emission of dust and other fugitive / toxic emissions going outside the project area so as to affect the air quality in the neighbouring areas.

d. The Tamil Nadu Pollution Control Board is directed to monitor the activities of the Project Proponent/4th Respondent and if there is any violation committed in implementing the conditions imposed in the Environmental Clearance or in the Consent granted, then they are directed to take appropriate action against the 4th Respondent including imposition of environmental compensation for the violations, apart from suggesting remedial measures to rectify the pollution (if any) caused on account of the deficiencies found in the pollution control mechanism provided by the 4th Respondent.

37. The points are answered accordingly.

38. In the result, the appeal is disposed of with the following directions:-

(i) The Environmental Clearance granted to the 4th Respondent is not liable to be set aside for any of the reasons stated in the appeal memorandum or the grounds raised by the appellant at the time of hearing and also in the written submission.

(ii) The Project Proponent/4th Respondent is directed to conduct a health survey in the villages of project impact area to ascertain the impact of activities on the health issues by an accredited agency approved by the MoEF&CC and on the basis of the recommendations made by them, they are directed to carry out the

recommendations and provide such facility which are recommended by them to meet the situation and to remove the apprehensions of the people in that locality.

(iii) The Project Proponent/4th Respondent is directed to increase the CSR Fund, if permissible under law for the purpose of conducting more medical camps and also to provide more facilities in the Primary Health Clinics established by them and also extend their CSR Fund for other Government Hospitals to increase the facility of meeting the probable Kidney disease that is being increased in that area by providing necessary infrastructure to meet the same. They are also directed to ensure the quality of medicine supplied in Primary Health Clinics as part of their CSR activity.

(iv) As regards the greenbelt is concerned, instead of using Eucalyptus and other species which are not conducive to protect environment, they are directed to use native plants and also consider the proposal of planting fast growing Bamboo species in that area and the development of greenbelt must be along the boundary with sufficient density and also in three tier so as to avoid emission of dust and other fugitive / toxic emissions going outside the project area so as to affect the air quality in the neighbouring areas.

(v) The Tamil Nadu Pollution Control Board is directed to monitor the activities of the Project Proponent/4th Respondent and if there is any violation committed in implementing the conditions imposed in the Environmental Clearance or in the Consent granted, then they are directed to take appropriate action against the 4th Respondent including imposition of environmental compensation for the violations, apart from suggesting remedial measures to rectify the pollution (if any) caused on account of the deficiencies found in the pollution control mechanism provided by the 4th Respondent.

(vi) Considering the circumstances, parties directed to bear their respective costs in the appeal.

(vii) The Registry is directed to communicate this order to the MoEF&CC, Tamil Nadu Pollution Control Board and also to the Project Proponent/4th Respondent for their information and compliance of directions.

(viii) The Registry is directed to communicate this order to the MoEF&CC to take back the file (pertains to issuance of Environmental Clearance), if any, produced by them.

39. With the above observations and directions, this appeal is disposed of.

Sd/-
Justice K. Ramakrishnan, JM

Sd/-
Dr. Satyagopal Korlapati, EM

Appeal No.13/2019 (SZ)
31st May 2022. Mn.

திருவள்ளூர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறைகள்
முன்னிலை : திரு.டாக்டர்.ஆல்பி ஜான் வர்கீஸ் இ.ஆ.ப

ந.க. 9326/2022/ஆ2, நாள்: 26.01.2023

பொருள்: முன் நுழைவு அனுமதி -நில உரிமை மாற்றம் - திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம் - சிப்காட் நிறுவனம் மூலம் - மாநெல்லூர் தொழில் நகரம் அமைத்தல் - எண்.10 சூரப்பூண்டி கிராமம் - புல எண்.223/2 மற்றும் பல - மொத்த விஸ்தீரணம் 0.54.0 ஏர்ஸ் (1.33 ஏக்கர்) நிலம் சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்ய கோரியது - முன் நுழைவு அனுமதி வழங்கி உத்திரவிடுதல்.

பார்வை:

1. மேலாண்மை இயக்குநர் தமிழ்நாடு தொழில் வளர்ச்சிக் கழகம் அவர்களது கடிதம் எண்.LA/Addl.Land/GMPD/ TK/2019 ehs;:29:03.2022.
2. G.O..Ms.No.241, Revenue and Disaster Management Department (Land Disposal Wing LD-5(1)) Dated:16.02.2020.
3. இவ்வலுவலக கடித ந.க.எண்.4177/2022/ஆ2 நாள்.24.03.2022 (நில நிர்வாக ஆணையருக்கு பிரேரணை அனுப்பப்பட்டது)
4. இவ்வலுவலக கடித ந.க.9326/2022/ஆ2 நாள்:04.04.2022.
5. வட்டாட்சியர் கும்மிடிப்பூண்டி அவர்களின் அறிக்கை ந.க.479/2022/09.05.2022 மற்றும் 07.12.2022.
6. வருவாய் கோட்டாட்சியர் பொன்னேரி அவர்களின் அறிக்கை ந.க.எண்.1491/2020/அ2, நாள்: 09.06.2022.
7. மாவட்ட வருவாய் அலுவலர் அவர்களின் புலத் தணிக்கை நாள்.08.09.2022.
8. துணை இயக்குநர் புவியியல் மற்றும் சுரங்கத்துறை திருவள்ளூர் அவர்களின் அறிக்கை ந.க.05/2023/கனிமம்.2, நாள்:06.01.2023.

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உத்தரவு:-

திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.10சூரப்பூண்டி கிராமத்தில் புல எண்.223/2 மற்றும் பல, மொத்த விஸ்தீரணம் 0.54.0 ஏர்ஸ் (1.33 ஏக்கர்) நிலம் சிப்காட் தொழில் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்யக்கோரி மேலாண்மை இயக்குநர்

தமிழ்நாடு தொழில் வளர்ச்சிக் கழகம் அவர்கள் பார்வை ஒன்றில் காணும் கடிதத்தில் கோரியுள்ளார்.

இந்நேர்வில் பார்வை 6-யில் காணும் அறிக்கையில் வருவாய் கோட்டாட்சியர் பொன்னேரி திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.10சூரப்பூண்டி கிராமத்தில் புல எண்.223/2 மற்றும் பல, மொத்த விஸ்தீரணம் 0.54.0 ஏர்ஸ் (1.33 ஏக்கர்) நிலம் சிப்காட் தொழில் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக பரிந்துரை செய்து கீழ்காணுமாறு அறிக்கை சமர்ப்பித்துள்ளனர்.

பிரஸ்தாப புலத்தின் விவரம்:-

திருவள்ளூர் மாவட்டம்,கும்மிடிப்பூண்டி வட்டம், எண்.10சூரப்பூண்டி கிராமத்தில் சிப்காட் நிறுவனம் நில உரிமை மாற்றம் செய்ய கோரியுள்ள அரசு புறம்போக்கு நிலங்களின் விவரம் பின்வருமாறு உள்ளது எனவும்;

வ. எண்.	கிராம கணக்கின் படி புல எண்	வகைப்பாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	ஏற்கனவே நில உரிமை மாற்றம் செய்ய பிரேரணை அனுப்பப்பட்ட புலங்களின் விவரம்		தற்போது நில உரிமை மாற்றம் செய்யவுள்ள புலங்களின் விவரம்	
				புல எண்/ புதிய உட்பிரிவு	பரப்பு (ஹெக்டேர்)	புல எண்/ புதிய உட்பிரிவு	பரப்பு (ஏர்ஸ்)
1	223	மேடு	3.58.5	223/1	2.38.0	223/2	0.13.5
				223/3	1.07.0		
2	224	மேடு	3.28.0	224/1	3.16.5	224/2	0.07.5
				224/3	0.04.0		
3	227	கல்லாங்குத்து	4.11.0	227/1	1.74.5	227/2	0.12.5
				227/3	2.24.0		
4	228	மேடு	4.53.0	228/1	1.15.0	228/2	0.12.0
				228/3	3.26.0		
5	229	மேடு	4.17.5	229/1	0.19.0	229/2	0.08.5
				229/3	3.90.0		
மொத்தம்			19.68.0		19.14.0		0.54.0

மேற்படி நில உரிமை மாற்றம் செய்யப்பட உள்ள புல எண்.223 மற்றும் பல மொத்த விஸ்தீரணம் 19.68.0 ஹெக்டேர் நிலத்தில் ஏற்கனவே 19.14.0 ஹெக்டேர் நிலம் நில உரிமை மாற்றத்திற்காக முன்னுழைவு அனுமதி பெற்று பிரோணை அனுப்பப்பட்டுள்ளது எனவும், மீதமுள்ள விஸ்தீரணம் 0.54.0 ஏர்ஸ் நிலம் நில உரிமை மாற்றம் செய்ய தற்போது பிரோணை அனுப்பப்படுகிறது எனத் தெரிவித்துள்ளார்.

பொது விளம்பரம்:

மேற்படி புலங்களை சிப்காட் நிறுவனத்திற்கு நில உரிமை மாற்றம் செய்வது தொடர்பாக கிராமத்தில் அ1 நோட்டீஸ் மற்றும் பொது விளம்பரம் பிரசுரம் 05.04.2022 அன்று செய்யப்பட்டதில் கிராமத்தில் ஆட்சேபனை ஏதும் வரப்பெறவில்லை எனவும், இதனைத் தொடர்ந்து கிராமத்தின் பொதுமக்கள் மற்றும் கிராம நிர்வாக அலுவலரின் வாக்குமூலம் பெற்று இணைக்கப்பட்டுள்ளது தெரிவித்துள்ளார்.

புலத்தின் தற்போதைய நிலை:

புலங்களின் தற்போதைய நிலை பின்வருமாறு உள்ளது

வ. எண்	புல எண்	புல எண்/ புதிய உட்பரிவு எண்	வகைபாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	நில உரிமை மாற்றம் செய்யவுள்ள விஸ்தீரணம்		குறிப்பு
					ஹெக்டேர்	ஏக்கர்	
1.	223	223/2	மேடு	3.58.5	0.13.5	0.33	காலி
2.	224	224/2	மேடு	3.28.0	0.07.5	0.18	காலி
3.	227	227/2	கல்லாங்குத்து	4.11.0	0.12.5	0.31	காலி
4.	228	228/2	மேடு	4.53.0	0.12.0	0.30	காலி
5.	229	229/2	மேடு	4.17.5	0.08.5	0.21	காலி
மொத்தம்					0.54.0	1.33	

நில உரிமை மாற்றம் செய்ய உள்ள புலங்களில் புராதான சின்னங்களோ, வழிபாட்டுத் தலங்களோ ஏதும் இல்லை.

நான்கு எல்லைகளின் விவரம்:-

வ.எண்	புல எண்	பரப்பு (ஏர்ஸ்)	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
1	223/2	0.13.5	புல எண். 173	புல எண். 224	புல எண். 223/3	புல எண். 223/1
2	224/2	0.07.5	புல எண். 223	புல எண். 229	புல எண். 224/3	புல எண். 224/1
3	227/2	0.12.5	புல எண். 228	வாணியமல்லி கிராமம்	புல எண். 227/3	புல எண். 227/1
4	228/2	0.12.0	புல எண். 229	புல எண். 227	புல எண். 228/3	புல எண். 228/1
5	229/2	0.08.5	புல எண். 230	புல எண். 228	புல எண். 229/3	புல எண். 229/1

நில மதிப்பு:

நில உரிமை மாற்றம் செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களிலிருந்து1.6 கி.மீ தூரத்திற்குள் அடங்கும் கிராமங்கள் எண்.10 சூரப்பூண்டி, எண்.9 ஈகுவார்பளையம், நெ.17 சித்தூர்நத்தம், எண்.16பூவலம்மேடு மற்றும் எண்.15 வாணியமல்லி கிராமங்களில் 01.01.2021 முதல் 21.03.2022 வரை ஒரு வருட காலத்தில் நடைபெற்ற விற்பனை புள்ளி விவரங்கள் கும்மிடிப்பூண்டி சார் பதிவாளர் அலுவலகத்திலிருந்து சேகரிக்கப்பட்டது எனவும், இதில் சூரப்பூண்டி கிராமத்தில் 25 விற்பனைகளும்; ஈகுவார்பளையம் கிராமத்தில் 38 விற்பனைகளும், சித்தூர்நத்தம் கிராமத்தில் 8 விற்பனைகளும், பூவலம்பேடு கிராமத்தில் 59 விற்பனைகளும் மற்றும் வாணியமல்லி கிராமத்தில் 34 விற்பனைகளும் நடைபெற்றுள்ளன ஆக மொத்தம் 114 விற்பனைகளாகும். இதனை பரிசீலனை செய்ததில் கீழ்க்கண்ட விற்பனை புள்ளி விவரங்கள் தள்ளுபடி செய்யப்படுகிறது எனவும்,

விற்பனை புள்ளி விவரம்	விற்பனை எண்ணிக்கை	விவரம்
2, 11, 12, 13, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 71, 72, 73, 74, 75, 76, 77, 78, 80, 81, 83, 84, 85, 86, 87, 88, 97, 98, 100, 101, 103, 104, 105, 107, 108, 109, 110, 111, 112, 113, 114	84	பிரஸ்தாப புலத்தின் 1.6 கீ.மீ ஆரத்திற்கு உட்பட்ட விற்பனை இல்லை என்பதால் நிராகரிக்கப்பட்டது.
1	1	வீட்டுமனை விற்பனை என்பதால் தள்ளுபடி செய்யப்படுகிறது.
4, 5, 6, 69, 70, 79, 92, 94, 96	9	கூட்டு புலங்களாக விற்பனை என்பதால் தள்ளுபடி செய்யப்படுகிறது.
3, 7, 8, 9, 14, 20, 82, 106	8	பிரஸ்தாப புலங்களிலிருந்து 1.6 கி.மீ விற்பனைக்குள் இருந்தாலும் நன்செய் விற்பனை என்பதால் தள்ளுபடி செய்யப்படுகிறது.
10, 15, 16, 55, 89, 90, 91, 93, 95, 99, 102	11	பிரஸ்தாப புலங்களிலிருந்து 1.6 கி.மீ விற்பனைக்குள் இருந்தாலும் குறைந்தபட்ச விலை விற்பனை என்பதால் தள்ளுபடி செய்யப்படுகிறது
56	1	மாதிரிபுலமாக தேர்வு செய்யப்பட்ட நில விற்பனை (புல எண்:177/12)

பிரஸ்தாப புலங்களுக்கு1.6 கி.மீ-க்கு வெளியில் உள்ள விற்பனைகளும், வீட்டுமனைகளாக விற்பனை செய்யப்பட்டவைகளும், நன்செய் விற்பனைகளும், கூட்டு புல விற்பனைகளும், குறைந்தபட்ச விலை விற்பனைகளும் தள்ளுபடி செய்யப்படுகிறது. நில மதிப்பு நிர்ணயம் செய்ய உள்ள புலங்கள் மேடு மற்றும் கல்லாங்குத்து ஆகிய வகைபாடுகளை கொண்ட புறம்போக்கு நிலங்கள் என்பதால் மண் வயனம், தரம், தீர்வை ஆகியவை இல்லை.

வரிசை எண்.56 விற்பனை 1.6 கி.மீ-க்கு உள்ளும், பிரஸ்தாப புலங்களுக்கு அருகிலும் உள்ளன. வரிசை எண்.56 விற்பனை தொகை சென்ட் 1-க்கு ரூ.16,750/- என விற்பனை ஆகியுள்ளது எனவும், எனவே பிரஸ்தாப புலங்களுக்கு அருகில் உள்ள விற்பனை வரிசை எண்.56-ல் உள்ள புல எண்.177/12-னை மாதிரி புலமாக தேர்வு செய்யப்பட்டுள்ளது. இப்புலமானது புஞ்சை வகைப்பாடு கொண்டதாகும். புலத்தணிக்கையின் போது மேற்படி

புலமானது நெல் அறுவடை செய்யப்பட்டு தாளடியாக உள்ளது எனவும், மாதிரி புலமாக தேர்வு செய்யப்பட்ட புலத்தின் அரசு வழிகாட்டி மதிப்பின்படியான ரூ.16,750/- தொகையினையே பிரஸ்தாப புலங்களுக்கு நில மதிப்பாக கொள்ளலாம் எனவும், மேலும் பிரஸ்தாப புலங்கள் மேடு மற்றும் கல்லாங்குத்து வகைபாட்டினை சேர்ந்ததாகும். மாதிரி புலமாக தேர்வு செய்யப்பட்டுள்ள புல எண்.177/12 புஞ்சை நிலம் என்பதால் பிரஸ்தாப புலங்களை ஒத்துள்ளன. எனவே மாதிரி புலத்தின் மண் வயனம் 8-3, தரம்-7, தீர்வை 1.24-யினையே பிரஸ்தாப புலங்களுக்கும் கொள்ளலாம்.

மேற்படி விற்பனை பத்திர பதிவின்படி பத்திர எண்.1154/2022 சார் பதிவாளர் அலுவலகம் கும்மிடிப்பூண்டி,ஈகுவார்பாளையம் கிராமம் புல எண்.177/12-ல் 0.35 சென்ட் நிலம் தசரதராமராஜா மற்றும் 2 நபர்களிடமிருந்து சீரஞ்சீவியன் என்பவருக்கு மொத்த விற்பனை ரூ.5,86,250/-க்கு விற்பனை ஆகியுள்ளது. எனவே சென்ட் ஒன்றின் மதிப்பு ரூ.16,750/- (ரூபாய் பதினாறாயிரத்து எழுநூற்றி ஐம்பது ஆகும்) என தெரிவித்துள்ளார்.

<u>வழிகாட்டி மதிப்பு</u>

எனவே, விற்பனை புள்ளி விவரப்படியும், அரசு வழிகாட்டி மதிப்பின்படியும் ஒரே மதிப்புடையதாகிறது. எனவே அரசு வழிகாட்டி மதிப்பின்படியான சென்ட் 1-க்கு ரூ.16750/- (ரூபாய் பதினாறாயிரத்து எழுநூற்றி ஐம்பது மட்டும்) என்பதனையே மதிப்பாக கொண்டு மொத்த விஸ்தீர்ணம் 0.54.0 ஏர்ஸ் (1.33 ஏக்கர்) சென்ட் 133 Xரூ.16,750 =ரூ.22,27,750/- (ரூபாய் இருபத்து இரண்டு இலட்சத்து இருபத்து ஏழாயிரத்து எழுநூற்றி ஐம்பது மட்டும்) நில மதிப்பாக நிர்ணயம் செய்யலாம் எனவும்,மேலும் நில் மதிப்பாக ரூ.22,27,750/- (ரூபாய் இருபத்து இரண்டு இலட்சத்து இருபத்து ஏழாயிரத்து எழுநூற்றி ஐம்பது மட்டும்) நிர்ணயம் செய்யப்பட்டுள்ளது.

எனவே, மேலும் பார்வை 5-யில் காணும் கடிதத்தில் திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.10 சூரப்பூண்டி கிரமத்தின் புல எண் 223/2 மற்றும் சில மொத்த

விஸ்தீரணம் 0.54 ஏர்ஸ் (1.33 ஏக்கர்) கொண்ட நிலம் சென்னை பெருநகர பகுதிக்குள் வரவில்லை என்று கும்மிடிப்பூண்டி வட்டாட்சியர் தன்னுடைய அறிக்கையில் தெரிவித்துள்ளார்

மேலும் பார்வை 8-யில் காணும் கடிதத்தில் திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.10சூரப்பூண்டி கிராமத்தில் புல எண்.223/2, 224/2, 227/2, 228/2 மற்றும் 229/2 மேடு மற்றும் கல்லாங்குத்து புறம்போக்கு வகைப்பாடு கொண்ட நிலங்கள் தொடர்புடைய ஆவணங்களை பரிசீலனை செய்ததில் மேற்கண்ட புல்ங்களான குறுகிய மற்றும் குறைந்த பரப்பு கொண்டதாகவும், இப்புலங்களில் 1959-ஆம் ஆண்டு தமிழ்நாடு சிறுவகை கனிமச்சலுகை விதிகளின்படி குவாரி குத்தகை அனுமதி வழங்கிட தகுதிவாய்ந்த புலங்களாக அமையவில்லை என்றும், துணை இயக்குநர் புவியியல் மற்றும் சுரங்கத்துறை திருவள்ளூர் அவர்கள் தன்னுடைய அறிக்கையில் தெரிவித்துள்ளார்.

அரசாணை நிலை எண். 241, வருவாய் மற்றும் பேரிடர் மேலாண்மைத்துறை (L.D.5.(1)) துறை நாள். 16.05.2020- பத்தி 5 (ii) ல் மாநில அரசு துறைகளுக்கு நிலமாற்றம் செய்யும் இனங்களில் நில மாற்றம் செய்ய உள்ள நிலம் ஆட்சேபணையுள்ள புறம்போக்கு நிலங்களாக இருப்பின் அதன் நில மதிப்பு கருத்தில் கொள்ளாமல் (Without considering the monetary limits) முன்நுழைவு அனுமதி வழங்க மாவட்ட ஆட்சியருக்கு அதிகாரம் பின் வருமாறு வழங்கப்பட்டுள்ளது.

> ***"Powers for grant of enter upon permission is delegated to the District Collectors to State Government undertakings for all unobjectionable Poramboke lands without considering without monetary limits, after getting undertaking from the concerned State Public Sector Undertakings with reference to payment of land cost as per RSO"***

இந்நேர்வில், பார்வை ஒன்றில் காணும் கடிதத்தில் நிர்வாக இயக்குநர், சிப்காட் அவர்கள் நில உரிமை மாற்றம் வழங்கப்படும் போது அரசு நிர்ணயிக்கும் நில்மதிப்பினை செலுத்த வருவாய் நிலை ஆணை 24 24 (A) 10 படிவத்தில் சம்மதம் தெரிவித்துள்ளார். எனவே நிர்வாக இயக்குநர், சிப்காட் நிறுவனம், சென்னை அவர்களது சம்மதத்தினை ஏற்று பார்வை 2 -ல் காணும் அரசாணை பத்தி (iv) ல் தெரிவித்துள்ளவாறு திருவள்ளூர் மாவட்டம், கும்மிடிப்பூண்டி வட்டம், எண்.10சூரப்பூண்டி கிராமத்தில் புல எண்.223/2 மற்றும் பல, மொத்த விஸ்தீரணம் 0.54.0 ஏர்ஸ் மேடு மற்றும்

கல்லாங்குத்து புறம்போக்கு வகைப்பாடு கொண்ட கீழக்கண்ட நிலத்தினை வருவாய் நிலை ஆணை எண்-24(ஏ) யில் கண்ட வழக்கமான மற்றும் கீழ்கண்ட நிபந்தனைகளுடன் சிப்காட் நிறுவன மேலாண்மை இயக்குநருக்கு முன் நுழைவு அனுமதி வழங்கி உத்தரவிடப்படுகிறது.

வ. எண்	புல எண்	புல எண்/ புதிய உட்பரிவு எண்	வகைபாடு	மொத்த விஸ்தீரணம் (ஹெக்டேர்)	நில உரிமை மாற்றம் செய்யவுள்ள விஸ்தீரணம்		குறிப்பு
					ஹெக்டேர்	ஏக்கர்	
1.	223	223/2	மேடு	3.58.5	0.13.5	0.33	காலி
2.	224	224/2	மேடு	3.28.0	0.07.5	0.18	காலி
3.	227	227/2	கல்லாங்குத்து	4.11.0	0.12.5	0.31	காலி
4.	228	228/2	மேடு	4.53.0	0.12.0	0.30	காலி
5.	229	229/2	மேடு	4.17.5	0.08.5	0.21	காலி
மொத்தம்					0.54.0	1.33	

நிபந்தனைகள்:

1 கல் கட்டணம், உட்பிரிவுக் கட்டணம், போன்ற இதரக் கட்டணங்களை கேட்புத்துறை செலுத்த வேண்டும்.

2 அரசு விதிக்கும் அனைத்து நிபந்தனைகளுக்கும் கேட்புத்துறை கட்டுப்படுதல் வேண்டும்.

3 எந்த நோக்கத்திற்காக நில உரிமை மாற்றம் செய்யப்படுகின்றதோ அதற்காக மட்டுமே குறிப்பிட்ட நிலத்தினை பயன்படுத்த வேண்டும்.

4 எதிர்காலத்தில் குறிப்பிட்ட புலமோ அல்லது அதன் ஒரு பகுதியோ கேட்புத்துறைக்கு தேவையில்லை என்றால் அதனை அரசு வருவாய்த் துறையிடம் கேட்புத்துறை திரும்ப ஒப்படைக்க வேண்டும்.

5 வனத்துறையினரால் நிர்ணயக்கும் மரக்கிரயத்தினை கேட்பு நிறுவனம் செலுத்த வேண்டும்.

6 அரசு நில உரிமை மாற்றம் செய்து பிறப்பிக்கபடும் உத்திரவின் போது நிர்ணயிக்கப்படும் நிலமதிப்பே இறுதியானது.

7 நில உரிமை மாற்றம் செய்யும் புலங்களில் உள்ள மின்கம்பங்கள் நிறுவனத்தின் சொந்த செலவிலேயே மாற்றி அமைத்து கொள்ளவோ அல்லது அகற்றி கொள்ளவோ வேண்டும்.

8 பொது மக்கள் பயன்படுத்தும் சாலைகள் ஏதேனும் இருப்பின், பொதுமக்களுக்கு பாதிப்பு ஏற்படாத வகையில் பராமரிக்கவோ அல்லது மாற்றி அமைக்கவோ வேண்டும்.

9 நில உரிமை மாற்றம் செய்யப்படும் நிலங்களுக்கு இடையில் நீர்நிலை புறம்போக்கு நிலங்கள் இருப்பின், அதனை ஆக்கிரமணம் செய்யாமல் அதன் தன்மை மாறாமல் பராமரிக்க வேண்டும்.

ஒம்/-டாக்டர்.ஆல்பி ஜான் வர்கீஸ்
மாவட்ட ஆட்சித்தலைவர்,
திருவள்ளூர்.

3/4

//உத்திரவின் படி//

30/11/23

மாவட்ட ஆட்சியரின் கூடுதல் நேர்முக
உதவியாளர்(நிலம்)(பொ),
திருவள்ளூர்.

பெறுநர்

30/11/23

மேலாண்மை இயக்குநர் ,
தமிழ்நாடு தொழில் வளர்ச்சிக் கழகம்
எண்.19 A, ருக்மணி லட்சுமிபதி சாலை,
எழும்பூர், சென்னை - 600 008.

நகல்:

1 முதன்மைச் செயலர்/ நில நிர்வாக ஆணையர்,
சேப்பாக்கம், சென்னை-05.
2 சார் ஆட்சியர், பொன்னேரி,
3 வட்டாட்சியர் கும்மிடிப்பூண்டி,

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IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION
M.R. SHAH; J., C.T. RAVIKUMAR; J.
CIVIL APPEAL NOS. 1811-1812 OF 2015; FEBRUARY 17, 2023
M/s IL&FS Tamil Nadu Power Company Limited *versus* **T. Muruganandam & Others**

National Green Tribunal Act, 2010 - Challenge to Environmental Clearance - Whether against the corrigendum to the EC along with additional conditions, an appeal before the NGT would be maintainable or not-An aggrieved person may always challenge the corrigendum imposing additional conditions to the Environmental Clearance, but the appeal would be restricted to the corrigendum if the original EC is not under challenge and/or the original EC has been confirmed by the NGT earlier on certain conditions which have not been challenged. (Para 9)

Environmental Clearance - Supreme Court permits IL&FS Tamil Nadu Power Company Limited to continue operating its power plants in Tamil Nadu.

For Appellant(s) Mr. Piyush Joshi, Adv. Mr. Senthil Jagadeesan, AOR Ms. Sumiti Yadava, Adv. Ms. Sonakshi Malhan, Adv. Ms. Vatsla Bhatia, Adv.

For Respondent(s) Ms. Srishti Agnihotri, AOR Ms. Sanjana Grace Thomas, Adv. Ms. Itisha Awasthi, Adv. Ms. Mantika Vohra, Adv. Mr. Tushar Mehta, SG Ms. Aishwarya Bhati, ASG Ms. Suhasini Sen, Adv. Mr. Shiv Mangal Sharma, Adv. Ms. Shivika Mehra, Adv. Ms. B.L.N. Shivani, Adv. Mr. Gurmeet Singh Makker, AOR Mr. Amit Anand Tiwari, A.A.G. Dr. Joseph Aristotle S., AOR Mr. Shobhit Dwivedi, Adv. Ms. Devyani Gupta, Adv. Ms. Tanvi Anand, Adv.

J U D G M E N T

M.R. SHAH, J.

1. Feeling aggrieved and dissatisfied with the impugned judgment and order dated 23.05.2012 in Appeal No. 17/2011 and judgment and order dated 10.11.2014 in Appeal No. 50/2012 passed by the National Green Tribunal (Principal Bench), New Delhi (hereinafter referred to as the 'NGT'), M/s IL&FS Tamil Nadu Power Company Limited has preferred the present appeals.

2. The facts leading to the present appeals in nutshell are as under:

The appellant herein has been incorporated in the year 2006 to implement the Project for establishing a 2x600 MW and 3x800 MW (aggregating to 3600 MW) imported coal based thermal power plant at village Kottatai, Ariyagoshti, Villianallur and Silambimangalam in Chidambram Taluk, District Cuddalore, Tamil Nadu. Now the appellant company is under the control of Government of India. The appellant submitted Form I under EIA Notification, 2006 to obtain Terms of Reference for the EIA study on 5.2.2008. The Terms of Reference approval letter was issued by the Ministry of Environment, Forest and Climate Change (hereinafter referred to as the 'MoEF') on 9.7.2008. Public hearing was carried out for the project on 5.2.2010. The appellant completed the EIA study in accordance with EIA Notification, 2006. That thereafter the Expert Appraisal Committee (for short, 'EAC') considered the EIA study and directed the appellant to undertake certain additional submissions to address specific points and directed that an updated Form I be submitted. That thereafter the appellant submitted updated Form I reflecting recommendations of EAC meeting dated 19.03.2010 to MoEF. The EAC meeting considered the project and recommended the project for Environment Clearance (for short, 'EC'), subject to stipulation of specific conditions including project to keep space for providing Flue Gas De-sulfurization (for short, 'FGD') system with all the

five units of the power plant to enable the system to be installed whenever required. The appellant herein was granted the EC in accordance with the recommendations of the EAC under EIA Notification, 2006.

2.1 The original petitioners claiming to be fishermen and persons acting for welfare of fishermen filed appeals against the EC before National Environment Appellate Authority being NEAA Appeal Nos. 19 & 20 of 2010. On the constitution of the NGT, Appeal No. 20/2010 filed before the National Environment Appellate Authority came to be transferred to the NGT, which was re-numbered as Appeal Nos. 16/2011 & 17/2011.

2.2 *Vide* order dated 23.05.2012 in Appeal No. 17/2011, the NGT upheld the validity of the EC but directed the MoEF to review the EC based on the cumulative impact assessment study and stipulate any additional conditions, if required and directed that till then the EC shall remain suspended. Instead of the cumulative impact assessment study, the appellant completed the Rapid Cumulative Impact Assessment (for short, 'RCIA') study and submitted a copy thereof to the MoEF. That thereafter the EAC, after extensive deliberations on the RCIA and after hearing the representative of the original petitioners and the appellant/project proponent, recommended certain additional conditions to be added to the EC including the requirement of installing a FGD system as part of the power plant. At this stage, it is required to be noted that as such neither the original petitioners nor even the appellant challenged the first judgment and order dated 23.05.2012 passed in Appeal No. 17/2011 by which the NGT upheld the validity of the EC but directed MoEF to review the EC based on the cumulative impact assessment study and stipulate any additional conditions, if required. That thereafter, on 14.08.2012, MoEF based on the recommendations of the EAC, issued a corrigendum to the EC imposing additional conditions to the EC. That thereafter the original petitioners who filed the earlier appeal against the grant of EC, filed Appeal No. 50/2012 against the corrigendum dated 14.08.2012 issued by the MoEF. By the impugned judgment and order dated 10.11.2014, the NGT has disposed of Appeal No. 50/2012, quashing the corrigendum dated 14.08.2012. The judgment and order dated 23.05.2012 in Appeal No. 17/2011 and subsequent judgment and order dated 10.11.2014 in Appeal No. 50/2012 passed by the NGT are the subject matter of present appeals.

3. By an interim order dated 10.02.2015, this Court stayed the impugned order dated 10.11.2014 passed in Appeal No. 50/2012, which has been continued till date. Pursuant to the interim order passed by this Court, the appellant-company had commenced two power plants in Phase-I, which are in operation since 2015.

4. Dr. Abhishek Manu Singhvi, learned Senior Advocate appearing on behalf of the appellant-company has submitted that to close the power plant now would not be in public interest. It is submitted that the appellant's power plant is running since September 2015 in power deficit State of Tamil Nadu. Appellant operates two units of 600MW each since September, 2015 and April, 2016, which presently supply power to approximately 40 lakhs households. The power plant is situated in an energy deficient State (Tamil Nadu) and therefore closing the power plant would adversely affect power sector of the State.

4.1 In support of his submission that to close the power plant now would not be in public interest, it is submitted as under:

(i) That Appellant's power plant is running since September 2015 in power-deficit state of Tamil Nadu: Appellant operates two unit of 600MW each since September 2015 and April 2016, which presently supply power to approximately 40 lakhs households. The

power plant is situated in an energy deficient State (Tamil Nadu), and closing the plant would adversely affect power section of the State;

(ii) Plant running in compliance with EC and Corrigendum: That the plant is in compliance with clearance conditions, and six-monthly reports being submitted to Ministry of Environment, Forest & Climate Change, latest report of April-September;

(iii) Plant uses imported coal with low sulphur and uses FGD system: That Appellant uses imported coal from Indonesia for its thermal power plant, which already has low sulphur content. Pursuant to MoEF Corrigendum, has spent Rs. 775 crores to install Flue Gas Desulphurisation (FGD) system. Report of Centre for Science and Environment identifies Appellant's plant as compliant with SO2 standards. All over India only 20 power plants have FDGs, of which two units are the Appellant's power plant;

(iv) Appellant part of IL&FS Group and value to be maximized: That ITPCL/ Appellant is a group company of IL&FS which is under control of Govt. of India and is undergoing restructuring. Larger public interest is to realize value and recover PSU debt. Appellant's restructuring plan has been approved by Hon'ble NCLAT on 01.12.2021. Appellant incurred expense of Rs. 11,000 crores (approx.) to build 2 x 600 MW units, which are operational since September 2015 and April 2016. Of this, Rs. 6,080 crore was through loans from public sector banks (Punjab National Bank, Bank of Baroda, LIC, SBM Bank, SBI) and Rs. 4,560 crores in equity by IL&FS Energy Development (another IL&FS group entity); and

(v) Appellant's CSR initiatives: That till date approx. Rs. 30 crores spent on CSR activities, including adopting several villages in the surrounding areas. As of February, 2022, the Appellant has 1466 employees of which 87% are from Tamil Nadu. Overall, 69% (1005 persons) are from Cuddalore District itself.

4.2 It is further submitted that instead of cumulative impact assessment study, the appellant bonafidely and taking into consideration the order passed by the NGT in Application No. 25/201 conducted/completed RCIA, a copy of which was submitted to MoEF and after undertaking extensive deliberations on the RCIA and after hearing the representative of the original petitioners and the appellant/project proponent, the EAC recommended certain additional conditions to be added to the EC including the requirement of installing FGD system and pursuant to which and based on the recommendations of the EAC, MoEF issued a corrigendum to the EC imposing additional conditions to the EC.

4.3 It is further submitted that taking into consideration the additional conditions imposed vide corrigendum dated 14.08.2012, the appellantcompany had installed FGD system at a cost of Rs. 775 crores, the only thermal power plant in the country to commence operations with FGD system.

4.4 Dr. Abhishek Manu Singhvi, learned senior counsel appearing on behalf of the appellant has also made an elaborate submission on the maintainability of Appeal No. 50/2012 before the NGT, filed by the original petitioners against the corrigendum dated 14.08.2012 issued by the MoEF. It is submitted that as such the first judgment dated 23.05.2012 passed in Appeal No. 17/2011, by which the NGT specifically upheld the validity of the EC but directed MoEF to deal with the EC based on cumulative impact assessment study and stipulate any additional conditions, was not challenged by the original petitioners. It is submitted that the original petitioners had no locus and therefore the original petitioners could not have challenged the subsequent corrigendum dated

14.08.2012 by which certain additional conditions were imposed to the original EC by the MoEF.

4.5 Dr. Abhishek Manu Singhvi, learned senior counsel has taken us to the additional affidavits dated 20.09.2022 and 28.11.2022. He has also taken us to the EC & CRZ Compliance Report dated 12.01.2022 as well as the subsequent Compliance Report dated 20.09.2022 and the copy of the response of the project proponent. He has stated at the Bar that by and large all the conditions of the original EC as well as corrigendum to the EC have been complied with by the appellant/project proponent and few conditions are under continuous compliance. He has stated that the conditions imposed while issuing the EC and the corrigendum have been substantially complied with and there are no fundamental breaches and/or non-compliance. He has stated at the Bar that whichever conditions are not complied with and not complied with fully and/or there are continuous compliance, the same shall be complied with within the time stipulated in the response of the project proponent.

4.6 Making above submissions and praying for keeping the question of law , if any, namely, “Whether for the project like this, a cumulative impact assessment study is required or not” open and also the question, “whether an appeal before the NGT against the corrigendum to the EC and the additional conditions imposed as per the corrigendum to the EC would be maintainable or not” and keeping the aforesaid questions(s) of law open, it is prayed to dispose of the present appeals by permitting the appellant to continue the power plants which are in operation since 2015.

5. Shri Shiv Mangal Sharma, learned counsel appearing on behalf of the MoEF has submitted that as such the appellant had never challenged earlier conditions imposed while issuing the EC and the first judgment and order passed by the NGT dated 23.05.2012 and even the corrigendum dated 14.08.2012 issued by the MoEF imposing additional conditions and therefore the appellant is bound by the conditions imposed while issuing the EC and corrigendum to the EC dated 14.08.2012 and the appellant has to comply with all the conditions imposed while issuing EC as well as additional conditions imposed vide corrigendum dated 14.08.2012. He has pointed out certain noncompliances/part compliances of certain conditions and the response by the appellant. Therefore, he has submitted that if this Court is inclined to permit the appellant to continue with the power plants in the public interest, in that case, the appellant may be directed to comply with all the conditions imposed while issuing EC as well as additional conditions imposed while issuing corrigendum dated 14.08.2012.

6. Ms. Srishti Agnihotri, learned counsel appearing on behalf of the original petitioners has prayed that in case this Court is inclined to permit the appellant to continue with the power plants as per the EC and the corrigendum dated 14.08.2012 which are in operation since 2015, in that case, the question of law, namely, “whether for the project like this conducting a cumulative environment impact assessment study is must or not”, may be kept open as so many other such projects may come and that on conducting cumulative environment impact assessment study, the Tribunal may consider the said issue in detail.

6.1 Insofar as maintainability of appeal before the NGT against the order of corrigendum is concerned, it is submitted that against the additional conditions imposed vide corrigendum dated 14.08.2012, an appeal would be maintainable before the NGT against the corrigendum to the EC.

7. Having heard Dr. Abhishek Manu Singhvi, learned Senior Counsel appearing on behalf of the appellant and the learned counsel appearing on behalf of the MoEF and

original petitioners and the facts narrated hereinabove, it is to be noted that pursuant to the interim order passed by this Court, the appellant has commenced two power plants in PhaseI, which are in operation since September, 2015. The appellant is operating two units of 600MW since September, 2015 and April, 2016, which presently supply power to approximately 40 lakhs households. The power plants are situated in an energy deficit State (Tamil Nadu). Thus, closing the power plants/units would adversely affect power sector of the State and which shall not be in the larger public interest, more particularly the power deficient State of Tamil Nadu.

7.1 However, at the same time, the appellant has to comply with all the conditions imposed while issuing EC as well as the additional conditions imposed vide corrigendum to the EC dated 14.08.2012. From the compliance report dated 20.09.2022 (latest compliance report) and the response of the project proponent, it appears that by and large there is a substantial compliance of the conditions imposed while issuing EC as well as the additional conditions imposed vide corrigendum to the EC dated 14.08.2012. There do not appear to be any fundamental breaches or non-compliance of the conditions imposed while issuing EC as well as additional conditions imposed vide corrigendum to the EC dated 14.08.2012. However, some conditions are still partly complied with, which have been responded by the appellant and has agreed to comply with the same. The particulars of the specific conditions, part compliances and the response to the same are as under:

Status of certain EC conditions referred by MoEF&CC vide email dated 16.11.2022

S.No.	Specific Conditions	Compliance status reported by RO as on 13.09.2022	Information asked by MoEF&CC vide email dated 16.11.2022	ITPCL Response -17.11.2022
EC No. J- 13012/13412008-IA.II (T) dated on May 31, 2010				
1	(xvii) To absorb the ground level pollutants, to act buffer against strong winds arising out of tropical cyclones/ storms, to reduce heat load and ameliorate environment, there is a need for shelterbelts/greenbelts/ tree cover along the coastline, bunds around marshy areas, roadsides, around the project protected monuments, forts, waste places, School Campuses and other vacant lots. Coconut plantations can be developed along the coastline and near villages, School and forts. Stands of Casuarina should also be developed on some dunes and along coasts. Bamboos, neem and other native trees should be planted in and around at the villages.	Partly complied. (As more plantation work to be carried out) The project proponent, as informed vide email dated 4-2-2022, has planted around 2,88,419 trees of native species in an area of 254.46 acres (which is more than 33% of land corresponding to Phase-1). Trees such as pongamia, neem, Jamon, Gulmahor, Ashoka, Silver oak, etc have been planted in and around the project site. However, no plantation has been taken up along the particular coastline as stated in the condition. Further, Coconut plantations are not developed along the coastline and near villages, school and forts. Plantation on sand dunes was not carried out. Bamboo is not planted instead other native species including neem were planted	Action plan with timelines be provided by which the compliance of this condition can be ensured.	We would like to submit the following facts for your consideration. The specific Conditions are mostly complied except along the coastline since this region is vulnerable and frequently affected by natural calamities like cyclones, Flood, low depressions and affected by Tsunami at times. However, we have planted around 2,88,419 trees of native species in an area of 254.46 acres (which is more than 33% of land corresponding to Phase 1). Trees such as pongamia, neem, Jamon, Gulmahor, Ashoka, Silver oak and etc , are planted in and around the project site, nearby villages and schools to take care of ground level pollutants. Due to hydrogeological as well as tropical conditions and heavy winds in the coastal region around the project site, coconut trees which were developed, could not be sustained along the shore as impacted by natural calamities. However, we have planted coconut, neem, and Casuarina trees in the nearby villages, in and around the project area, and road sides close to the coastal area to act as buffer against strong winds during cyclone/storms. **Additionally, we propose to plant Bamboo and Casuarina trees 25000 nos in and around the Project area, Schools and nearby Villages from Jan 2023 to October 2023.**
2	(xxiii) Green Belt shall consist of 3 tiers of plantations as cited above and largely comprising of native species around the power plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Regional office of the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.	Partly complied. (As more plantation work to be carried out) As stated in the condition, three-tier plantation is not carried out. However, they have taken up 100 meter with plantation including native species at some places and 50 meter width plantation at some places (Photos attached) Vide email dated 4-2-2022, the project proponent informed that so far about 2,88,419 trees of native species were planted in an area of 254.46 acres. During the visit, it was observed that many vacant lands are available within the site and the same can be used for plantation. The project proponent has agreed to plant more trees in those vacant lands inside their campus. The project proponent, vide email dated 16-9-2022, informed that an amount of Rs. 9.25 crore (up to Sep 2022) was spent for the purpose of green belt development including plantation and their maintenance. (Copy of expenditure statement as provided by the company is given in Appendix-II)	Action plan with timelines for three tier plantation around the plant providing 100M-50M width as per EC condition be provided. Please submit the commitment in this regard.	As mentioned in report of IRO, Chennai, We have already made plantations for about 288419 trees in the area of 254.56 acres and the details and photographs are already submitted. **To comply with the conditions, Three tier plantations are carried out around the power plant in some of the locations like ash dyke, coal yard, and north side of the plant and sustained. However, three tier plantation could not be sustained in some other areas due to land formations, soil conditions and plant setup.** **Three Tier Green belt is developed around the coal yard in addition to the wind barrier. Plantations is made to 100 m width wherever possible and minimum not less than 50 m width is maintained in other possible areas.** **Green belt development and tree plantation is a continuous activity as part of our Sustainability initiatives and every year we plant 1000 of trees and till August 2022, around 2,88,419 saplings are planted in an area of 254.46 acres and tree density of (>2500trees per Ha) is maintained in and around the project site.** All dust generation areas have engineering controls like wind barriers around coal yard, dust suppression systems and dust extraction systems at the point source of emissions like coal unloading area, transfer towers, coal crushers etc. Fly ash and bottom ash is handled in closed conveyors, pipe line transfers etc and hence dust generation is avoided. **Since the requirement of green cover as well as dust control measures are fulfilling the requirement, we request the Ministry to consider our above submissions and note the condition as complied.**

Status of certain EC conditions referred by MoEF&CC vide email dated 16.11.2022

S.No.	Specific Conditions	Compliance status reported by RO as on 13.09.2022	Information asked by MoEF&CC vide email dated 16.11.2022	ITPCL Response -17.11.2022
3	(xxiv) To meet the expenditure on plantations and their management, a common Green Endowment fund should be created by the project proponents out of EMP budgets the interest earned out of it should be used for the development and management of green cover of the area	Partly complied. (As Common Green Endowment Fund is not created) As specifically stated in the condition, a Common Green Endowment Fund is not created by the project proponent. In this regard, the project proponent vide email dated 4-2-2022 has indicated the following reasons: 1) Presently the company is undergoing Debt Restructuring. 2) As per the current arrangement, mandated by consortium banks and RBI policy, it is allowed to open only one account for the company. 3) However, the lead bank will be requested to allow to open the desired account to comply with the requirements. The project proponent, vide email dated 16-9-2022, informed that an amount of Rs. 9.25 crore (up to Sep 2022) was spent for the purpose of green belt development including plantation and their maintenance. No information was provided about the common green endowment fund. However, as informed, the company has spent a sum of Rs 9.23 Crores (as on Sep 2021) towards green belt development and maintenance from their budget provision.	Please provide the method along with commitment to ensure the availability of fund to meet the expenditure on plantations and their management.	Presently the company is undergoing debt restructuring. As per the current arrangement mandated by consortium of banks and RBI policy, we are allowed to open only one account for our company. However, we requested the lead bank to allow us to open the desired account to comply with the requirements. Bankers have denied for opening of new account and the correspondence between the company and the bank is attached as **Annexure 1.** **Though a separate account was not maintained as per the EC Condition, a separate budget head has been created internally and the amount spent towards green belt development is being accounted under the budget head. So far, the company has spent a sum of Rs 9.27 Crores (as on September 2022) towards green belt development and maintenance under this budget head.** In comparison to the amount spent, the amount stipulated for Green Endowment Fund and the expected returns from the fund would be much lower. In fact company has already spent more than the amount planned.
4	(xxv) The project proponent shall submit a time bound implementation plan for regeneration/ preservation of Pichavaram Mangroves and others, if any, and the fund earmarked and committed for the same amounting to Rs 6.0 Crores shall not be diverted for any other activity. Road map for implementation shall be submitted within six months to the Ministry	Implementing the condition. In this regard, during the recent site visit carried out on 13-9-2022, the project proponent produced a copy of the report, dated February 2013, regarding 'Nursery Establishment for Mangrove Afforestation / Coastal bioshield Development' carried out through Annamalai University, Parangipettai (Tamil Nadu). (Copy of the report is attached in Appendix- III) Around 30,000 mangrove saplings and propagules have been planted to conserve Pichavaram Mangrove area. The project proponent has earmarked Rs. 6 crore for regeneration / preservation of Pichavaram Mangroves in a phased manner for entire capacity of the Plant and the same has not been diverted to any other activity.	Please submit the action plan for regeneration/ preservation of Pichavaram Mangroves and others, if not prepared commitment by what period the said condition be submitted.	**The condition is already complied** **Preservation and Maintenance of Pichavaram Mangroves and others are part of our routine Sustainability activities and recent Photographs of Mangroves are attached for your perusal in Annexure 2 which also covers the various stages of Mangroves developed by the company.**
	proponent	clearance letter was uploaded in company's website.		

Status of certain EC conditions referred by MoEF&CC vide email dated 16.11.2022

S.No.	Specific Conditions	Compliance status reported by RO as on 13.09.2022	Information asked by MoEF&CC vide email dated 16.11.2022	ITPCL Response -17.11.2022
EC No. J- 1301213412008-IA.II (T) dated on 14.08.2012 CORRIGENDUM				
1	(xxxviii)Fish catch along the impacted zone of sea should be monitored periodically by the Department of Fisheries, Government of Tamil Nadu. The project proponent shall accordingly take up the matter with the Fishery Dept., Govt, of Tamil Nadu from time to time.	Not complied. The project proponent informed that necessary request was made by the Company vide letter dated 19-7 -2013 to the Department of Fisheries, Government of Tamil Nadu and reply is awaited.	i. Latest action taken, if any, in this regard to ensure compliance of the condition. ii. Provide a timeline by which the compliance can be ensured.	Complied. The Company has made a written request to Department of Fisheries, Tamilnadu and details are awaited from the Fisheries Department. In addition to the above, the company has engaged M/s Annamalai University for conducting monthly Marine monitoring and ensures there is no adverse impact in the fish catch along the impacted sea zone. **The company will again follow up with the department of Fisheries, Tamilnadu to fulfill the obligation and submit the progress to the MoEF &CC within 31.03.2023 .**
EC No. J- 1301213412008-IA.II (T) dated on 04.02.2014				
1	(xlix) Hydro geological study of the area shall be reviewed annually and report submitted to the Ministry. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Not complied As stipulated in the condition, the hydro-geological study of the area has not been taken up by the project proponent. The project proponent, vide email dated 16-09-2022, has agreed to conduct Hydro geological study of the area by 31 .12 2022 (Appendix-V)	i) What is the current status regarding the compliance of this condition? ii) Since you have agreed to conduct Hydro geological study of the area by 31.12.2022 as per the email dated 16-09-2022. In this regard please give your commitment with timelines for the same to the MoEF&CC.	**Current status: Preliminary area walk through survey conducted by the Consultant for estimating the quantum of work and techno-commercial offers are under evaluation for vendor engagement and the Hydrogeological study will be completed by January 2023 due to rain predictions and monsoon in the month of December '22** **After completion of the hydrogeological study, the report will be submitted to MoEF&CC within 31.03.2023.**
2	(li) Three tier green belt shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.	Partly Complied The project proponent has taken up plantation around ash pond area by planting different species including local species of 1, 96,313 numbers wherever possible. However, as stipulated in the condition, three tier green belt development is not carried out on all sides. **The plantation work and survival are good.**	i. The green belt development is insufficient. In this regard please ensure that the three tier green belt development is carried on all sides completely. ii. In this regard please give your commitment with timelines for the same to the MoEF&CC.	The condition is mostly Complied. There is a difficulty in sustaining three tier formation due to natural calamities (Cyclones and wind storms) in this coastal region. However, The Company has developed Three tier green belt in many places around ash pond. However, due to natural land formation, soil condition and proximity to railway track, three tier green belt could not be sustained in some locations. Further, we state that here is no possibility of dust generation from Ash dyke as there is no Fly ash discharge into our Ash Pond for the last 5 years and our Fly ash Generations is 100% utilised in the Cement Plants. **However, we have planned for additional Green Belt development for about 5 acres around the Ash Pond by October 2023.**

Status of certain EC conditions referred by MoEF&CC vide email dated 16.11.2022

S.No.	Specific Conditions	Compliance status reported by RO as on 13.09.2022	Information asked by MoEF&CC vide email dated 16.11.2022	ITPCL Response -17.11.2022
3	(iii)A common Green Endowment Fund shall be created and the interest earned out of it shall be used for the development and management of green cover of the area.	Partly Complied (As Common Green Endowment Fund is not created) As specifically stated in the condition, a Common Green Endowment Fund is not created by the project proponent. In this regard, the project proponent vide email dated 4-2-2022 has indicated the following reasons: 1. Presently the company is undergoing Debt Restructuring. 2. As per the current arrangement, mandated by consortium banks and RBI policy, it is allowed to open only one account for the company. 3. However, the lead bank will be requested to allow to open the desired account to comply with the requirements. The project proponent, vide email dated 16-9-2022, informed that an amount of Rs. 9.25 crore (up to Sep 2022) was spent for the purpose of green belt development including plantation and their maintenance.	i. List out the ways by which it is being ensured that sufficient amount is being spent for the purpose of green belt development including plantation and their maintenance. ii. The amount that will be spent in another six months for ensuring the compliance. iii. Has the request been sent to the lead bank to open the desired account to comply with the requirements? If yes, what is the current status?	Presently the company is undergoing debt restructuring. As per the current arrangement mandated by consortium of banks and RBI policy, we are allowed to open only one account for our company. However, we requested the lead bank to allow us to open the desired account to comply with the requirements. Bankers have denied for opening of new account and the correspondence between the company and the bank is attached as **Annexure 1** **Though a separate account was not maintained, a separate budget head was created and the amount spent towards Green Endowment is being accounted under the budget head. So far, the company has spent a sum of Rs 9.27 Crores (as on September 2022) towards green belt development and maintenance under this budget head.** In comparison to the amount spent, the amount stipulated for Green Endowment Fund and the expected returns from the fund would be much lower. In fact company has already spent more than the amount planned.

8. Considering the aforesaid facts and circumstances and subject to compliance of the conditions imposed while issuing EC and the additional conditions imposed vide corrigendum to the EC dated 14.08.2012 and subject to the conditions/additional conditions which are partly complied with, to be complied with within the time suggested in the response of the appellant/project proponent, reproduced hereinabove and keeping the larger question of law, namely, "whether for the project like this, a cumulative impact assessment study is required or not", open and to be decided in an appropriate case, we dispose of the present appeals by permitting/allowing the appellant/project proponent to continue with the power plants which are in operation since September, 2015 and April, 2016 on the conditions as above, i.e., subject to compliance of all the conditions mentioned in the EC as well as additional conditions imposed vide corrigendum to the EC dated 14.08.2012 and to fully comply with the conditions which are partly complied with within the stipulated time as suggested and prayed by the appellant company, prayed in response to the compliance report dated 20.09.2022, reproduced hereinabove.

9. Now so far as the issue, "whether against the corrigendum to the EC along with additional conditions, an appeal before the NGT would be maintainable or not" is concerned, having heard learned counsel appearing on behalf of the respective parties, we are of the opinion that an aggrieved person may always challenge the corrigendum to the EC, however, the appeal will be restricted to the corrigendum to the EC on additional conditions only, if the original EC is not under challenge and/or the original EC has been confirmed by the NGT earlier on certain conditions which have not been challenged.

10. The present appeals stand disposed of in the aforesaid terms. We make it clear that the present order shall not be cited as a precedent in any other matter.

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THIRU.DEEPAK S.BILGI, I.F.S.,
MEMBER SECRETARY

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AMENDMENT -TERMS OF REFERENCE (ToR)

Letter No. SEIAA-TN/F.9263/SEAC/ToR-1213/2022/Amendment/2023 dated:06.11.2023

To

M/s. State Industries Promotion Corporation of Tamil Nadu Limited,
19/A, Rukmani Lakshmipathy road,
Egmore, Chennai-600 008.

Sir/Madam,

Sub: SEIAA-TN – Amendment to Terms of Reference for the Proposed Construction at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt. Vaniamallee Village S.Nos. -31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1, Vaniamallee Village, Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu by M/s. SIPCOT - under project category – "B1" and Schedule S.No. 8(b) Area Development" under the EIA Notification, 2006 as amended – Amendment to Terms of Reference – Issued – Regarding.

Ref: 1. TOR issued vide Letter No. SEIAA-TN/F.No.9263/SEAC/TOR-1213/2022 dated:14.07.2022

MEMBER SECRETARY
SEIAA-TN

2. Online proposal No. SIA/TN/MIS/303835/2023 Dt: 01.09.2023 for amendment
3. Proponent application for ToR Amendment dated: 01.09.2023.
4. Minutes of the 416th SEAC Meeting held on 13.10.2023.
5. Minutes of the 670th SEIAA meeting held on 06.11.2023

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Terms of Reference was accorded vide Letter No. SEIAA-TN/F.No. 9263/SEAC/ToR-1213/2022 dated:14.07.2022 to M/s. State Industries Promotion Corporation of Tamil Nadu for the Proposed Construction at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt. Vaniamallee Village S.Nos. -31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1, Vaniamallee Village, Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu under Category "B1" and Schedule S.No. 8(b) Area Development". Now, the Proponent has applied Amendment to Terms of Reference vide Online proposal No. SIA/TN/MIS/303835/2023 Dt: 01.09.2023.

Remarks of SEAC

Proposed Development of Industrial Park with Industrial Housing Facility at Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt. Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 Gummidipoondi Taluk, Tiruvallur District,

MEMBER SECRETARY
SEIAA-TN

Tamil Nadu By M/s. State Industries Promotion Corporation of Tamil Nadu Limited - Amendment in Terms of Reference. (SIA/TN/MIS/303835/2023 Dt: 01.09.2023).

The proposal was placed in the 416th SEAC Meeting held on 13.10.2023. The project proponent gave a detailed presentation. The details of the project furnished by the proponent are available in the website (parivesh.nic.in). **The SEAC noted the following:**

1. The project proponent M/s. State Industries Promotion Corporation of Tamil Nadu Limited, has applied for seeking Amendment in Terms of Reference for the Proposed Development of Industrial Park with Industrial Housing Facility at Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt. Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.
2. The project/activity is covered under Category "B1" of Item 8(b) "Townships and Area Development Projects" of the Schedule to the EIA Notification, 2006.
3. Earlier TOR obtained – Letter No. SEIAA-TN/F.No.9263/SEAC/TOR-1213/2022 dated:14.07.2022.
4. Now, the PP has applied for amendment for the following in the existing TOR issued.

Description	Earlier TOR issued	Amendment requested	Remarks
Land Area	203.69 Ha. (503.12 Acres)	215.834 Ha. (533.11 Acres)	Due to addition of 12.144 ha lands
Survey numbers (Village wise)	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216,	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216,	-

MEMBER SECRETARY
SEIAA-TN

	217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203pt, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.	217, 218pt, 219pt, 220pt, 221pt, **227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt**, 235pt. Vaniamallee Village S.Nos. **31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20**, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.	
Industrial	Nil	6.32 acres	Plot AM-3 is

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Housing facility			earmarked for Industrial Housing
Public Hearing	ToR issued with Public Hearing	Public Hearing to be excluded	Public Hearing is not applicable for 8(b) projects.

Based on the presentation & documents furnished by the PP, SEAC decided to **recommend the above amendments in the Terms of Reference**. The remaining conditions stipulated vide ToR Letter No. SEIAA-TN/F.No.9263/SEAC/TOR-1213/2022 dated:14.07.2022 will remain unaltered.

Discussion of SEIAA:

The subject was placed in the 667th Authority meeting held on 06.11.2023. The Authority noted that the subject was appraised in the 416th SEAC meeting held on 13.10.2023. The SEAC noted that the PP has applied for amendment for the following in the existing ToR issued.

Description	Earlier TOR issued	Amendment requested	Remarks
Land Area	203.69 Ha. (503.12 Acres)	215.834 Ha. (533.11 Acres)	Due to addition of 12.144 ha lands
Survey numbers (Village wise)	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2,	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, **227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt**, 235pt. Vaniamallee Village S.Nos. **31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20**, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2,	-

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	181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203pt, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.	176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.	
Industrial Housing facility	Nil	6.32 acres	Plot AM-3 is earmarked for Industrial Housing
Public Hearing	ToR issued with Public Hearing	Public Hearing to be excluded	Public Hearing is not applicable for 8(b) projects.

Based on the presentation & documents furnished by the PP, SEAC decided to **recommend the above amendments in the Terms of Reference**. The remaining conditions stipulated vide ToR Letter No. SEIAA-TN/F.No.9263/SEAC/TOR-1213/2022 dated:14.07.2022 will remain unaltered.

The Authority after detailed discussion accepts the recommendation of SEAC and decided to grant Amendment in the Terms of Reference as follows subject to grant the existing conditions

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as mentioned in the ToR vide Lr.No. SEIAA-TN/F.No.9263/SEAC/TOR-1213/2022 dated:14.07.2022 are remains unaltered.

Description	Earlier TOR issued	ToR Amendment recommended
Land Area	203.69 Ha. (503.12 Acres)	215.834 Ha. (533.11 Acres)
Survey numbers (Village wise)	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203pt, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.	Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, **227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt**, 235pt. Vaniamallee Village S.Nos. **31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20**, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1.
Industrial Housing facility	Nil	6.32 acres

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Public Hearing	ToR issued with Public Hearing	Public Hearing to be excluded

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Copy to:

1. The Additional Chief Secretary to Government, Environment, Climate Change and Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi - 110032.
3. The Chairman, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, Ministry of Environment & Forest (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. Monitoring Cell, I A Division, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, New Delhi - 110003.
6. Stock File.

सत्यमेव जयते

THIRU.DEEPAK S.BILGI, I.F.S.
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITYTAMILNADU
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022 Dated :14.07.2022

To

M/s.State Industries promotion
Corporation of Tamil Nadu
Soorapoondi and Vaniamallee
Thiruvallur District

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Proposed Construction at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 , Vaniamallee Village, Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu by M/s SIPCOT - under project category – "B1" and Schedule S.No. 8(b) Area Development – ToR issued along with Public Hearing- preparation of EIA report – Regarding.

Ref: 1. Online proposal No. SIA/TN/MIN/ 76835/2022, dated: 21.06.2022

2. Your application seeking Terms of Reference submitted on: 18.05.2022

3. Minutes of the 287th Meeting of SEAC held on 22.06.2022

14/7/2022

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4. Minutes of the 532th Meeting of SEIAA held 14.07.2022.

Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

The project proponent, M/s SIPCOT has submitted application seeking ToR for B1 category project in Form-I, for the Proposed Construction at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 , Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu and has furnished Pre-feasibility report.

Discussion by SEAC and the Remarks:-

Proposed Development of Industrial Park at Soorapoondi Village S.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 Gummidipoondi Taluk, Tiruvallur District Tamil Nadu By M/s SIPCOT for Terms of Reference (SIA/TN/MIS/76835/2022 Dt. 21.6.2022)

The proposal was placed for appraisal in this 287th SEAC meeting held on 22.6.2022. The details of the project furnished by the proponent are given in the website (parivesh. nic.in).

The SEAC noted the following:

1. The project proponent M/s. State Industries Promotion Corporation of Tamil Nadu Limited, has applied for seeking Terms of Reference for the Proposed Development of Industrial Park over an extent of 203.69 Ha (503.12 Acres) at Soorapoondi Village S.Nos. 65/1, 181, 182,

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183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219 pt, 220pt, 221pt, 227pt, 228pt, 235pt. Vaniamallee Village S.Nos. -142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1, Gummidipoondi Taluk, Tiruvallur District Tamil Nadu.

2. The proposed quarry/activity is covered under Category "B1" of Item 8(b) "Area Development"of the Schedule to the EIA Notification, 2006.

Based on the presentation and documents furnished by the project proponent, SEAC decided to recommend the proposal for the grant of Terms of Reference , subject to the following TORs, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The PP shall obtain SCNBWL prior clearance since Pulicat Bird Sanctuary is 7.34 Km. ESZ for Pulicat Bird Sanctuary has not been notified.
2. The project proponent shall obtain the approval from the competent authority for the extraction of Groundwater.
3. The project proponent shall create and monitor Environmental Management Cell.
4. The project proponent shall take fresh base line data for the study.
5. The project proponent shall comply Wet land Management Rules, 2017.
6. The project proponent shall furnish a detailed study analysis of Ayacut.
7. The project proponent shall study in detail about the PWD tank and other water bodies.
8. All industries in the SIPCOT should not store inflammable materials. The SIPCOT shall furnish the plan for the same.
9. The salt shall not be disposed to TSDF and it should be scientifically disposed and disposal plan shall be submitted.
10. The contour levels of the proposed site shall be measured and contour map shall be furnished. The project Proponent shall furnish the detailed water balance as per the MoEF & CC guidelines.

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11. The project Proponent shall furnish 'A' register, Village map with FMB sketch to check the contiguous nature of the site.
12. The Proponent shall carryout a Cumulative impact study for soil, water, air etc, and the same may be furnished in the report.
13. A detailed storm water plan to drain out the water from site shall be prepared in accordance with the contour levels of the proposed project site considering the flood occurred in the year 2015 and also considering the surrounding development.
14. Storm water drain should be utilized inside the premises and there should not be any discharge out of the plant and plan shall be submitted accordingly.
15. The layout plan for the greenbelt area shall be earmarked with GPS coordinates by the project proponent on the periphery of the site and the same shall be submitted to CMDA/DTCP for approval. It is the responsibility of the SIPCOT to have 33% green belt.
16. The proponent shall list out all the commercial activities planned in the SIPCOT area.
17. The SIPCOT shall provide a hospital facility in industrial housing area.
18. The proponent shall fix separate compound between factory and residences. Minimum distance as per guidelines should be there between factory and residence.
19. The space allotment for solid waste disposal (5% of the area) and sewage treatment shall be furnished.
20. Details of Solid Waste management plan shall be prepared as per Solid waste management Rules, 2016 by SIPCOT and shall be furnished.
21. Details of Rainwater harvesting system proposed should be furnished and the water shall be used for other beneficial purpose so that fresh water utilization is reduced.
22. The Proponent shall assess and include the Solid waste Generation and Hazardous waste Generation due to the expired chemicals.
23. The Proponent shall carry out the AAQ & ANL survey in minimum six places & minimum 6 ground water samples of Surface Water Quality to be analyzed.
24. The Proponent shall carry out the Traffic Study at minimum two locations.
25. The Proponent shall carry out the assessment and modeling study on Fugitive Emission and analysis the impact of the same.

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26. The proponent shall use green technology, renewable energy at least 20% should be of solar energy.

Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	*Aegle marmelos*	Vilvam	வில்வம்
2	*Adenaanthera pavonina*	Manjadi	மஞ்சாடி, ஆனைக்குன்றிமணி
3	*Albizia lebbeck*	Vaagai	வாகை
4	*Albizia amara*	Usil	உசில்
5	*Bauhinia purpurea*	Mantharai	மந்தாரை
6	*Bauhinia racemosa*	Aathi	ஆத்தி
7	*Bauhinia tomentos*	Iruvathi	இருவாத்தி
8	*Buchanania axillaris*	Kattuma	காட்டுமா
9	*Borassus flabellifer*	Panai	பனை
10	*Butea monosperma*	Murukkamaram	முருக்கமரம்
11	*Bobax ceiba*	Ilavu, Sevvilavu	இலவு
12	*Calophyllum inophyllum*	Punnai	புன்னை
13	*Cassia fistula*	Sarakondrai	சரக்கொன்றை
14	*Cassia roxburghii*	Sengondrai	செங்கொன்றை
15	*Chloroxylon sweitenia*	Purasamaram	புரசு மரம்
16	*Cochlospermum religiosum*	Kongu, Manjalllavu	கோங்கு, மஞ்சள் இலவு
17	*Cordia dichotoma*	Naruvuli	நருவுளி.
18	*Creteva adansoni*	Mavalingum	மாவிலங்கம்
19	*Dillenia indica*	Uva, Uzha	உசா
20	*Dillenia pentagyna*	SiruUva, Sitruzha	சிறு உசா
21	*Diospyro sebenum*	Karungali	கருங்காலி
22	*Diospyro schloroxylon*	Vaganai	வாகணை
23	*Ficus amplissima*	Kalltchi	கல் இச்சி
24	*Hibiscus tiliaceou*	Aatrupoovarasu	ஆற்றுப்புவரசு
25	*Hardwickia binata*	Aacha	ஆச்சா
26	*Holoptelia integrifolia*	Aayili	ஆயா மரம், ஆயிலி
27	*Lannea coromandelica*	Odhiam	ஓதியம்
28	*Lagerstroemia speciosa*	Poo Marudhu	பூ மருது
29	*Lepisanthus tetraphylla*	Neikottaimaram	நெய் கொட்டடை மரம்
30	*Limonia acidissima*	Vila maram	விலா மரம்
31	*Litsea glutinos*	Pisinpattai	அரம்பா. பிசின்பட்டை
32	*Madhuca longifolia*	Illuppai	இலுப்பை
33	*Manilkara hexandra*	UlakkaiPaalai	உலக்கை பாலை
34	*Mimusops elengi*	Magizhamaram	மகிழமரம்
35	*Mitragyna parvifolia*	Kadambu	கடம்பு
36	*Morinda pubescens*	Nuna	நுணா
37	*Morinda citrifolia*	Vellai Nuna	வெள்ளை நுணா
38	*Phoenix sylvestre*	Eachai	ஈச்சமரம்
39	*Pongamia pinnat*	Pungam	புங்கம்

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40	*Premna mollissima*	Munnai	முன்னை
41	*Premna serratifolia*	Narumunnai	நறு முன்னை
42	*Premna tomentosa*	Malaipoovarasu	மலை பூவரசு
43	*Prosopis cinerea*	Vanni maram	வன்னி மரம்
44	*Pterocarpus marsupium*	Vengai	வேங்கை
45	*Pterospermum canescens*	Vennangu, Tada	வெண்ணாங்கு
46	*Pterospermum xylocarpum*	Polavu	புலவு
47	*Putranjiva roxburghi*	Karipala	கரிபாலா
48	*Salvadora persica*	Ugaa Maram	உகா மரம்
49	*Sapindus emarginatus*	Manipungan, Soapukai	மணிப்புங்கன் சோப்புக்காய்
50	*Saraca asoca*	Asoca	அசோகா
51	*Streblus asper*	Piray maram	பிராய் மரம்
52	*Strychnos nuxvomic*	Yetti	எட்டி
53	*Strychnos potatorum*	Therthang Kottai	தேத்தான் கொட்டை
54	*Syzygium cumini*	Naval	நாவல்
55	*Terminalia belleric*	Thandri	தான்றி
56	*Terminalia arjuna*	Ven marudhu	வெண் மருது
57	*Toona ciliate*	Sandhana vembu	சந்தன வேம்பு
58	*Thespesia populnea*	Puvarasu	பூவரசு
59	*Walsuratrifoliata*	valsura	வால்சுரா
60	*Wrightia tinctoria*	Veppalai	வெப்பாலை
61	*Pithecellobium dulce*	Kodukkapuli	கொடுக்காப்புளி

Discussion by SEIAA and the Remarks:-

The subject was placed in the 532nd meeting of SEIAA held on 14.07.2022. After detailed discussions, the Authority accepted the recommendation of SEAC and decided to grant of **Terms of Reference** as recommended by SEAC for undertaking the Environment Impact Assessment Study

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SEIAA-TN

and preparation of Environment Management Plan subject to the conditions as recommended by SEAC in addition to the following conditions:

1. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall furnish the detailed EMP mentioning all the CER activities as committed with the action plan.
2. All the construction of Buildings shall be energy efficient and confirm the green building norms.
3. The proponent shall provide the adequate parking facility for vehicles of all the visitors.
4. The proponent shall ensure that no treated or untreated trade effluent/sewage shall be discharged outside the premises under any circumstances.
5. The disaster management and disaster mitigation standards to be seriously adhere avoid of calamities.
6. The proponent shall provide the action taken for reduction of green house gas emissions to support the climatic action to make it sustainable building.
7. The project proponent shall furnish the action taken to provide adequate parking space for visitors of all inmates including clean traffic plan.
8. The project proponent shall furnish the action taken to improve water usage efficiency in the building.
9. The project proponent shall conduct detailed study of biodiversity flora & fauna including invasives /endemic vulnerable species.
10. The project proponent shall furnish impact of Green House Gases emissions and climate change likely due to activities.
11. The project proponent shall conduct detailed soil investigation including micro flora /fauna.
12. The project proponent shall study impact on livelihood.
13. The project proponent shall furnish List of trees available in the area.
14. The project proponent shall study impact of activities on water bodies/wetlands.
15. The project proponent shall conduct studies on invasive and alien species.

The following general points shall be noted:

All documents shall be properly indexed, page numbered. Period/date of data collection shall be clearly indicated.

1. Authenticated English translation of all material provided in Regional languages.

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SEIAA-TN

2. The letter/application for EC shall quote the SEIAA. File No. and also attach a copy of the letter.
3. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
4. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.
5. The prescribed TORs would be valid for a period of Three years for submission of the EIA/EMP reports, as per the O.M. No. J- 11013/41/2006-IA.II(I) dated 22.08.2014. As per the Ministry of Environment, Forest and Climate Change Impact Assessment Division, Government of India, Circular Memo No.J-11013/41/2006-Ia-II (I) (Part) dated 7th November, 2015.
6. After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006. The final EIA / EMP shall be submitted to the SEIAA – Tamil Nadu for obtaining Environmental Clearance.
7. The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
8. The TORs prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August 2017.

The receipt of this letter may be acknowledged.

Besides the above, the below mentioned general points should also be followed:-

a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
b. All documents may be properly referenced with index, page numbers and continuous page numbering.
c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.

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d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF & CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.

e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -l1013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website http://www.moef.nic.in/ may be referred.

- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
- The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
- The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

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Copy to:

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1st& 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai -34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
6. The District Collector, Tiruvallur District.
7. Stock File.

RISK ASSESSMENT (RA) STUDY REPORT

"Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu" over an extent of 215.834 Ha. (533.11 Acres)

BY

STATE INDUSTRIES PROMOTION CORPORATION OF TAMILNADU LIMITED

19/A, Rukmani Lakshmipathy Road, Egmore, Chennai – 600008.

AT

Villages: Soorapoondi and Vaniamallee

Taluk: Gummidipoondi

District: Thiruvallur

State: Tamil Nadu

Prepared by

HUBERT ENVIRO CARE SYSTEMS (P) LTD, CHENNAI

JANUARY 2024

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1. INTRODUCTION

1.1 Purpose of the Report

SIPCOT propose to develop an Industrial Park over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi and Vaniamallee Villages of Gummidipoondi Taluk, Thiruvallur district and Tamil Nadu State. The IP is proposed to accommodate Engineering & fabrication / Electrical & Electronics and Other Non EC category industries that will not fall under category 'A' or 'B' as per EIA Notification, 2006 and amendments thereof.

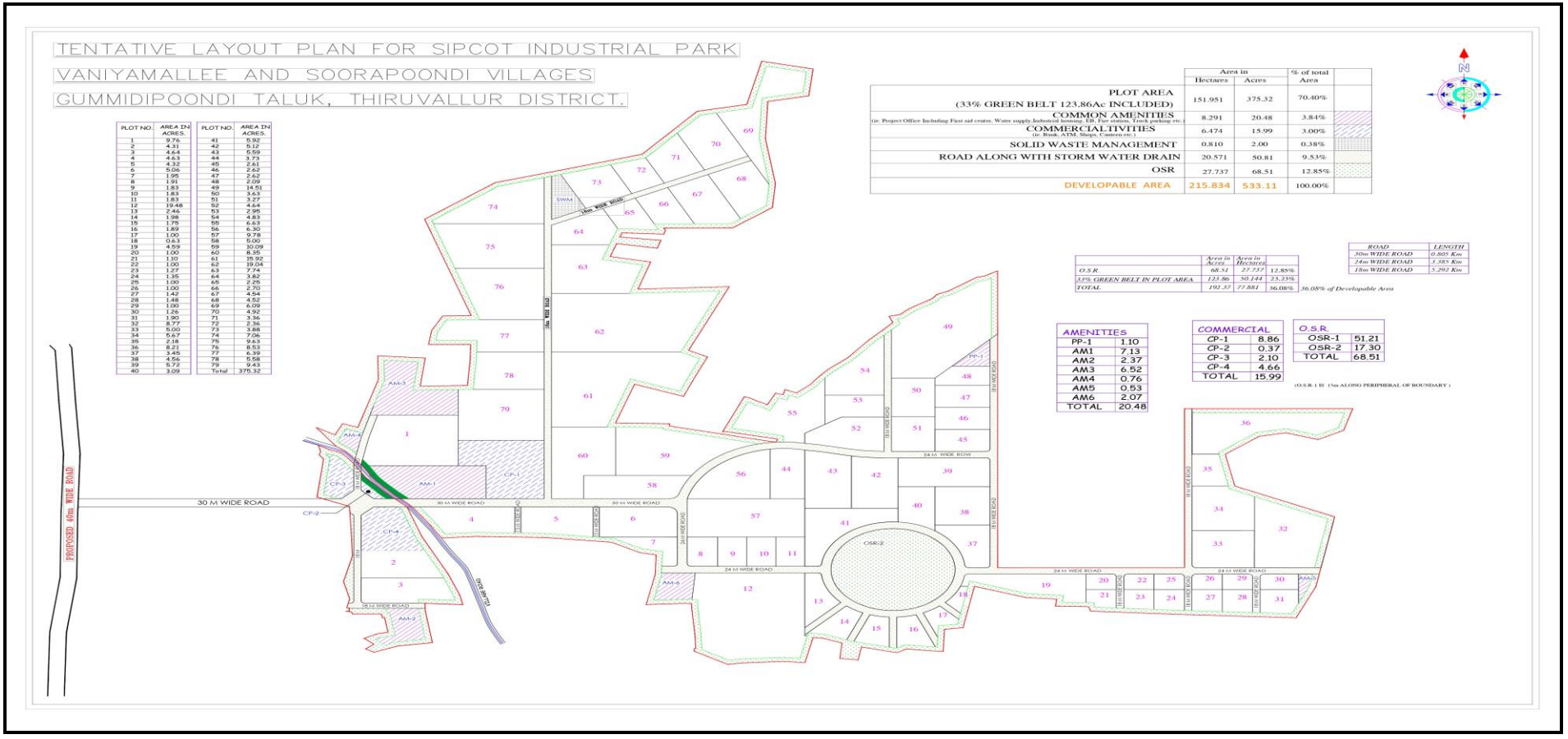
SIPCOT is in the process of developing industrial parks across the State for prospective and new age industries to enhance their manufacturing foot print in the State of Tamil Nadu. As part of its endeavour to promote new industries and considering the demand for industries land in proximity to Chennai, SIPCOT has proposed to develop an IP for Engineering & fabrication / Electrical & Electronics and Other Non EC category industries with Industrial Housing over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi and Vaniamallee Villages of Gummidipoondi Taluk, Thiruvallur district and Tamil Nadu .

1.2. Scope of the study

The scope of the study is to analyse the risk involves the identification an assessment of risks the persons involved in the proposed project and the neighbouring populations are exposed to as a result of hazard occurrence. In the sections below, the identification of various hazards, probable risks in the proposed project, maximum credible accident analysis and which give a broad identification of risks involved are addressed. The scope of study mainly involves in hazard identification and risk assessment.

	DEVELOPMENT OF INDUSTRIAL PARK WITH INDUSTRIAL HOUSING FACILITY OVER AN EXTENTOF 215.834 Ha.	VER REV DATE	
	RISK ASSESSMENT (RA) STUDY REPORT	0 1 25.01.24	

1.3.Project Layout



PLOT NO.	AREA IN ACRES.	PLOT NO.	AREA IN ACRES.
1	9.76	41	5.92
2	4.31	42	5.12
3	4.64	43	5.59
4	4.63	44	3.73
5	4.32	45	2.61
6	5.06	46	2.62
7	1.95	47	2.62
8	1.91	48	2.09
9	1.83	49	14.51
10	1.83	50	3.63
11	1.83	51	3.27
12	19.48	52	4.64
13	2.46	53	2.95
14	1.98	54	4.83
15	1.75	55	6.63
16	1.89	56	6.30
17	1.00	57	9.78
18	0.63	58	5.00
19	4.59	59	10.09
20	1.00	60	8.35
21	1.10	61	15.92
22	1.00	62	19.04
23	1.27	63	7.74
24	1.35	64	3.82
25	1.00	65	2.25
26	1.00	66	2.70
27	1.42	67	4.54
28	1.48	68	4.52
29	1.00	69	6.09
30	1.26	70	4.92
31	1.90	71	3.36
32	8.77	72	2.36
33	5.00	73	3.88
34	5.67	74	7.06
35	2.18	75	9.63
36	8.21	76	8.53
37	3.45	77	6.39
38	4.56	78	5.58
39	5.72	79	9.43
40	3.09	Total	375.32

	Area in Hectares	Area in Acres	% of total Area
PLOT AREA (33% GREEN BELT 123.86Ac INCLUDED)	151.951	375.32	70.40%
COMMON AMENITIES (ie. Project Office Including First aid center, Water supply,Industrial housing, DB, Fire stations, Truck parking etc.)	8.291	20.48	3.84%
COMMERCIAL(TIVITIES (ie. Bank, ATM, Shops, Canteen etc.)	6.474	15.99	3.00%
SOLID WASTE MANAGEMENT	0.810	2.00	0.38%
ROAD ALONG WITH STORM WATER DRAIN	20.571	50.81	9.53%
OSR	27.737	68.51	12.85%
DEVELOPABLE AREA	215.834	533.11	100.00%

	Area in Acres	Area in Hectares	
O.S.R	68.51	27.737	12.85%
33% GREEN BELT IN PLOT AREA	123.86	50.144	23.23%
TOTAL	192.37	77.881	36.08%

36.08% of Developable Area

ROAD	LENGTH
30m WIDE ROAD	0.805 Km
24m WIDE ROAD	3.385 Km
18m WIDE ROAD	5.292 Km

AMENITIES	
PP-1	1.10
AM1	7.13
AM2	2.37
AM3	6.52
AM4	0.76
AM5	0.53
AM6	2.07
TOTAL	20.48

COMMERCIAL	
CP-1	8.86
CP-2	0.37
CP-3	2.10
CP-4	4.66
TOTAL	15.99

O.S.R.	
OSR-1	51.21
OSR-2	17.30
TOTAL	68.51

(O.S.R.1 IS 15m ALONG PERIPHERAL OF BOUNDARY)

Figure 1- project layout

1.4. Project Description

The proposed project involves development of Industrial Park in a total area of 215.834 Ha. (533.11 Acres) for accommodating industries which does not require Environmental Clearance as per the EIA Notification, 2006 & its subsequent amendments. The project will be established with infrastructure development like Industrial housing, provision of storm water drain, laying of internal roads, water supply line, providing substation and green belt in common area and other common facilities.

The following type / category of industries are proposed in the Industrial park:

- 40% of the plots will be allocated for Electrical & Electronics
- 30% for Engineering & fabrication and
- 30% for Other Non EC category industries.

1.5. zonation details

Industry Type	Tentative Area (Acres)	Approx.% of industrial plot area
Electrical & Electronics	150.94	40%
Engineering & Fabrication	111.84	30%
Other Non EC Category	112.54	30%
Total	**375.32**	**100%**

Table 1- zonation details

2. RISK ANALYSIS

Risk analysis involves the identification and assessment of risks the persons involved in the proposed project and the neighbouring populations are exposed to as a result of hazard occurrence.

In the sections below, the identification of various hazards, probable risks in the proposed project, maximum credible accident analysis and consequence analysis, which give a broad identification of risks involved, are addressed.

- ❖ Analytical process to provide information regarding undesirable events
- ❖ Detailed examination including risk assessment, Risk evaluation and risk management alternatives, perform to understand the nature of unwanted outcome.

In Risk assessment, the quantitative or qualitative risk related to proposed construction are determined.

Hazard Identification and Risk Assessment (HIRA) is carried for identification of undesirable events that can lead to a hazard, the analysis of hazard of this undesirable event, that could occur and usually the estimation of its extent, magnitude and likelihood of harmful effects. It is widely accepted within industry in general that the various techniques of risk assessment contribute greatly toward improvements in the safety of complex operations and equipment.

Figure 1- risk assessment process

Figure 2- risk assessment process

Workplace hazards can be identified in a number of ways. Inspections provide a system of recognizing hazardous conditions so that those conditions can be corrected. The data collected while performing inspections will be used to identify hazards and barriers to working safely and in an environmentally protective manner so that they can be addressed such as procedure changes or purchasing different PPE. The data also will be tracked as a protective measure of acceptable HSE behavior on the site. reports and safe work observation information will be shared with employees at toolbox safety meetings.

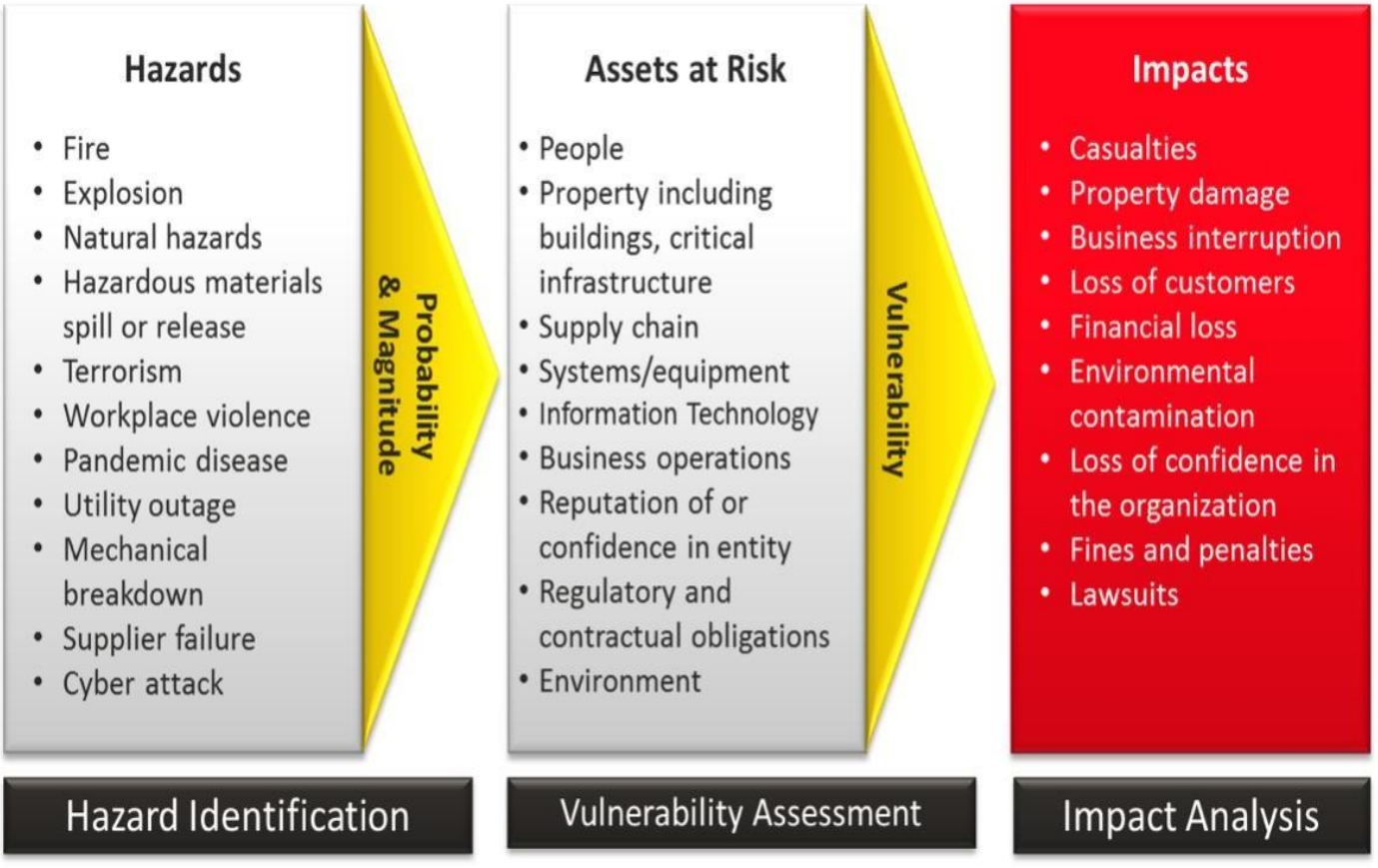


Figure 3- hazard identification and impact analysis

- Once the hazards have been identified, it is necessary to assess what risk they pose to employees in the workplace.

- In this way we can establish a measure of the risk and determine what priority they should have for corrective actions.

- The risk assessment step is that part of the process that assesses the probability (likelihood) and consequences (severity) of hazard that have been identified.

- Once we have estimated the probability and consequences for each hazard then we can allocate it a priority for corrective action.

- Generally, risk assessment is estimating:

  what are the chances (probability) of an accident happening, and if it does happen, what are the chances that someone will be hurt? What will be the extent of equipment or environmental damage, and how bad will it be (severity)? The level of risk is dependent on the exposure to the hazard and the probability and consequences of an event occurring.

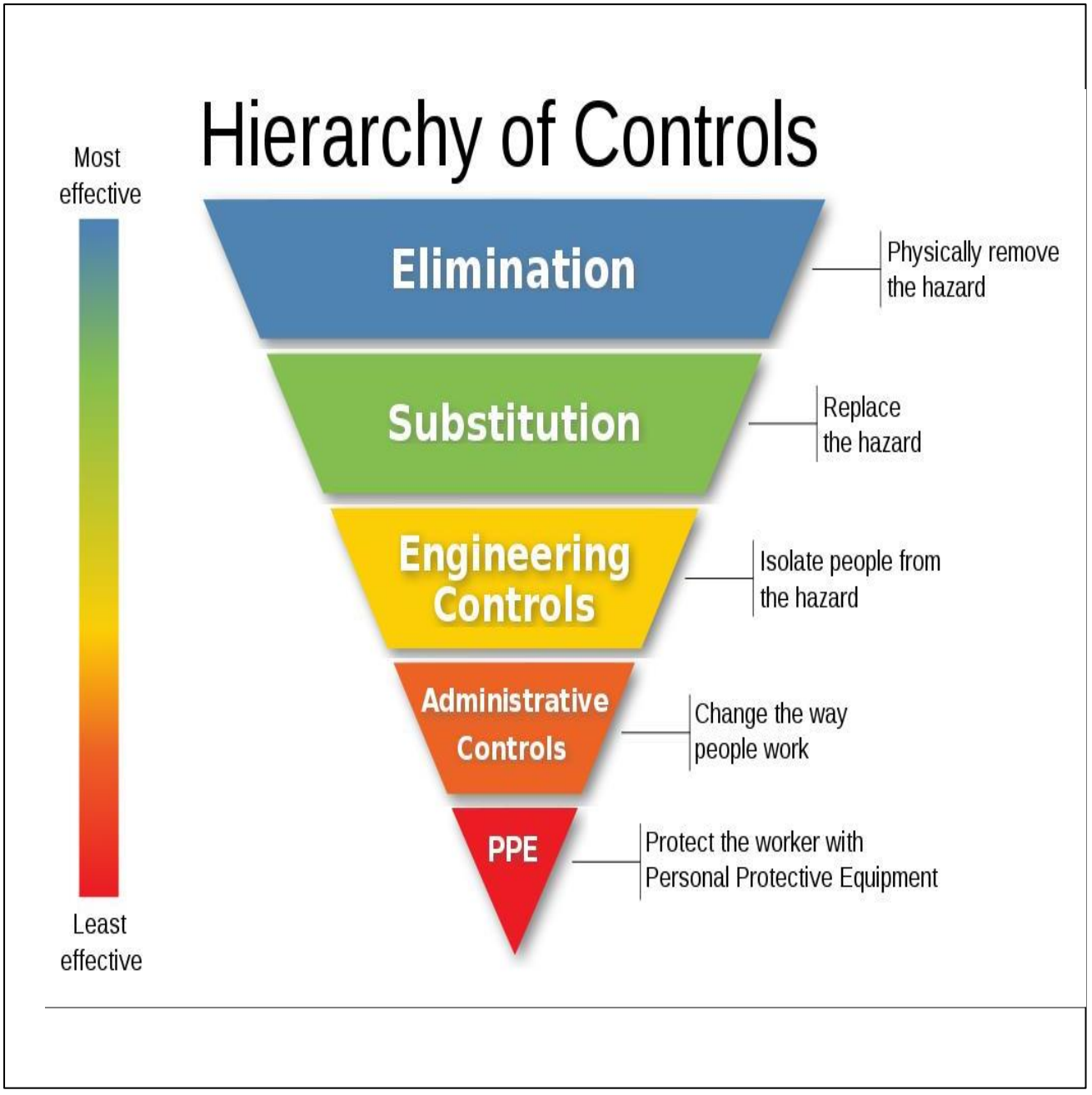


Figure 4- Hierarchy of controls

3. HAZARD & RISK

A hazard is a physical entity (i.e., energy or an environmental agent) which have a potential to cause injury or disease in people (or environmental damage to property etc.).

Risk is the chance or likelihood of the hazard, under the circumstances of its use, producing an injury, disease etc. Risk is influences by such factors as:

- Nature of hazard
- Quantity of hazard
- Energy of the hazard
- Use to which the hazard is put
- Work system / operator factors,
    - ❖ Leadership /teamwork
    - ❖ Design
    - ❖ Documentation
    - ❖ Training
    - ❖ work practices
    - ❖ Job selection
    - ❖ Environment control
- System auditing.

RISK = Hazard effect x Probability
(likelihood of occurrence)

3.1. RISK ASSESSMENT STEPS

There are five steps followed to assess the risks in workplace.

They are;

Step 1: Identify the hazards

Step 2: Decide who might be harmed and how

Step 3: Evaluate the risks and decide on precautions

- Identify the existing control measures and recommendations, if necessary
- evaluate the residual risks

Step 4: Record the findings and implement them.

Step 5: Review the assessment and update if necessary

3.2. HAZARD IDENTIFICATION

- This step seeks to identify the hazards and risks to be managed. Comprehensive identification using a well-structured systematic process is critical, because of hazard or risk not identified at this stage may be excluded from further analysis. Identification shall include actual and potential risks, whether or not they are under the control of the entity.
- The aim is to generate a comprehensive list of risks and events that might have an impact on the achievement of each of the objectives identified in the context. These events might prevent, degrade, delay or enhance the

achievement of those objectives. These are then considered in more detail to identify what can happen.

- Having identified what can happen, it is necessary to consider possible causes and scenarios. There are many ways an event can occur.

3.3. RISK ANALYSIS AND EVALUATION

- Risk analysis is about developing an understanding of the risk. It involves the source of the risk, consequences and likelihood that the consequence may occur. The existing control measures shall also be identified in this section.
- The level of risk is calculated by multiplying the consequence score and probability of occurrence together.

Risk = Consequence score x probability of occurrence

- The next step is to identify and evaluate the adequacy of existing control measures and suggestion of addition recommendation, if necessary.

3.4. RISK ASSESSMENT MATRIX

The hazards and risks associated with construction phase are those from the below activities. The scope of construction by SIPCOT is limited to construction of office buildings, roads and other basic infrastructures.

The major activities during the construction phases are:

- Construction material and machines handling
- Hoisting & Lifting activity
- Working at height
- Operation of Material Handling Equipments
- Excavation
- Construction of roads and other civil works

4. RISK CATEGORIES

- Risk categories are classifications or groupings of risks based on common characteristics, sources, or impacts. They help organize and understand different risks within an organization or project.
- Risk categories help identify risks and enable them to become robust and practical at the same time.

- It ensures that the users can track the origin of the underlying and potential risks faced by an organization.

- These categories help determine the efficiency of the control systems implemented in all the departments of an organization.

- It ensures that **risk identification** is made comprehensively, covering all the probable aspects of the underlying and upcoming risk conditions.

- With these categories, users can determine the areas that are highly prone to risks, and it even allows for the identification of standard and probable causes.

- With risk categories, users can even develop appropriate risk dealing mechanisms.

Probability	Severity				
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
15-25	Extreme Risk (E)		Activity should not proceed in current form without adequate control measures.		
8 - 12	High Risk (H)		Activity should be modified to include remedial planning and action		
4 - 6	Moderate Risk (M)		Activity can operate subject to management and/or modification		
1 - 3	Low Risk (L)		No action required, unless escalation of risk is possible.		

Table 2: Risk Categories

4.1. Definition and Criteria for Risk Categories

Probability		Severity Rating			
Probability Rating	**Expressed in terms of likelihood**	**Rating**	**Description**	**Effects**	**Outcome**
1	Highly unlikely	1	Minor Injury/damage	Cuts and abrasions, minor skin or eye irritations etc.	No lost time
2	Reasonably likely	2	Injury requiring first aid	Any injury that requires first aid	One to three days lost from work
3	Even Chance	3	Injury or industrial disease requiring medical treatment	Deep wounds, fractures, scalds, burns, eye injuries, respiratory infections, temporary blindness or hearing loss etc.	More than three days of sick leave reportable injury
4	Highly likely	4	Serious injury or long term medical effects (industrial diseases)	Loss of fingers, toes, damage to eyes, serious medical effects	Weeks or months of sick leave hospitalization etc. reportable injury.
5	Almost certain	5	Major injury or fatality	Loss of limbs, sight, hearing, long term illness or death	Permanent disablement or ling term sick leave. Reportable Injury.

Table 3: Definition and Criteria for Risk Categories

5. GENERAL HAZARD IDENTIFICATION AND RISK ASSESSMENT FOR INDUSTRIES PROPOSED

5.1. INDUSTRIES PROPOSED:

1. Electrical and electronics
2. Engineering and fabrications
3. Other non EC categories

5.2. GENERAL RISKS FOR ELECTRICAL AND ELECTRONICS

5.2.1. ELECTRICAL AND ELECTRONICS

Electronics Industry, valued at USD 1.75 trillion, is the largest and fastest growing industry in the world. At present, the electronic industry in India accounts for a miniscule share of the global electronic industry which represents huge opportunity for growth in the sector.

In India, electronic industry is classified into six major categories. The categories are as follows:

- Consumer Electronics - 31.0%
- Industrial Electronics - 20.5%
- Computer - 9.0%

- Electric Components - 22.0%
- Strategic Electronics - 7.5%
- Communication and Broadcasting Equipments - 10.0%

Consumer electronics is the fastest growing sub-sector which is characterized with a huge manufacturing base, large consumer set and intense competition owing to the presence of global players. There has been a steep rise in demand due to a growing and aspirational market in India.

Along with consumer electronics, another segment which has been one of the fastest growing is computers & peripherals. The performance of industrial electronics sub-sector is closely linked with investments and demand patterns in other industries as these electronic products are consumed by other industries. India has been showing progressive reforms in the field of strategic electronics wherein, some of the latest technologies being promoted includes electro- magnetic wave application, intelligent sensor, RFID, micro robotic, intelligent material, micro-electronic systems, intelligent secure data communication, millimetre wave and microwave devices. In the electronic component segment, India has been an exporter of components such as cables, speakers, and cathode ray tubes among others.

5.2.2. SOME BASIC ELECTRICAL AND ELECTRONIC HAZARDS

Electrical hazards refer to the potential dangers and risks that are associated with electrical systems. These hazards can cause dangers such as burns, electrocution, arc flash, electric shock, and other serious injuries. In extreme cases, they can even lead to fires or explosions, posing a threat to life, property, and the overall safety of a place and its occupants.

5.2.3. MAIN HAZARDS OF ELECTRICALS END ELECTRONICS

- Electric shock and burns from contact with live parts
- Injury from exposure to arcing, fire from faulty electrical equipment or installations
- Explosion caused by unsuitable electrical apparatus or static electricity igniting flammable vapours or dusts, for example in a spray paint booth

Electric shocks can also lead to other types of injury, for example by causing a fall from ladders or scaffolds etc.

Electrical shock occurs when the body becomes part of the electric circuit, either when an individual comes in contact with both wires of an electrical circuit, one

wire of an energized circuit and the ground, or a metallic part that has become energized by contact with an electrical conductor**.**

5.2.4. CAUSE OF ELECTRICAL HAZARDS

- Faulty or damage wiring or equipment.
- Loose connections.
- Use of poor quality fittings.
- Lack of earthing/bonding and grounding.
- Use of overrated fuse or jumper.
- Working on live equipment.
- Overloading of power sockets and equipment.
- Poor housekeeping.
- Handling of electrical equipment with an incompetent person and lack of training awareness.
- Lack of safe working procedure and communication.
- Failure to use appropriate PPE and use.
- Lack of warning signs.

5.2.5. CONTROL MEASURES FOR ELECTRICAL HAZARDS

1. Carry our risk assessment:

You must ensure an assessment has been made of any electrical hazards, which covers:

- Who could be harmed by them
- How the level of risk has been established?
- The precautions taken to control that risk

The risk assessment should take into consideration the type of electrical equipment used, the way in which it is used and the environment that it is used in.

2. Use Fuses, circuit-breakers appropriately:

In wet surroundings, unsuitable equipment can become live and make its surroundings live too. Fuses, circuit-breakers and other devices must be correctly rated for the circuit they protect. Isolators and fuse-box cases should be kept closed and, if possible, locked.

3. Use robust electrical accessories:

Cables, plugs, sockets and fittings must be robust enough and adequately protected for the working environment.

4. **Ensure machinery has emergency stop key:**

Ensure that machinery has an accessible switch or isolator to cut off the power quickly in an emergency.

5. **Adequate maintenance:**

So far as is reasonably practicable, you must make sure that electrical equipment and installations are maintained to prevent danger.

6. **Timely inspection:**

Users of electrical equipment, including portable appliances, should carry out visual checks. Remove the equipment from use immediately and check it, repair it or replace it if:

- The plug or connector is damaged
- The cable has been repaired with tape, is not secure, or internal wires are visible etc.
- Burn marks or stains are present (suggesting overheating)

Have more frequent checks for items more likely to become damaged (eg portable electrical tools and equipment that is regularly moved, or used frequently or in arduous environments). Less frequent checks are needed for equipment less likely to become damaged (eg desktop computers etc.).

Visual checks are not usually necessary for small, battery-powered items, or for equipment that works from a mains-powered adaptor (laptops or cordless phones etc.). However, the mains-powered adaptor for such equipment should be visually checked.

7. Repairs should be done by competent personnel: Repairs should only be carried out by a competent person (someone who has the necessary skills, knowledge and experience to carry out the work safely).

5.2.6. OTHER ELECTRICAL SAFETY CONTROL MEASURES:

1. Don’t work on live equipment, isolation and multi lock system shall be followed.
2. Don’t hang cloth or any material on electrical equipment.
3. Handling of electrical equipment or switchgear shall not be done with wet hand or body.
4. Electrical switches or access to them shall not block by any material.
5. Use appropriate PPE while working on electrical equipment.
6. Use safe work practices every time electrical equipment is used.

7. Know the location and how to operate shut-off switches and/or circuit breaker panels. Use these devices to shut off equipment in the event of a fire or electrocution.
8. Limit the use of extension cords. Use only for temporary operations and then only for short periods of time. In all other cases, request installation of a new electrical outlet.
9. Multi-plug adapters must have circuit breakers or fuses.
10. Place exposed electrical conductors (such as those sometimes used with electrophoresis devices) behind shields.
11. Minimize the potential for water or chemical spills on or near electrical equipment.
12. All electrical cords should have sufficient insulation to prevent direct contact with wires. In a laboratory, it is particularly important to check all cords before each use, since corrosive chemicals or solvents may erode the insulation.
13. Damaged cords should be repaired or taken out of service immediately, especially in wet environments such as cold rooms and near water baths.

14. Live parts of electric equipment operating at 50 Volts or more (i.e., electrophoresis devices) must be guarded against accidental contact. Plexiglas shields may be used to protect against exposed live parts.
15. Only equipment with two-prong plugs should be used in the laboratory. The two prong provides a path to ground for internal electrical short circuits, thereby protecting the user from a potential electrical shock.
16. Ensure that workers know how to use the electrical equipment safely
17. Make sure enough sockets are available. Check that socket outlets are not overloaded by using unfused adaptors as this can cause fires
18. Ensure there are no trailing cables that can cause people to trip or fall
19. Switch off and unplug appliances before cleaning or adjusting them
20. Ensure everyone looks for electrical wires, cables or equipment near where they are going to work and check for **signs warning of dangers from electricity,** or any other hazard. Checks should be made around the job, and remember that electrical cables may be within walls, floors and ceilings (especially when drilling into these locations) etc.
21. Make sure anyone working with electricity has sufficient skills, knowledge and experience to do so. Incorrectly wiring a plug can be dangerous and lead to fatal accidents or fires

22. Stop using equipment immediately if it appears to be faulty – have it checked by a competent person

23. Ensure any electrical equipment brought to work by employees, or any hired or borrowed, is suitable for use before using it and remains suitable by being maintained as necessary

24. Consider using a residual current device (RCD)between the electrical supply and the equipment, especially when working outdoors, or within a wet or confined place.

25. Be aware of the dangers of working near or underneath overhead power lines. Electricity can flash over from them, even though machinery or equipment may not touch them.

26. Don't work under them when equipment (eg ladders, a crane jib, a tipper-lorry body or a scaffold pole) could come within a minimum of six metres of a power line without getting advice. Speak to the line owner, eg the electricity company, railway company or tram operator, before any work begins.

27. Always assume cables will be present when digging in the street, pavement and/or near buildings.

5.3. GENERAL HAZARDS FOR ENGINEERING AND FABRICATIONS

5.3.1. ENGINEERING AND FABRICATIONS (METAL FABRICATIONS)

Fabrication engineering is the process of manufacturing metal-based structures from raw materials using techniques such as cutting, forming, shearing and welding. People working in this field manage and improve the manufacturing process of turning raw materials into finished products.

The metal fabrication industry as you probably already know consists of a lot of cutting, grinding, welding, metal bending. Operating very dangerous machinery that might not seem as dangerous on the first look. But you probably know someone or “a guy that knows a guy” that had a near-fatal accident using a grinder with a large cutting wheel or you have probably meet a welder with bad eyesight in its fifth year in the trade. And if you didn’t, the internet is full of gruesome accidents that fall upon workers or contractors in the workplace. You would not believe how quickly things can go from bad to worse in a matter of seconds.

Now, not looking at this from the health administration, company, or insurance perspective it should be common sense to take all of these (or at least some) safety measures and safety protocols seriously in your metal fabrication shop. This article will try to inform you on potential hazards as well as major injuries that can occur then help you to prevent those injuries by convincing you to sacrifice a little productivity or speed for safety.

5.3.2. RISK MATRIX FOR METAL FABRICATION

Risk is analysed by combination of Severity and Probability (product of severity and probability is calculated risk). Risk is evaluated based on following consequences and likelihood.

Hazard	Description	Likeli hood	Conse quence	Risk Level	Current Control Measure	Further Risk Mitigation Measure	Likeli hood	Conse quence	Residu al risk Level
Fire and electrical shock	During the welding process, there is some flammable substance (paper, thinner) or welding on a wet floor.	B	4	High	No flammable substance, no paper near welding area and equipped with fire extinguisher. Welding warning sign, PPE and clean welding environment is a must. All welders have been attended the welder training from approved agent.	Provide in-house fire safety, welding safety and general safety training for all welders.	D	2	L
Skin burn injury	Welder or worker is affected.	C	3	Mode rate	Welder must be equipped with PPE. All welders have attended the welder training from approved agent.	Provide in-house fire safety, welding safety and general safety training for all welders.	D	3	M
Inhalation	During the welding process, worker inhales the welding fume.	D	2	Low	Open area or with electric fan. All welders have attended the welding training from approved agent.	Provide in-house fire safety, welding safety and general safety training for all welders.	E	2	L
Radiation	During the welding process, the worker's skin may be expose partially to the extremely bright flash.	D	2	Low	All welders must wear long sleeves or arm cover or coverall clothing to prevent skin from directly being exposed to the bright flash.	Provide in-house fire safety, welding safety and general safety training for all welders.	E	2	L
Arc-eye or eye hurt by slat	During welding process, bright flash light will appear. And after each welding, the welder needs to remove the slag. If the welder does not have PPE, then the eye will be damaged by the bright flash or slag.	E	1	Low	Welder has been equipped with PPE. All welders have attended the welder training from approved agent.	Provide in-house fire safety, welding safety and general safety training for all welders.	E	1	L

Table 4: risk matrix for metal fabrication

5.3.3. HEALTH AND SAFETY CONTROL MEASURES IN FABRICATIONS

1. Design and Planning:
    - Providing ergonomic workspaces with adjustable desks and chairs
    - Encouraging breaks and stretching to reduce repetitive strain injury
2. Reading and interpreting blueprints or engineering drawings:
    - Providing adequate lighting to reduce eye strain
    - Encouraging regular breaks to reduce eye fatigue
3. Cutting:
    - Using proper ventilation to reduce exposure to fumes and dust
    - Installing fire suppression systems to reduce fire and explosion hazards
    - Providing personal protective equipment (PPE) such as goggles and protective clothing to reduce exposure to sharp metal fragments and debris
4. Shaping:
    - Regularly maintaining and inspecting shaping equipment to reduce the risk of equipment malfunction
    - Providing proper training and supervision to reduce the risk of improper use of shaping tools
    - Encouraging breaks and stretching to reduce repetitive strain injury
5. Preparing:
    - Providing adequate ventilation to reduce exposure to toxic chemicals

- Providing PPE such as gloves and protective clothing to reduce exposure to sharp edges and fumes
- Installing guarding around equipment to reduce the risk of physical injury.

6. Welding:
   - Providing proper ventilation to reduce exposure to welding fumes and fumes from coatings
   - Providing PPE such as face shields, protective clothing, and welding gloves to reduce exposure to intense light, heat, and sparks
   - Installing fire suppression systems to reduce fire and explosion hazards Properly maintaining and inspecting welding equipment to reduce the risk of equipment malfunction and electrocution
7. Grinding and Finishing:
   - Using proper ventilation to reduce exposure to dust and debris generated during grinding and finishing
   - Providing PPE such as face masks, goggles, and protective clothing to reduce exposure to dust and debris
   - Regularly maintaining and inspecting grinding tools to reduce the risk of equipment malfunction and improper use

8. Assembly:
    - Providing proper training and supervision to reduce the risk of equipment malfunction and improper handling of heavy metal parts
    - Providing manual handling aids, such as dollies or cranes, to reduce the risk of physical injury
    - Encouraging breaks and stretching to reduce repetitive strain injury
9. Inspection and Testing:
    - None
10. Shipping and Delivery:
    - Providing proper training and supervision to reduce the risk of physical injury during manual handling of heavy metal parts
    - Providing manual handling aids, such as pallet jacks or forklifts, to reduce the risk of physical injury
    - Encouraging breaks and stretching to reduce repetitive strain injury.

5.3.4. HAZARD AND PREVENTIVE MEASURES SAFETY PERFORMANCE MEASUREMENTS:

– Safety Inspection: Regular safety inspection to be carried out at site to measure the implementation status of safety aspects.

– Upward Communication from workmen: All workmen should be motivated for communication of hazards at workplace, which may reduce the likelihood of accidents at workplace.

– SCOPE Award: Safety Conscious Person Award shall be introduced to motivate the workmen towards good EHS Practice at workplace.

– Safety Audit: Audit shall be conducted once in six months to evaluate the implementation of safety system of the organization and for changes with continual improvement.

NEAR MISS INCIDENT INVESTIGATION AND CAPA:

– All the incidents shall be investigated and the purpose is not to find the fault, it is for learning and to implement Corrective Action and Preventive action.

– Learning outcome shall be communicated to all to prevent further incidents.

TRANSPORTATION AND MANUAL HANDLING:

– All equipments entering site shall undergo equipment fitness certificate from site engineer along with safety person before deploying

– Separate pedestrian walkway shall be provided to prevent any incident

– Manual handling persons should be trained with way of handling material and load of weight a person shall lift. Only trained person shall perform manual handling of materials.

– Use of material handling devices like pallet, fork lift, cranes shall minimize the manual handling hazards.

ELECTRICITY, NOISE, AND VIBRATION:

– All tripping device shall be checked twice in a month frequency

– Earth resistance value shall be checked once in a month and the date shall be displayed with next checking date.

– Noise level at industrial areas shall be frequently checked using sound level meter.

– Job rotation and minimized working time shall be maintained as administrative control while working near noisy area.

– Introduction of acoustic enclosures at noisy area shall minimize the exposure of other persons.

– Vibration pads may be used for all vibrating tools like drilling machine, hammer, chipping machine.

CHEMICAL AND PSYCHOLOGICAL FACTORS:

– All welding activities in fabrication industry is static, hence Local exhaust ventilation shall be placed inside the premises to minimize inhalation or ingestion of fumes and gases.

– Motivational, team work, appropriate working hours, recreation at evening time these all can reduce the psychological factors at workplace

6.RISK MATRIX

Risk is analyzed by combination of Severity and Probability (product of severity and probability is calculated risk). Risk is evaluated based on following consequences and likelihood

6.1. Protecting the Guests and Public Interface

Sl. No	Activity/Element	Hazard	Consequence	Risk Rating				Existing /recommended Control Measures	Residual Risk			
				Severity	likelihood	Risk rating	cat		Severity	likelihood	Risk rtg	cat
1	Site Entrance	Struck by Vehicle	Personnel Injury Asset Damage Lost Time Traffic Congestion	5	2	10	H	• Most suitable entrance/exit location determined from Traffic Management plan / Site layout plan •Adequate warning signage erected • Good visibility allowing vehicles entering / exiting site • Entrance well maintained, kept clean, level and trip free	5	1	5	M
2	Site Visitors	Falls (People) Falls (things) Struck by vehicles	Personnel Injury Lost Time Asset Damage	5	2	10	H	• Display site layout and rules near entrance for guidance •Providing adequate directional signage showing route to car park and office establishment • All visitors to wear minimum PPE inclusive of hardhat, safety boots	5	1	5	M

Table 5: Risk Matrix: Protecting the Public Interface

6.2. Activity: Forklift Operation

s.no	hazard	consequence	risk rating				existing/recommended control measures	residual risk			
			severity	likelihood	rating	cat		severity	likelihood	rating	cat
1	Pedestrian/ vehicle collision	Major Injury	4	4	16	E	Only competent, authorized persons to operate the forklift Daily visual inspection and maintenance of vehicle checklist Appropriate training, supervision, information and instruction should be given to all staff	4	1	4	M
2	Falling loads, dropping onto pedestrians in work area	Falling injury	3	4	12	H	Only competent, authorized persons to operate the forklift Pedestrians to be segregated from the operating areas of forklift Banks man /persons on foot to be wearing high vis clothing and remain clear of machine and load at all the time. Appropriate training supervision, information and instructions should be given	3	1	3	L
3	Adverse weather	Major Injury	5	4	20	E	Restricted use in adverse weather conditions – management control	5	1	5	M

s.no	hazard	consequence	risk rating				existing/recommended control measures	residual risk			
			severity	likelihood	rating	cat		severity	likelihood	rating	cat
	conditions causing poor visibility, impact injury						Suitable warning devices to be installed on forklift e.g. amber flashing light, reversing beepers etc.				
4	sliding or skidding on wet/contaminated surface	Falling injury	3	4	12	H	Roll-over protective structure to be fitted at all times Seat belts to be worn at all times Work area to be maintained in suitable condition for safe operation of Forklift Appropriate training supervision, information and instructions should be given	4	1	4	M
5	Electric shock from touching live battery causing severe burns to the hands	electrocution-major injury	4	4	16	E	Operators to carry out daily check list on forklift- faults to be reported immediately Monthly inspections to be carried out by a competent person Operator to be aware of any overhead obstruction eg. power lines, top of doors, gantries etc.	4	1	4	M

s.no	hazard	consequence	risk rating				existing/recommended control measures	residual risk			
			severity	likelihood	rating	cat		severity	likelihood	rating	cat
6	Overloading of forklift causing load failure, falling objects	falling injury	4	3	12	H	Loads to be carried in accordance with packer's instructions and training	4	1	4	M
							No person to be allowed to pass under the load at any time				
							Unstable loads not to be carried				
							Operators to carry out daily checks on forklift – faults to be reported immediately				
							Monthly inspections to be carried out by a competent person				
7	Unsecured loads falling from height-causing injury	crushing injury	5	3	15	E	Load to be carried in accordance with packers	5	1	5	M
							No person to be allowed to pass under load at any time				
							Unstable loads not to be carried				
							Operations to carry of daily checks on forklift-faults to be report immediately				

Table 6: Risk Matrix: Forklift Operations

6.3. Activity: Operating of Crane

Activity/ Element	Hazard	Risk Rating				Existing /recommended Control Measures	Residual Risk			
		Severity	likelihood	Risk rating	cat		Severity	likelihood	Risk rtg	cat
Equipment is not being used in accordance with the manufacturer's recommendations. Equipment fail Lack of maintenance, negligence in inspection, or unauthorized repairs.	Fatal Serious Injuries	3	4	12	H	• Inspect equipment before use. • Ensure that it is in good working order and rated for the particular hoist or crane. • Ensure that the lifting environment is free of obstructions. • Keep people out of the area. • Lift loads away from people. • Use a crane or hoist only to lift objects - never people. **When moving heavy objects:** • Move loads slowly at first to make sure that everything is stable and operating properly. • Lift loads vertically, to avoid stressing equipment and causing uncontrolled	3	1	3	L

Equipment has been used to lift items that were heavier than the manufacturer's weight ratings. (as per the load chart) Equipment is produced without the benefit of safety ratings or standards. Personnel are not trained or certified to operate equipment						load swings. • Balance loads properly. • Be aware of the items being lifted. Never leave a suspended load unattended. • Know the weights of the items to be lifted. Supervisors need to train operators to accurately estimate weights. Improperly estimating the weight of working loads (the weight of the item being lifted) is a violation of regulations. • Ensure that load slings and other attachments are the proper size, are rated for the load, and are properly attached to the saddle of the hook. Do not exceed the specified ratings when operating cranes, hoists, and attachments.				

Slips, trips, and falls when getting on or off the plant.	Fatal Serious Injuries	3	4	12	H	• Take the following precautions when you get in and off the crane: • Check that all guards and covers on the machine are fastened correctly. Tighten any loose bolts or repair any damage. • Wipe off any mud, oil or snow on the steps before you start work. • Do not jump onto or off the machine • Do not hold onto the seat, control box, control levers or anything other than the hand grips provided when you get on or off the machine. • Do not get on and off the machine while it.	3	1	3	L
Dropping of load	Fatal Serious Injuries	3	4	12	H	Check safety devices. Pick & Carry cranes are fitted with various safety devices which should be checked before starting work.	3	1	3	L

Crane overload or tip over in adverse working configuration.	Fatal Serious Injuries	3	4	12	H	Check the operation of the crane computer / Load Moment Indicator (“LMI”) according to the pre-operational check procedure described in the Operators Manual (this manual should be kept in the crane cabin).	3	1	3	L
Falling objects (during erecting and dismantling activities)	damage property and present a risk of injury to workers and members of the public.	3	4	12	H	• Erect and maintain effective barricades around the mobile crane. • Only allow persons who are directly involved Pick & Carry crane operations inside the area. • Schedule the erecting and dismantling of the crane to occur when the movement of other persons and mobile plant at the workplace is at a minimum • Monitor the weather conditions before and during crane operation. Stop the operation of immediately, if there is a chance of heavy wind or cyclone. • The Crane shall be located in very stable.	3	1	3	L

Table 7: Activity: Operating of Crane

6.4. Activity: use of scaffoldings

Sl. No	Activity/Element	Hazard	Consequence	Risk Rating				Existing /recommended Control Measures	Residual Risk			
				severity	likelihood	Risk rating	cat		Severity	likelihood	Risk rating	cat
1	Location of scaffolding	Toppling of scaffoldings due to place on uneven and slope surface	Fatal Major injury	5	4	20	E	• The scaffolding must be placed in stable and even surface • The area surrounding the tower should be cleared of people and don't place the towers on near door opening and emergency exit • The work area should be properly secured (barriers, cones, fencing, signs)	5	1	5	M
2		Toppling of scaffolding due to place near floor edge and use of tower on high wind	Fatal Major injury	5	4	20	E	• Do not use the tower when there is a high wind • Don not use the tower near the floor edges, if required standard distance should be maintained between floor edge and scaffolding	**5**	**1**	**5**	**M**

3	condition of scaffolding	Scaffold can collapse due to improper erection and use of damaged parts	Fatal Amputation Fractures and severe injuries	5	4	20	E	• The towers must be erected, inspected and competent person prior to start the activity • Castor when locks to be functional and engaged prior to lock the wheel • The scaffolding should have complete platform and secured/fastened properly with clamps or ropes and the planks are without knots, cracks, splits. • The access ladder should be provided for required height f reach the platform • Ensure the scaffolding should have complete bracing pieces' top rail, mid rail and toe boards. • Inspect scaffolding on daily basis by concern in charge and weekly basis by competent person	**5**	**1**	**5**	**M**
4.	working on scaffolding	Man on materials falling due to	Fatal fracture and severe	4	4	16	E	• Only competent and trained workers will be authorized to use the scaffolding • Safe access to be provided	4	1	4	M

		overloading and unsafe work on scaffolding	injuries					• The work platform should be fully boarded and gat between plants should not exceed 1” • The platform capacity should be checked and safe working load (SWL) f platform should be maintained. • No modification should be done on the platform to accommodate more man or materials • No loose materials should be kept on the platform loose materials should be kept on the platform • The height of the scaffolding been				

								restricted to 3.5 times the minimum base width while working inside the building and 3 times while working outside the building. • Outriggers to be used wherever height ratio is more than mentioned above ration limit • Hand tools to be tied by using rope, if required • Never sit and stand the guardrails of the scaffolding				
5.		Man on materials falling due to overhead services and unsafe scaffolding.	Fatal fractures and severe injuries	5	4	20	E	• Ensure that the tower is empty (man and material) while tower is moving from one location to another. • Move the tower manually by applying face on the base. Do not use machinery to push pull the tower. • Check all caters and stabilizers are on form contact with the ground.	5	1	5	M

6.	Use of power tools in scaffolding	Electric shock, fire, fumes and dust due to the use of improper power tools	Fatal severe injuries	5	4	20	E	• Only tested and tagged machine should be used. Competent, trained workers to be engaged. Correct rating of industrial power socket should be used for connections • Cables to be well insulated without any damages • Cable routing area to be dried and not immersed in water • The area to be cleared of flammable materials and other ignition sources • Close supervision and necessary fire extinguisher to be placed.	5	1	5	M

Table 8: Risk Matrix: Working on scaffoldings

6.4. Activity: House Keeping

Sl. No	Hazard	Consequence	Risk Rating				Existing /recommended Control Measures	Residual Risk			
			Severity	likelihood	Risk rating	cat		Severity	likelihood	Risk rating	cat
1	Spillages of liquids, oils etc. Incorrect storage of hoses, materials etc.	Slips, trips and falls	5	4	20	E	• High levels of housekeeping must be maintained. Supervisors shall monitor the standards and implement clean ups where necessary. • Rubbish shall be disposed of in the correct skip	5	1	5	M
2	Build-up of waste, combustible materials and debris	Fires and or explosions can occur when waste, debris are ignited by sparks or hot surfaces. Escape routes and fire equipment can become blocked	5	3	15	E	• All waste shall be removed from site immediately • Machinery shall be cleaned on a regular basis to remove any dust or debris which could be ignited by sparks or hot surfaces	5	1	5	M
3	Foreign bodies in eyes	Can occur when particles of dust, debris or grit etc. are blown around the workplace or when such particle is dislodged from work area	3	3	9	H	• Personnel must wear appropriate eye protection and minimise the amount of dust created	3	1	3	L

Table-9: risk matrix-housekeeping

6.6. Activity: Working at heights

Sl. No	Hazard	Consequence	Risk Rating				Existing /recommended Control Measures	Residual Risk			
			Seve	likelih	Risk ratin	cat		Severity	likelihood	Risk ratin	cat
1	Risk of falling	Fatal Serious injury to personnel	5	4	20	E	• Work at height to be carried out only when scaffold cannot reasonably be provided. Step ladders are not to be used on walkways, ladders to be secured or footed. • Safety harnesses fall arrestor and climbers helmet, to be worn. Step ladders not to be used outside modules, on gratings, etc. • Work at height to be reviewed by competent personnel on site when wind exceeds 25 Kt., if there is danger of lightning strike, etc. • Process equipment not to be used for hand/foot holds or for supporting lifting gear or scaffolding.	5	1	5	M
2	Dropped Objects	Serious injury to personnel, plant and/or	5	3	15	E	• Utilization of competent personnel • Periodical training and supervision • Avoid the risk of dropped objects by securing tools and equipment	5	1	5	M

Table 10: Risk Matrix: Working On Heights

6.7. Activity: use of generators

	Hazard	Consequenc	Risk Rating	Existing/Recommended Control Measures	Residual Risk

		e	Severity	Likelihood	Rating	Category		Severity	Likelihood	Rating	Category
1	Electrical shock - fire and explosion	fatal	5	2	10	H	Never attach a generator directly to the electrical system of a structure unless a qualified electrician has installed a transfer switch for the generator. If the structure's electrical system is not isolated, it may energize the utility's wiring system for great distances and create a risk of electrocution for utility workers and others in the area	5	1	5	M
		person injury					Always plug electrical equipment directly into the generator using the manufacturer's supplied cords or grounded (3-pronged) extension cords that are rated for the total anticipated load				
		damage to properties					Do not overload a generator; it can overheat and create a fire hazard				
							Ground and bond generators according to the manufacturer's recommendations; ensure that any manufacturer-required connections are secure before using the generator				
							Keep the generator dry; protect with a canopy if needed; do not use it in wet or rainy conditions				
							Carbon monoxide (CO) is a poisonous, colorless, and odorless gas that is produced by the incomplete burning of the generator's fuel. CO is harmful when breathed because it displaces oxygen in the blood and deprives the heart, brain, and other vital organs of oxygen				
							Never use a generator indoors				

Table 11: Risk Matrix: Use of Generator

6.8. Activity: Excavation

Sl. No	Hazard	Consequence	Risk Rating				Existing /recommended Control Measures	Residual Risk			
			Severity	likelihood	Risk rating	cat		Severity	likelihood	Risk rating	cat
1	Collapsing of Excavated Area	Injury to body and death	4	5	20	E	Shielding or benching should be installed to prevent the collapse of trench cavity.	1	5	5	M
2	Exposure to vibrating equipments	Chances of permanent disabilities	3	5	15	E	Proper PPE's to be provided to the workers	1	5	5	M
3	Fall of equipments into the trenching site	Can lead to damage to property and life	3	4	12	H	Barricading should be provided at the trenching site.	1	4	4	M
4	Presence of poisonous gases/ low level of oxygen	Can cause respiratory issues and even to death.	5	5	25	E	Trenches and excavation should be inspected before entering	1	5	5	M

Table 12: Risk Matrix: Excavation

F.No.WL-6/16/2024-WL
Government of India
Ministry of Environment, Forests and Climate Change
(Wildlife Division)

2nd Floor, Vayu Wing,
Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi 110003.

Date: 7th Feb, 2024

To,

All Members
Standing Committee of NBWL

Sub: Minutes of 77th Meeting of the Standing Committee of National Board for Wild Life-reg.

Sir/Madam,

Kindly find enclosed copy of the Minutes of 77th Meeting of the Standing Committee of National Board for Wild Life held on 30th January, 2024 under the Chairmanship of Hon'ble Minister of Environment, Forest and Climate Change, Government of India.

Yours faithfully,

(Dr. Sudheer Chintalapati)
Scientist 'E'
Email: adwl-mefcc@gov.in

Encl: As above

Distribution:

1. Secretary, MoEF & CC
2. DGF&SS, MoEF&CC
3. ADGF (WL), MOEF&CC
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6. Director/IGF, PE Division, MoEF&CC
7. Director, WII, Dehradun
8. Director, GEER Foundation, Gandhinagar
9. Dr. R. Sukumar, Member, NBWL
10. Dr. H.S. Singh, Member, NBWL
11. Secretary, Environment, Forest, Science and Technology Department, Govt. of Andhra Pradesh.

77.2.13 Proposal for use of 215.834 ha non-forest land for Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu 5.00 Kms away from the Pulicat Bird Sanctuary in its default Eco-sensitive Zone.

WL/TN/INFRA/442689/2023

The Standing Committee was informed that a proposal for use of 215.834 ha non-forest land for Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu 5.00 Kms away from the Pulicat Bird Sanctuary in its default Eco-sensitive Zone.

The proposal has been recommended by Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The proposal was discussed in the 75th meeting of the Standing Committee wherein the Standing Committee decided that a site inspection committee constituted by the Ministry shall carry out inspection and submit report and therefore, deferred the matter for the next meeting. Accordingly, the Ministry vide OM 6-170/2023 dated 19.12.2023 constituted a site inspection committee comprising of Dr. R. Sukumar and representative of the Regional Office, Chennai.

The committee carried out inspection on 08.01.2024 in the presence of officials from the User Agency.

The Chief Wild Life Warden informed that there is no discharge from the Industrial park.

Dr. H. S. Singh suggested that if the rain water from the project area is not coming towards the lake, the project may be recommended.

Prof. Sukumar Raman stated that he went for the site inspection. The project is proposed to be located in the default ESZ of the Pulicat Lake Bird Sanctuary. The Pulicat Lake is a critical wetland with large number of birds including Greater and Smaller Flamingos visiting the lake. The lake falls on the border of Andhra Pradesh and Tamil Nadu. In Tamil Nadu, the critical part is the mouth of the lake which opens in the sea near the Tamil Nadu coast. The

sanctuary includes 12 revenue villages. In order to protect the lake, the State Government with an aim to provide buffer to the lake have declared these areas as the sanctuary. There is definitely a need for rationalisation of the boundaries of the sanctuary. The site inspection committee was satisfied that project would be following all the environmental norms and get environment clearance. The project proponent is aiming at net zero carbon emission. All the water will be recycled and there will not be any discharge from the project area. Hon'ble NGT, SZ, Chennai in matter before it has observed that in the zone of around l0 km from the sanctuary, there are more than 100 industries. NGT, SZ, Chennai has directed that cumulative impact of industries through experts from various fields Iike wildlife, environmental engineering, hydrology, sociology etc. shall be carried and suitable mitigation measures shall be proposed by a group of experts or an institution.

He further emphasised that there is a need of rationalisation of boundaries of the sanctuary and need for declaration of appropriate ESZ around it. There is no forest area in the project area. Some forest patches are away from the project location which is totally a revenue land.

The Chief Wild Life Warden informed that the process of rationalisation has been initiated and the District Collector is following the process as per the Act.

Dr. H. S. Singh highlighted that the boundaries of the sanctuary have not yet been marked on the ground even several years after its notification and this might complicate the situation. The proposal may be recommended with the condition that the state government shall demarcate the boundaries of the sanctuary on the ground.

Inspector General of Forests, Forest Conservation Division mentioned that in both the cases of rationalisation or notification of the ESZ around the sanctuary, the project area would not require consideration by the Standing Committee in future.

The Chief Wild Life Warden informed that the once rationalised the boundaries of the sanctuary would come closer to the lake.

The Member Secretary, NBWL highlighted that the process of rationalisation would take lot of time. The project is being considered by the Standing Committee due to its location in the default 10 km ESZ. The States are not taking effective

steps to notify ESZ around many sanctuaries and National Parks. Many project proposals have to be considered by the Standing Committee due to their locations within default 10 km ESZ around the sanctuaries or National Parks.

Decision Taken: After discussions, the Standing Committee directed that the State Government shall take effective steps for rationalization of boundaries of the Pulicat Bird Sanctuary, followed by its demarcation on the ground and notification of the ESZ. The Standing Committee decided to recommend the proposal subject to the following conditions:

1. The project proponent shall obtain all other statutory clearance and also submit and implement Impact Mitigation Plan of Marine and Wildlife Conservation of Pulicat Bird Sanctuary.
2. The project proponent shall submit an undertaking stating that no disturbance will be caused to the wildlife during project implementation.
3. Any other conditions stipulated by the Additional Principal Chief Conservator of Forests and Director, Arignar Anna Zoological Park / Wild Life Warden, Chennai shall be followed.
4. The Project Proponent shall ensure that there is no discharge from the project area towards into the sanctuary.
5. An annual compliance certificate on the stipulated conditions shall be submitted by the User Agency to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

Ref No. WL5/26656/2023

O/o. Principal Chief Conservator Forests (HoFF),
State Forest Headquarters,
Guindy-Velachery Main Road,
Chennai - 600 032 Dated: 12-02-2024

Sub: Forests – Wildlife – Proposal for development of Industrial housing facility at Soorapoondi and Vaniamalle Villages of Gummidipondi Taluk of Thiruvallur District over an extent of 215.834 Ha by SIPCOT – Regarding.

Ref: Government of India, Ministry of Environment Forests and Climate Change, New Delhi letter F. No. WL-6/16/2024-WL dated 07-02-2024.

* * * *

Attention of the Wildlife Warden, Chennai is invited to the references cited. It is informed that the Standing Committee of National Board for Wildlife has recommended the proposal vide Agenda No. 77.2.13. Based on the above, No Objection is hereby granted to proposal for development of Industrial housing facility at Soorapoondi and Vaniamalle Villages of Gummidipondi Taluk of Thiruvallur District over an extent of 215.834 Ha by SIPCOT subject to following conditions:-

1) The project proponent shall obtain all other statutory clearance and also submit Impact Mitigation Plan of Marine and Wildlife Conservation of Pulicat Birds Sanctuary if required.
2) The project proponent shall submit an undertaking stating that no disturbance will be caused to the wildlife during project implementation.
3) Any other conditions stipulated by the Additional Principal Chief Conservator of Forests and Director, Arignar Anna Zoological Park, Wildlife Warden, Chennai shall be followed.

The Wildlife Warden, Chennai is requested to send the annual compliance certificate on the stipulated conditions to be obtained from the User Agency to this office for onward submission to the Government of India. He is also requested to send the Impact Mitigation Marine and Wildlife Conservation within the project cost to this office approval.

Encl: As stated above

Sd/- Srinivas R. Reddy
Principal Chief Conservator of Forests
and Chief Wildlife Warden

To
The Wildlife Warden,
Chennai.

Copy to the Additional Principal Chief Conservator of Forests and Director, Arignar Anna Zoological Park, Vandalur, Chennai – 48 for information and necessary action.

Copy to SIPCOT, 19-A, Rukmani Lakshmipathy Road, Egmore, Chennai.

/True Copy / By order /

12/2/24

for Senior Draughting Officer

12/2/24

Agenda No: 450-18

(File No: 9263/2023)

Proposed Development of Industrial Park with Industrial Housing Facility over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt & Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 of Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu by M/s. State Industries Promotion Corporation of Tamil Nadu Limited - For Environmental Clearance. (SIA/TN/INFRA2/463400/2024 dated: 20.02.2024).

The proposal was placed for appraisal in the 450th meeting of SEAC held on 08.03.2024. The details of the project furnished by the proponent are given in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, M/s. State Industries Promotion Corporation of Tamil Nadu Limited has applied for seeking Environmental Clearance for the Proposed Development of Industrial Park with Industrial Housing Facility over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt & Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3,

207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 of Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu.

2. The project/activity is covered under Category "B1" of Item 8(b) "Townships and Area Development Projects" of the Schedule to the EIA Notification, 2006.
3. As per the EIA Notification 2006 and its amendments the project is termed under Schedule 8 (b), Category B, since the area of Industrial Park is< 500 hectare and not housing any industry of Category A or B. As reported, the Industrial Park is proposed to accommodate Electronics/Electrical, Engineering & Fabrication Industries which do not fall under the purview of EIA Notification 2006 and its subsequent amendments.
4. ToR issued vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022 Dated:14.07.2022.
5. ToR amendment issued vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022/Amendment/2023 Dated:06.11.2023.
6. EIA Report submitted on 21.02.2024.

Based on the documents submitted and presentation made by the project proponent along with the consultant, the following facts have emerged: -

1. **The Environmental Clearance is sought for "Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu" over an extent of 215.834 Ha (533.11 Acres) by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT).**
2. M/s. Hubert Enviro Care Systems Pvt ltd is the EIA Consultant for the project.
3. Total plot area of the project is **533.11 Acres (215.834 Ha)** in which total developable area is **533.11 acres (215.834 Ha)** respectively.
4. Maximum number of floors in the project will be **G+4** for Industrial Housing unit and maximum height of the building will be 18.2m.

5. The total developable area is 533.11 Acres (215.834 Ha) which includes industrial plots, industrial Housing, Other Common facilities, Greenbelt, SWM, Road, Storm Water Drain, OSR and such other infrastructure facilities.
6. Salient features of the project as submitted by the project proponent:

PROJECT SUMMARY			
S. No.	Description	Total Quantity	Unit
GENERAL			
1	Plot Area	533.11 Acres (215.834 Ha)	Acres (Ha)
2	Proposed Built Up Area of Industrial Housing unit	22041.18	SQMT
3	Total no of Saleable DU's/Villas	Not applicable Total developable area is 533.11 Acres (215.834 Ha) which includes industrial plots (79 plots), industrial housing, Other Common facilities, Greenbelt, SWM & E waste Management, Road, Storm Water Drain, OSR and such other infrastructure facilities.	No.
4	Max Height – (Height of tallest block)	18.2	M
5	No of Building Blocks (Residential + Community facilities)	4 tower(in Industrial Housing)	No.
6	Max No of Floors	G+4	No.
7	Expected Population	Construction phase - 100 Nos. Operation phase – 10,800 Nos (including 1920 Nos for	No.

		Industrial Housing during operation phase)	
8	Total Cost of Project	495.52	CR
9	Project Activity :	Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu" over an extent of 215.834 Ha (533.11 Acres) by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT)	
	AREAS		
10	Permissible Ground Coverage Area (xx%)	-	SQMT
11	Proposed Ground Coverage Area (xx%)	-	SQMT
12	Permissible FSI Area (xxx)	-	
13	Proposed FSI Area	-	
14	Other Non FSI Areas - including basement area etc.	-	
15	Proposed Total Built Up Area	-	SQMT
	WATER		
16	Total Water Requirement	4789	KLD
17	Fresh water requirement	874	KLD
18	Treated Water Requirement	2133	KLD
19	Wastewater Generation	1786 (Sewage-593 & Effluent-1193)	KLD
20	Proposed Capacity of STP & ETP	STP – 250 ETP-1300	KLD

21	Treated Water Available for Reuse	1782	KLD
22	Treated Water Recycled		KLD
23	Surplus treated water to be discharged in Municipal Sewer with Prior permission, if any	Nil	KLD
	RAINWATER HARVESTING		
24	Rainwater Harvesting - Recharge Pits	3522	No.
25	Rainwater Harvesting Sump Capacity	-	M^3
	PARKING		
25	Total Parking Required as / Building Bye Laws	Will be provided by Individual unit within the plot as per norms Statement mentioned in EIA: Truck parking is provided in Common amenities area by SIPCOT and Individual units will also have their own parking space within their Site.	ECS
26	Proposed Total Parking		ECS
27	Parking in Basements	Nil	
	GREEN AREA		
28	Proposed Green Area (Minimum 15.0% of plot area)	Overall GB 192.37 acres (77.883 Ha)	Acres (Ha)
	Total area	533.11 Acres	Acres (Ha)

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		(215.834 Ha) – Developable area	
	Existing trees on plot	6,117	Nos
	Number of trees to be planted	1,46,027	Nos
	Number of trees to be transplanted/cut	-	Nos
SOLID WASTE MANAGEMENT			
29	Total Solid Waste Generation	4.860	TPD
30	Organic waste	2.916	TPD
31	Mode of Treatment & Disposal	**For Industrial Park:** Individual industries will segregate the waste and organic waste will be composted and used as manure for green belt development. Inorganic waste will be sold to TNPCB authorized recyclers/local vendors by individual industries. **For Industrial Housing:** Organic wastes will be composted in Organic Waste Convertor and the compost will be used as manure for green belt development. Inorganic waste will be collected and sold to TNPCB authorized recyclers / local vendors.	TPD
32	Quantity of Sludge Generated from STP & Disposal	Will be done by Individual unit as per Norms For housing: 25 kg/day sludge from STP will be used as manure	KG/DAY
33	Quantity of E-Waste Generation & Disposal	E-waste such used PC, equipment, sensor, controller, etc) will be generated from the	KG/DAY

<table>
<tr><td></td><td></td><td colspan="3">proposed units in IP and Industrial Housing. The same will be disposed through TNPCB Authorized E-waste Vendor by Individual units as per E-waste Management Rules 2022.</td><td></td></tr>
<tr><td>34</td><td>Quantity of Hazardous waste Generation& Disposal</td><td colspan="3"><table><tr><th>Hazardous waste schedule & type</th><th>Quantity</th><th>Method of Disposal</th></tr><tr><td>5.1 - Used /Spent Oil</td><td>0.5KL/ A</td><td>Will be sent to TNPCB authorized recyclers/vendors</td></tr><tr><td>33.3-Empty barrels/ containers/ liners contaminated with hazardous chemicals/wastes</td><td>5 nos/ Annum</td><td>Will be sent to TNPCB authorized recyclers</td></tr></table></td><td>LPD</td></tr>
<tr><td colspan="5">POWER / GREEN POWER</td></tr>
<tr><td>34</td><td>Total Power Requirement</td><td colspan="2">22</td><td>MVA</td></tr>
<tr><td>35</td><td>DG set backup</td><td colspan="2" rowspan="2">Individual industries will have their own power back up:
• 1x500 kVA DGs will act as power back up for Industrial Housing.</td><td>KVA</td></tr>
<tr><td>36</td><td>No of DG Sets</td><td>No.</td></tr>
</table>

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		• SIPCOT will not propose any power back up for other common facilities.	
37	Solar Panels – Roof Coverage	50% of total roof coverage 1) Solar panels will be proposed in the roof top of Project office. Solar power will be utilized for the IP internal road lighting. 2) Apart from this, individual industries will be advised to provide roof top solar panels & solar lighting to reduce power consumption.	%
38	Hot Water Requirement	-	-
	Of which met by Solar Panels	-	-

Population details:

POPULATION			
Residential	**DU'S**	**POP/DU**	**TOTAL POPULATION**
Total Saleable Du's			
Total	-	-	-
Non Residential			
CLUB house (Employees etc.)	Area		
~~Club~~/ Industrial Employees	10,800 Nos (including 1920 Nos for industrial Housing during operation phase)	-	10,800 Nos (including 1920 Nos for industrial Housing during operation phase)

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Commercial	-	-	-
Facility Management Staff	-	-	-
Total	10,800	-	10,800
Visitors	-	-	-
Residential	-	-	-
Club/Community Hall	-	-	-
Commercial	-	-	-
Total Visitors	-	-	-
Total Population	10,800	-	10,800
EMP Cost	Capital cost-34.59 Crores Recurring cost-67 lakhs		
CER Cost	Rs. 1.5 Crores. As accepted by the project proponent, amount shall be spent for the conservation measures towards Pulicat Bird Sanctuary in consultation with the State Wildlife Warden, Chennai.		

RECOMMENDATION OF THE COMMITTEE

The Committee discussed the matter and recommended a grant of environmental clearance for the project proposal as above and subject to the standard conditions as per the Annexure II of this minutes & normal conditions stipulated by MOEF &CC, in addition to the following specific conditions:

Additional Conditions:

1. The construction shall comply with Green Building norms and shall get minimum IGBC Gold rating.
2. The PP shall ensure that 33% of the total land area is maintained as green area.

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3. PP shall submit the commitment letter from the local body for supply of fresh water.
4. The project proponent shall continuously operate and maintain the Sewage treatment plant & Grey Water Treatment Plant to achieve the standards prescribed by the TNPCB/CPCB.
5. The proponent must protect 5 numbers of Ficus trees existing in the site by constructing stone wall fencing around each tree.
6. STP shall be installed on 10-year BOOT basis, so that the construction and maintenance are combined in one single responsibility.
7. The project proponent shall provide entry and exit points for the OSR area, play area as per the norms for the public usage and as committed. The PP shall construct a pond of appropriate size in the earmarked OSR land in consultation with the local body. The pond should be modelled like a temple tank with parapet walls, steps, etc. The pond is meant to play three hydraulic roles, namely (1) as a storage, which acted as insurance against low rainfall periods and also recharges groundwater in the surrounding area, (2) as a flood control measure, preventing soil erosion and wastage of runoff waters during the period of heavy rainfall, and (3) as a device which was crucial to the overall eco-system.
8. Project proponent is advised to explore the possibility and getting the cement in a closed container rather through the plastic bag to prevent dust emissions at the time of loading/unloading.
9. Project proponent should ensure that there will be no use of "Single use of Plastic" (SUP).
10. The proponent should provide the sufficient electric vehicle charging points as per the requirements at ground level and allocate the safe and suitable place in the premises for the same.
11. The project proponent should develop green belt in the township as per the plan submitted and also follow the guidelines of CPCB/Development authority for green belt as per the norms.

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12. Project proponent should invest the CSR amount as per the proposal and submit the compliance report regularly to the concerned authority/Directorate of environment.
13. Proponent should submit the certified compliance report of previous/present EC along with action taken report to the Regional office MoEF Lko/Director of Environment and other concerning authority regularly.
14. Proponent shall provide the dual pipeline network in the project for utilization of treated water of STP for different purposes and also provide the monitoring mechanism for the same. STP treated water not to be discharged outside the premises without the permission of the concerned authority.
15. The project proponent shall provide a measuring device for monitoring the various sources of water supply namely fresh water, treated waste water and harvested rain water.
16. The proponent should provide the MoU with STPs' owner/concerned department for getting the STPs treated water for construction use.

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सत्यमेव जयते

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority (SEIAA), TAMIL NADU)
***

Minutes of 707 & 708 SEIAA MEETING State Environment Impact Assessment Authority meeting held from 01/04/2024 to 02/04/2024

Date: 16/04/2024

MoM ID:	EC/MOM/SEIAA/934502/4/2024
Agenda ID:	EC/AGENDA/SEIAA/934502/4/2024
Meeting Venue:	SEIAA OFFICE
Meeting Mode:	Hybrid
Date & Time:	

01/04/2024	10:00 AM	06:00 PM
02/04/2024	10:00 AM	06:00 PM

1. Opening remarks

707&708 SEIAA Meeting held on 1-04-2024 and 02-04-2024 with Chairman SEIAA and Member SEIAA, Chairman welcomes for meeting

2. Confirmation of the minutes of previous meeting

706 SEIAA Minutes Confirmed

3. Details of proposals considered by the committee

Day 1 -01/04/2024

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

M. Koteeswaramuthu, Rough stone over an extent of 1.00.0Ha of Government Poromboke Land in S.F.Nos. 219/1A (Part-3) of Kadambur Village, Gangavalli Taluk, Salem District by **MUTHULINGAM KODEESWARAMUTHU** located at **SALEM,TAMIL NADU**

Proposal For		Fresh ToR	
Proposal No	**File No**	**Submission Date**	**Activity (Schedule Item)**

	39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc. 40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan. 41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gum midipoondi Taluk, Thiruvallur District, Tamil Nadu by **STATE INDUSTRIES PROMOTION CORPORATION OF TAMILNADU LIMITED** located at **THIRUVALLUR,TAMIL NADU**

Proposal For		Fresh EC	
Proposal No	**File No**	**Submission Date**	**Activity (Schedule Item)**
SIA/TN/INFRA2/463400/ 2024	9263	23/02/2024	Townships/ Area Development Projects / Rehabilitation Centres (8(b))

3.3.2. Deliberations by the committee in previous meetings

Date of SEAC 1 :08/03/2024

Deliberations of SEAC 1 :

The SEAC noted the following:

1. The project proponent, M/s. State Industries Promotion Corporation of Tamil Nadu Limited has applied for seeking Environmental Clearance for the Proposed Development of Industrial Park with Industrial Housing Facility over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt & Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 of Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu.
2. The project/activity is covered under Category “B1” of Item 8(b) “Townships and Area Development Projects” of the Schedule to the EIA Notification, 2006.
4. ToR issued vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022 Dated:14.07.2022.
5. ToR amendment issued vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022/Amendment/2023 Dated:06.11.2023.
6. EIA Report submitted on 21.02.2024.

Based on the documents submitted and presentation made by the project proponent along with the consultant, the following facts have emerged: -

1. **The Environmental Clearance is sought for “Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu” over an extent of 215.834 Ha (533.11 Acres) by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT).**
2. M/s. Hubert Enviro Care Systems Pvt ltd is the EIA Consultant for the project.
3. Total plot area of the project is **533.11 Acres (215.834 Ha)** in which total developable area is **533.11 acres (215.834 Ha)** respectively.
4. Maximum number of floors in the project will be **G+4** for Industrial Housing unit and maximum height of the building will be 18.2m.
5. The total developable area is **533.11 Acres** (**215.834 Ha**) which includes industrial plots, industrial Housing, Other Common facilities, Greenbelt, SWM, Road, Storm Water Drain, OSR and such other infrastructure facilities.

The Committee discussed the matter and recommended a grant of environmental clearance for the project.

3.3.3. Deliberations by the SEIAA in current meetings

The authority noted that the subject was appraised in the 450th meeting of SEAC held on 08.03.2024. Based on the presentation and documents furnished by the project proponent, SEAC Recommended the

proposal for the grant of Environmental Clearance subject to the conditions stated therein.after detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Environmental Clearance subject to the conditions as recommended by SEAC &amp normal conditions and conditions.

3.3.4. Recommendation of SEIAA

Approved

3.3.5. Details of Environment Conditions

3.3.5.1. Specific

SEAC conditions - Site specific	
1.	1. The construction shall comply with Green Building norms and shall get minimum IGBC Gold rating. 3. PP shall submit the commitment letter from the local body for supply of fresh water. 4. The project proponent shall continuously operate and maintain the Sewage treatment plant & Grey Water Treatment Plant to achieve the standards prescribed by the TNPCB/CPCB. 5. The proponent must protect 5 numbers of Ficus trees existing in the site by constructing stone wall fencing around each tree. 6. STP shall be installed on 10-year BOOT basis, so that the construction and maintenance are combined in one single responsibility. 7. The project proponent shall provide entry and exit points for the OSR area, play area as per the norms for the public usage and as committed. The PP shall construct a pond of appropriate size in the earmarked OSR land in consultation with the local body. The pond should be modelled like a temple tank with parapet walls, steps, etc. The pond is meant to play three hydraulic roles, namely (1) as a storage, which acted as insurance against low rainfall periods and also recharges groundwater in the surrounding area, (2) as a flood control measure, preventing soil erosion and wastage of runoff waters during the period of heavy rainfall, and (3) as a device which was crucial to the overall eco-system. 8. Project proponent is advised to explore the possibility and getting the cement in a closed container rather through the plastic bag to prevent dust emissions at the time of loading/unloading. 9. Project proponent should ensure that there will be no use of “Single use of Plastic” (SUP). 10. The proponent should provide the sufficient electric vehicle charging points as per the requirements at ground level and allocate the safe and suitable place in the premises for the same. 11. The project proponent should develop green belt in the township as per the plan submitted and also follow the guidelines of CPCB/Development authority for green belt as per the norms. 12. Project proponent should invest the CSR amount as per the proposal and submit the compliance report regularly to the concerned authority/Directorate of environment. 13. Proponent should submit the certified compliance report of previous/present EC along with

	action taken report to the Regional office MoEF Lko/Director of Environment and other concerning authority regularly. 14. Proponent shall provide the dual pipeline network in the project for utilization of treated water of STP for different purposes and also provide the monitoring mechanism for the same. STP treated water not to be discharged outside the premises without the permission of the concerned authority. 15. The project proponent shall provide a measuring device for monitoring the various sources of water supply namely fresh water, treated waste water and harvested rain water. 16. The proponent should provide the MoU with STPs' owner/concerned department for getting the STPs treated water for construction use.
SEIAA SPECIFIC CONDITIONS:	
1.	11The PP shall ensure that the proposed activities in no way result any impact on the migratory birds. 2. The PP shall ensure that the proposed activity in no way result any impact on the surrounding Agriculture. 3. The proponent shall ensure that the buildings should not cause any damage to water Table & natural drainage. 4. The proponent shall take necessary action to reduce anthropogenic GHGs such as CO2, CH4, nitrous oxide, etc., and temperature rise resulting from human activities.
SEIAA STANDARD CONDITIONS:	
1.	**Climate Change** 1. The proponent shall adopt strategies to decarbonize the building. 2. The proponent shall adopt strategies to reduce emissions during operation (operational phase and building materials). 3. The proponent shall adopt strategies to reduce temperature including the Building Façade. 4. The proponent shall adopt methodology to control thermal environment and other shocks in the building. 5. The proponent shall adopt detailed plan to reduce carbon footprints and also develop strategies for climate proofing and climate mitigation. 6. The proponent shall adopt strategies to ensure the buildings in blocks are not trapping heat to become local urban heat islands. 7. The proponent shall ensure that the building does not create artificial wind tunnels creating cold water and uncomfortable living conditions resulting in health issues. 8. The activities should in no way cause emission and build-up Green House Gases. All actions to be eco-friendly and support sustainable management of the natural resources within and outside the campus premises. 9. The proponent shall ensure that the buildings should not cause any damage to water environment, air quality and should be carbon neutral building. **Health** 10. The proponent shall adopt strategies to maintain the health of the inhabitants. **Energy** 11. The proponent shall adopt strategies to reduce electricity demand and consumption. 12. The proponent shall provide provisions for automated energy efficiency. 13. The proponent shall provide provisions for controlled ventilation and lighting systems. 14. The proponent shall provide solar panels and contribute to the grid from the solar panel as proposed. 15. All the construction of Buildings shall be energy efficient and conform to the green building norms. The PP shall ensure that carbon neutral building. 16. The proponent shall provide adequate capacity of DG set (standby) for the proposed STP so as to ensure continuous and efficient operation. **Regulatory Frameworks** 17. The proponent shall adopt methodologies to effectively implement the Solid Waste Management Rules, 2016,

E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001.

18. The project proponent shall ensure to provide adequate elevated closed area earmarked for collection, segregation, storage & disposal of wastes generated within the premises as per provisions of Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001.

19. The proponent shall provide elevator as per rules CMDA/DTCP.

Database maintenance & audits

20. The database record of environmental conditions of all the events from pre-construction, construction and post-construction should be maintained in digitized format.

21. The proponent should maintain environmental audits to measure and mitigate environmental concerns.

Biodiversity

22. There should not be any impact due to the modification of the habitat on critically endangered species, biodiversity, etc,.

23. The proponent shall ensure that the proposed activities in no way result in the spread of invasive species.

24. The proponent shall adopt sustainability criteria to protect the micro environment from wind turbulences and change in aerodynamics since high rise buildings may stagnate air movements.

25. The proponent shall ensure almost safety for the existing biodiversity, trees, flora & fauna shall not disturb under any circumstances.

26. The proponent shall develop building-friendly pest control strategies by using non chemical measures so as to control the pest population thereby not losing beneficial organisms.

27. The proponent shall adopt strategies to prevent bird hits.

Safety measures

28. The proponent should develop an emergency response plan in addition to the disaster management plan.

29. The proponent shall develop detailed evacuation plan for disabled people and safety evacuation plan in emergencies.

30. All bio-safety standards, hygienic standards and safety norms of working staff and patients to be strictly followed as stipulated in EIA/EMP.

31. The disaster management and disaster mitigation standards to be seriously adhered to avoid any calamities.

32. The proponent shall provide the emergency exit in the buildings.

33. The proponent shall adhere to the provision and norms regard to fire safety prescribed by competent authority.

Water/Sewage

34. The proponent shall ensure that no treated or untreated sewage shall be let outside the project site & shall find access to nearby water-bodies under any circumstances other than the permitted mode of disposal.

35. The proponent shall provide STP of adequate capacity as committed and shall continuously & efficiently operate STP so as to satisfy the treated sewage discharge standards prescribed by the TNPCB time to time.

36. The proponent shall periodically test the treated sewage the through TNPCB lab /NABL accredited laboratory and submit report to the TNPCB.

37. The proponent shall periodically test the water sample for the general water quality core parameters including fecal coliform within the proposed project site through TNPCB lab /NABL accredited laboratory and submit report to the concerned authorities.

38. The proponent shall ensure that provision should be given for proper utilization of recycled water.

39. The project proponent shall adhere to storm water management plan as committed.

Parking

40. The project proponent shall adhere to provide adequate parking space for visitors of all inmates including clean traffic plan as committed.

Solid waste Management

41. The proponent shall ensure that no form of municipal solid waste shall be disposed outside the proposed project site at any time.

42. The proponent should strictly comply with, Tamil Nadu Government order regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.

EMP

43. The proponent shall ensure that the EIA/EMP and disaster management plan should be adhered strictly.

44. The proponent shall ensure that all activities of EMP shall be completed before obtaining CTO from TNPCB.

45. The proponent shall provide and ensure the green belt plan is implemented as indicated in EMP. Also, the proponent shall explore possibilities to provide sufficient grass lawns.

Others

	46. As per the 'Polluter Pay Principle', the proponent will be held responsible for any environmental damage caused due to the proposed activity including withdrawal of EC and stoppage of work. 47. The project proponent shall adhere to height of the buildings as committed.

3.3.5.2. Standard

8(b)	**Townships/ Area Development Projects / Rehabilitation Centres**
Air quality monitoring and preservation	
1.	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
1.	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.
1.	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
1.	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. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
1.	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
1.	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
1.	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.
1.	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
1.	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
1.	For indoor air quality the ventilation provisions as per National Building Code of India.
1.	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
1.	Wet jet shall be provided for grinding and stone cutting.
Energy Conservation measures	
1.	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as

	building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
1.	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
1.	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
1.	Outdoor and common area lighting shall be LED.
Green Cover	
1.	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.
1.	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
1.	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.
1.	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
Human health issues	
1.	Occupational health surveillance of the workers shall be done on a regular basis.
1.	A First Aid Room shall be provided in the project both during construction and operations of the project.
1.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
1.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
1.	For indoor air quality the ventilation provisions as per National Building Code of India.
1.	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
Miscellaneous	
1.	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the

	environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
1.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
1.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
1.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
1.	The Ministry/SEIAA-TN reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
1.	The Ministry/SEIAA-TN may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
1.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
1.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC)/SEIAA-TN.
1.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the State Expert Appraisal Committee.
1.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
1.	The project proponent 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, commencing the land development work and start of production operation by the project.
1.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
1.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report
1.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
1.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
1.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

1.	ii. environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
1.	The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.
Noise monitoring and prevention	
1.	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
1.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
1.	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
Specific Conditions	
1.	The project proponent shall develop R& D facilities to develop their own technologies for propylene and polypropylene processing.
Statutory compliance	
1.	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
1.	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
1.	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
1.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
1.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
1.	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
1.	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of

	Power strictly.
Transport	
1.	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
1.	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation.
Waste Management	
1.	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring 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.
1.	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
1.	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
1.	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
1.	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.
1.	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
1.	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
1.	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
1.	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
Water quality monitoring and preservation	
1.	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
1.	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
1.	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

1.	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
1.	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available.
1.	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
1.	Total fresh water use shall not exceed the proposed requirement as provided in the project details.
1.	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
1.	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
1.	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
1.	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
1.	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
1.	No sewage or untreated effluent water would be discharged through storm water drains.
1.	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
1.	No ground water shall be used during construction phase of the project.
1.	All recharge should be limited to shallow aquifer.
1.	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse.
1.	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
1.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

null	
1.	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

3.4. Agenda Item No 4:

3.4.1. Details of the proposal

Setting up of new All India Institute of Medical sciences (AIIMS institute) under PMSSY at Thoppur village , Madurai District, Tamil Nadu by **ALOK DEVRANI** located at **MADURAI,TAMIL NADU**			
Proposal For		Fresh ToR	
Proposal No	**File No**	**Submission Date**	**Activity (Schedule Item)**
SIA/TN/INFRA2/464023/2024	10723	08/03/2024	Townships/ Area Development Projects / Rehabilitation Centres (8(b))

3.4.2. Deliberations by the committee in previous meetings

Date of SEAC 1 :08/03/2024

Deliberations of SEAC 1 :

The SEAC noted the following:

1. The Project Proponent, M/s. All India Institute of Medical sciences (Madurai) has applied for Terms of Reference for the Proposed construction of All India Institute of Medical sciences (AIIMS institute) at S.F.Nos. 12/1, 12/2, 22/4, 23/2b, 23/3, 23/4b, 23/5, 23/6b, 23/7b,23/8, 23/9, 24, 25/1, 25/2, 25/3, 26/2, 30, 31/1, 32/1,33/1,34/1,35 36, 37/1, 38/1, 39, 40,41, 42/1, 42/2, 43/1, 44/1, 44/2, 45/1, 45/2, 46/1, 46/2, 47/1, 47/2, 47/3, 48/3, 48/1, 48/2,49/1, 49/2, 49/3, 50/1, 50/2, 50/3 & 53/1 of K. Pudupatti village, Thirupprankundram Taluk, Madurai District, Tamil Nadu.
2. The project/activity is covered under Category “B1” of Item 8(b) “Townships and Area Development Projects” of the Schedule to the EIA Notification, 2006.
3. The total built up area of the project is 2,31,782 Sq.m (Hospital building - 129173.00 Sq.m, Academic building -70990.00 Sq.m, Staff Quarters - 25756.00 Sq.m, Service Buildings -5494.00 Sq.m & Miscellaneous Building - 369. 00Sq.m)
4. The overall project site plot area is 90.03 Hectare (222.47 Acres).

Based on the presentation made by the proponent and the documents furnished, SEAC decided **to recommend the proposal for the grant of Terms of Reference (TOR).**

3.4.3. Deliberations by the SEIAA in current meetings

सत्यमेव जयते

File No: 9263

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA), TAMIL NADU)

***

Date **22/04/2024**

To,

Managing Director
STATE INDUSTRIES PROMOTION CORPORATION OF TAMILNADU LIMITED
19-A, Rukmani Lakshmipathy Road, Egmore, Chennai , Egmore, CHENNAI, TAMIL NADU, Egmore, 600008
md@sipcot.in

Subject: Grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 -regarding.

Sir/Madam,

This is in reference to your application for Proposed Development of Industrial Park with Industrial Housing Facility over an extent of 215.834 Ha (533.11 Acres) at Soorapoondi Village S.F.Nos. 65/1, 181, 182, 183, 184, 185, 186, 187, 188, 189/1, 190, 192, 213pt, 214pt, 215, 216, 217, 218pt, 219pt, 220pt, 221pt, 227/1pt, 227/2pt, 227/3pt, 228/1pt, 228/2pt, 228/3pt, 235pt & Vaniamallee Village S.Nos. 31/1, 31/2, 31/3, 31/4, 31/5, 31/6, 36, 38/1, 41/3, 41/4, 41/12, 41/20, 142/1, 175/2, 175/3, 175/4, 176/1, 176/2, 176/3, 177, 178/1, 179, 180/1, 180/2, 180/3, 180/4, 180/5, 180/6, 181/1, 181/2, 181/3, 181/4, 182, 183, 184, 185, 188/2, 188/3, 188/4, 188/5, 189/1, 189/2, 189/3, 189/4, 197/2, 198/1, 199, 200, 201, 202, 203/1, 204/10, 205/2, 206, 207/1, 207/2, 207/3, 207/4, 207/5, 207/6, 207/7, 207/8, 207/9, 208/1, 208/2, 208/3, 208/4, 208/5, 208/6, 209, 210, 211, 212, 213pt, 214pt, 215, 216, 217/1, 218pt, 219pt, 221pt, 222pt, 223pt, 225pt, 226pt, 228/1 of Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) submitted to SEIAA-TN vide proposal number SIA/TN/INFRA2/463400/2024 dated 23/02/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

Ref:

1. ToR issued by SEIAA-TN vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022 dated:14.07.2022
2. ToR amendment issued by SEIAA-TN vide Lr.No.SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022/Amendment/2023 dated:06.11.2023
3. Online Proposal No. SIA/TN/INFRA2/463400/2024, dated 20.02.2024 for EC
4. EIA report submitted dated: 21.02.2024

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24B3813TN5100474N
(ii) File No.	9263
(iii) Clearance Type	Fresh EC
(iv) Category	B1
(v) Project/Activity Included Schedule No.	8(b) Townships/ Area Development Projects / Rehabilitation Centres
(vii) Name of Project	Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu
(viii) Name of Company/Organization	STATE INDUSTRIES PROMOTION CORPORATION OF TAMILNADU LIMITED
(ix) Location of Project (District, State)	THIRUVALLUR, TAMIL NADU
(x) Issuing Authority	SEIAA
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the Ministry for an appraisal by the State Environment Impact AssessmentAuthority(SEIAA) under the provision of EIA notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by SEIAA in the meeting held on 01/04/2024. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.
5. The SEAC, based on information submitted viz: Form 1 (Part A, B and C), EIA/EMP report etc., & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and public hearing issues and compliance thereto furnished by the Project Proponent, recommended the proposal for grant of Environment Clearance under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of Specific and Standard EC conditions as detailed in the point below.
6. The SEIAA has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the SEAC hereby accords Environment Clearance for the instant proposal to Mr. Raam Mohan K under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of the Specific and Standard EC conditions as given in Annexure (2)
7. The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.
8. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
9. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.
10. Validity of EC is for a period of 7 years from the date of issue of EC. In case the project proponent fails to complete the construction/proposed activities within the EC validity date, application for EC validity extension shall be submitted to the regulatory authority as per the provision contained in the Para 9.0 of EIA notification, 2006 and its amendment
11. **Salient features of the proposal are as follows:**

S. No	Description	Details
1.	Name of the Project	“Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu” over an extent of 215.834 Ha (533.11 Acres) by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT).

2.	Location	Soorapoondi and Vaniamallee villages Gummidipoondi Taluk, Thiruvallur District and Tamil Nadu state.
3.	Type of Project	Category – 8(b)
4.	Latitude & Longitude	13°25'24.17"N, 80° 2'12.45"E
5.	Total Plot Area (in sq. m)	215.834 Ha (533.11 Acres)
6.	Brief description of the project	The Environmental Clearance is sought for "Development of Industrial Park with Industrial Housing Facility at Soorapoondi and Vaniamallee villages, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu" over an extent of 215.834 Ha (533.11 Acres) by M/s. State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT)
7.	Built up area details	Not applicable – It is infrastructure development project
8.	Maximum height of the project	18.2
9.	Maximum number of floors	Industrial park - based on industrial units Industrial Housing – G+4
10.	No. of blocks	Industrial park - based on industrial units Industrial Housing – 4 towers
11.	Permissible FSI area	-
12.	Proposed FSI area	-
13.	Cost of Project	INR. 495.52 crores
14.	No. of Saleable Units	Not applicable. Total developable area is 533.11 Acres (215.834 Ha) which includes Industrial plot area, Industrial Housing, Other Common facilities, Greenbelt, SWM, Road, Storm Water Drain, OSR and such other infrastructure facilities.
15.	Expected Population	**Construction phase** - 100 Nos. **Operation phase** – 10,800 Nos (including 1,920 Nos for industrial housing during operation phase)
16.	a) Water requirement (in KLD)	4789 KLD (Fresh water: 874 KLD, TTRO water: 2133 KLD and Recycled water: 1782 KLD)
17.	b) Source	Source: a. Fresh water - Letter from TWAD for the supply of 10 MLD raw water supply from SIPCOT Industrial Park at Thervoykandigai vide Letter no. CMWSSB/WT&T/RO-II/SIPCOT-Manallur dated: 03.02.2023 b. TTRO water - Letter from TWAD for the supply of 22.70 MLD TTRO water vide Letter no. CMWSSB/CE(O&M)II/STP(N)/45TTRO – KOD/039/SIPCOT – Manallur dated 25.03.2023
18.	Details of Sewage generation and Treatment	Total Sewage generation: 593 KLD **Treatment Method:** • Sewage from Industries - Will be treated by individual industries and used for green belt development within the IP. • Sewage from Industrial Housing - SIPCOT will provide STP of capacity 250 KLD for Industrial Housing.
19.	Details of greywater / Effluent generation and Treatment	Total Effluent Generation: 1193 KLD **Treatment Method:** • Effluent from Industries - Will be treated by individual industries and reused for process and utilities. ZLD will be maintained by individual industries, if necessary. • Effluent from Industries - SIPCOT will provide ETP of capacity 1300 KLD.
20.	Mode of Disposal of treated sewage / effluent	• Treated effluent will be used by individual units for their Process & Utilities • Treated sewage will be used for greenbelt & Flushing.

<table>
<tr><td>21.</td><td>Quantity of Solid Waste generation, Mode of treatment and Disposal</td><td>
<table>
<tr><th>Description</th><th>Details</th><th>Unit</th></tr>
<tr><td>Total Solid Waste Generation</td><td>4.860</td><td>TPD</td></tr>
<tr><td>Organic waste</td><td>2.916</td><td>TPD</td></tr>
<tr><td>Mode of Treatment & Disposal</td><td colspan="2">For Industrial Park: Individual industries will segregate the waste and organic waste will be composted and used as manure for green belt development.
Inorganic waste will be sold to TNPCB authorized recyclers/local vendors by individual industries.
For Industrial Housing: Organic wastes will be composted in Organic Waste Convertor and the compost will be used as manure for green belt development.
Inorganic waste will be collected and sold to TNPCB authorized recyclers / local vendors.</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>22.</td><td>Quantity of E-Waste generation, Mode of treatment and Disposal</td><td>E-waste such used PC, equipment, sensor, controller, etc) will be generated from the proposed units in IP and Industrial Housing. The same will be disposed through TNPCB Authorized E-waste Vendor by Individual units as per E-waste Management Rules 2022.</td></tr>
<tr><td>23.</td><td>Quantity of Biomedical Waste generation, Mode of treatment and Disposal</td><td>
Biomedical waste generation and management (Medical centre proposed within Industrial housing)
<table>
<tr><th>Waste Schedule</th><th>Waste Type</th><th>Quantity</th><th>Method of Disposal</th></tr>
<tr><td>Yellow</td><td>Soiled wastes</td><td>6.5 kg/month</td><td>Will be sent to TNPCB Authorized common Biomedical waste Management Facility for Incineration</td></tr>
<tr><td>Red</td><td>Contaminated wastes</td><td>4.7 kg/month</td><td>Will be sent to TNPCB Authorized common Biomedical waste Management Facility for sterilization</td></tr>
<tr><td>White</td><td>Waste sharps including metals</td><td>0.3 kg/month</td><td>Will be sent to TNPCB Authorized common Biomedical waste Management Facility for shredding & disposal</td></tr>
<tr><td>Blue</td><td>Glassware</td><td>1.8 kg/month</td><td>Will be sent to TNPCB Authorized common Biomedical waste Management Facility for disinfection & recycling</td></tr>
</table>
</td></tr>
<tr><td>24.</td><td>Quantity of Hazardous Waste generation, Mode of treatment and Disposal</td><td>
Hazardous waste generation from SEZ & its management
<table>
<tr><th>Hazardous waste schedule & type</th><th>Quantity</th><th>Method of Disposal</th></tr>
<tr><td>5.1 - Used /Spent Oil</td><td>0.5KL/A</td><td>Will be sent to TNPCB authorized recyclers/vendors</td></tr>
<tr><td>33.3-Empty barrels/ containers/ liners contaminated with hazardous chemicals/wastes</td><td>5 nos/Annum</td><td>Will be sent to TNPCB authorized recyclers</td></tr>
</table>
</td></tr>
<tr><td>25.</td><td>Power requirement</td><td>22 MVA (Source: TANGEDCO)</td></tr>
<tr><td>26.</td><td>Details of solar energy</td><td>50% of total roof coverage
1) Solar panels will be proposed in the roof top of Project office. Solar power will be utilized for the IP internal road lighting.
2) Apart from this, individual industries will be advised to provide roof top solar panels & solar lighting to reduce power consumption.</td></tr>
<tr><td>27.</td><td>Details of D.G. set with Capacity</td><td>Individual industries will have their own power back up:</td></tr>
</table>

28.	Details of Green Belt Area i) Total area of green belt ii) No. of trees existing within the project site iii) No. of trees proposed to be planted iv) No. of trees to be transplanted / cut	I. Greenbelt Area – 77.883 Ha (192.37 Acres) II. Existing Tree – 6,117 Nos. III. Tree cut - 0 Nos. IV. Tree going to be planted – 1,46,027 Nos.
29.	Details of OSR Area	27.737 Ha (68.51 acres) (12.85%)
30.	Details of Parking Area	Truck parking is provided in Common amenities area by SIPCOT and Individual units will also have their own parking space within their Site.
31.	Provision for rain water harvesting	• Rain water Harvesting pit proposed = 3522 nos • The capacity of the Rain water harvesting pit has been calculated as 1.18 m3 (Assuming 50% percolation rate). • Storm water will be collected in RWH pits through storm water drains and only excess storm water will be let into nearby water bodies after filtration.
32.	EMP Cost (Rs.)	Capital cost-34.59 Crores Recurring cost/annum-67 lakhs
33.	CER Cost	Rs. 1.5 Crores. As accepted by the project proponent, amount shall be spent for the conservation measures towards Pulicat Bird Sanctuary in consultation with the State Wildlife Warden, Chennai.

12. **General Instructions:**

(a) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.

(b) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(c) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.

(d) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during perational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(e) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(f) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(g) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

13. This issues with the approval of the Competent Authority.

Copy To

1.The Additional Chief Secretary to Government, Environment, Climate Change and Forests Department, Govt. of Tamil

Nadu, Fort St. George, Chennai - 9.
2.The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi - 110032.
3.The Chairperson, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4.Monitoring Cell, I A Division, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, New Delhi - 110003.
5.Stock File.

Annexure 1

Specific EC Conditions for (Townships/ Area Development Projects / Rehabilitation Centres)

1. Seac Conditions - Site Specific

S. No	EC Conditions
1.1	1. The construction shall comply with Green Building norms and shall get minimum IGBC Gold rating. 3. PP shall submit the commitment letter from the local body for supply of fresh water. 4. The project proponent shall continuously operate and maintain the Sewage treatment plant & Grey Water Treatment Plant to achieve the standards prescribed by the TNPCB/CPCB. 5. The proponent must protect 5 numbers of Ficus trees existing in the site by constructing stone wall fencing around each tree. 6. STP shall be installed on 10-year BOOT basis, so that the construction and maintenance are combined in one single responsibility. 7. The project proponent shall provide entry and exit points for the OSR area, play area as per the norms for the public usage and as committed. The PP shall construct a pond of appropriate size in the earmarked OSR land in consultation with the local body. The pond should be modelled like a temple tank with parapet walls, steps, etc. The pond is meant to play three hydraulic roles, namely (1) as a storage, which acted as insurance against low rainfall periods and also recharges groundwater in the surrounding area, (2) as a flood control measure, preventing soil erosion and wastage of runoff waters during the period of heavy rainfall, and (3) as a device which was crucial to the overall eco-system. 8. Project proponent is advised to explore the possibility and getting the cement in a closed container rather through the plastic bag to prevent dust emissions at the time of loading/unloading. 9. Project proponent should ensure that there will be no use of “Single use of Plastic” (SUP). 10. The proponent should provide the sufficient electric vehicle charging points as per the requirements at ground level and allocate the safe and suitable place in the premises for the same. 11. The project proponent should develop green belt in the township as per the plan submitted and also follow the guidelines of CPCB/Development authority for green belt as per the norms. 12. Project proponent should invest the CSR amount as per the proposal and submit the compliance report regularly to the concerned authority/Directorate of environment. 13. Proponent should submit the certified compliance report of previous/present EC along with action taken report to the Regional office MoEF Lko/Director of Environment and other concerning authority regularly. 14. Proponent shall provide the dual pipeline network in the project for utilization of treated water of STP for different purposes and also provide the monitoring mechanism for the same. STP treated water not to be discharged outside the premises without the permission of the concerned authority. 15. The project proponent shall provide a measuring device for monitoring the various sources of water supply namely fresh water, treated waste water and harvested rain water. 16. The proponent should provide the MoU with STPs’ owner/concerned department for getting the STPs treated water for construction use.

2. Seiaa Specific Conditions:

S. No	EC Conditions
2.1	1. 1. The PP shall ensure that the proposed activities in no way result any impact on the migratory birds. 2. The PP shall ensure that the proposed activity in no way result any impact on the surrounding Agriculture. 3. The proponent shall ensure that the buildings should not cause any damage to water Table & natural drainage. 4. The proponent shall take necessary action to reduce anthropogenic GHGs such as CO2, CH4, nitrous oxide, etc., and temperature rise resulting from human activities.

3. Seiaa Standard Conditions:

S. No	EC Conditions
3.1	**Climate Change** 1. The proponent shall adopt strategies to decarbonize the building. 2. The proponent shall adopt strategies to reduce emissions during operation (operational phase and building materials). 3. The proponent shall adopt strategies to reduce temperature including the Building Façade. 4. The proponent shall adopt methodology to control thermal environment and other shocks in the building. 5. The proponent shall adopt detailed plan to reduce carbon footprints and also develop strategies for climate proofing and climate mitigation. 6. The proponent shall adopt strategies to ensure the buildings in blocks are not trapping heat to become local urban heat islands. 7. The proponent shall ensure that the building does not create artificial wind tunnels creating cold water and uncomfortable living conditions resulting in health issues. 8. The activities should in no way cause emission and build-up Green House Gases. All actions to be eco-friendly and support sustainable management of the natural resources within and outside the campus premises. 9. The proponent shall ensure that the buildings should not cause any damage to water environment, air quality and should be carbon neutral building. **Health** 10. The proponent shall adopt strategies to maintain the health of the inhabitants. **Energy** 11. The proponent shall adopt strategies to reduce electricity demand and consumption. 12. The proponent shall provide provisions for automated energy efficiency. 13. The proponent shall provide provisions for controlled ventilation and lighting systems. 14. The proponent shall provide solar panels and contribute to the grid from the solar panel as proposed. 15. All the construction of Buildings shall be energy efficient and conform to the green building norms. The PP shall ensure that carbon neutral building. 16. The proponent shall provide adequate capacity of DG set (standby) for the proposed STP so as to ensure continuous and efficient operation. **Regulatory Frameworks** 17. The proponent shall adopt methodologies to effectively implement the Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other

S. No	EC Conditions
	Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001. 18. The project proponent shall ensure to provide adequate elevated closed area earmarked for collection, segregation, storage & disposal of wastes generated within the premises as per provisions of Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001. 19. The proponent shall provide elevator as per rules CMDA/DTCP. **Database maintenance & audits** 20. The database record of environmental conditions of all the events from pre-construction, construction and post-construction should be maintained in digitized format. 21. The proponent should maintain environmental audits to measure and mitigate environmental concerns. **Biodiversity** 22. There should not be any impact due to the modification of the habitat on critically endangered species, biodiversity, etc,. 23. The proponent shall ensure that the proposed activities in no way result in the spread of invasive species. 24. The proponent shall adopt sustainability criteria to protect the micro environment from wind turbulences and change in aerodynamics since high rise buildings may stagnate air movements. 25. The proponent shall ensure almost safety for the existing biodiversity, trees, flora & fauna shall not disturb under any circumstances. 26. The proponent shall develop building-friendly pest control strategies by using non chemical measures so as to control the pest population thereby not losing beneficial organisms. 27. The proponent shall adopt strategies to prevent bird hits. Safety measures 28. The proponent should develop an emergency response plan in addition to the disaster management plan. 29. The proponent shall develop detailed evacuation plan for disabled people and safety evacuation plan in emergencies. 30. All bio-safety standards, hygienic standards and safety norms of working staff and patients to be strictly followed as stipulated in EIA/EMP. 31. The disaster management and disaster mitigation standards to be seriously adhered to avoid any calamities. 32. The proponent shall provide the emergency exit in the buildings. 33. The proponent shall adhere to the provision and norms regard to fire safety prescribed by competent authority. **Water/Sewage** 34. The proponent shall ensure that no treated or untreated sewage shall be let outside the project site & shall find access to nearby water-bodies under any circumstances other than the permitted mode of disposal. 35. The proponent shall provide STP of adequate capacity as committed and shall continuously & efficiently operate STP so as to satisfy the treated sewage discharge standards prescribed by the TNPCB time to time. 36. The proponent shall periodically test the treated sewage the through TNPCB lab /NABL accredited laboratory and submit report to the TNPCB. 37. The proponent shall periodically test the water sample for the general water quality core parameters including fecal coliform within the proposed project site through TNPCB lab /NABL accredited laboratory and submit report to the concerned authorities. 38. The proponent shall ensure that provision should be given for proper utilization of recycled

S. No	EC Conditions
	water. 39. The project proponent shall adhere to storm water management plan as committed. **Parking** 40. The project proponent shall adhere to provide adequate parking space for visitors of all inmates including clean traffic plan as committed. **Solid waste Management** 41. The proponent shall ensure that no form of municipal solid waste shall be disposed outside the proposed project site at any time. 42. The proponent should strictly comply with, Tamil Nadu Government order regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. **EMP** 43. The proponent shall ensure that the EIA/EMP and disaster management plan should be adhered strictly. 44. The proponent shall ensure that all activities of EMP shall be completed before obtaining CTO from TNPCB. 45. The proponent shall provide and ensure the green belt plan is implemented as indicated in EMP. Also, the proponent shall explore possibilities to provide sufficient grass lawns. **Others** 46. As per the 'Polluter Pay Principle', the proponent will be held responsible for any environmental damage caused due to the proposed activity including withdrawal of EC and stoppage of work. 47. The project proponent shall adhere to height of the buildings as committed.

Standard EC Conditions for (Townships/ Area Development Projects / Rehabilitation Centres)

1. Statutory Compliance

S. No	EC Conditions
1.1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
1.2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
1.3	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.5	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.6	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

S. No	EC Conditions
1.7	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
1.8	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
1.9	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
2.2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
2.3	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.
2.4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
2.5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
2.6	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
2.7	Wet jet shall be provided for grinding and stone cutting.
2.8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
2.9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.

S. No	EC Conditions
2.10	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
2.11	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. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
2.12	For indoor air quality the ventilation provisions as per National Building Code of India.

3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
3.2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
3.3	Total fresh water use shall not exceed the proposed requirement as provided in the project details.
3.4	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available.
3.6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
3.7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
3.8	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
3.9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
3.10	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

S. No	EC Conditions
3.11	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
3.12	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse.
3.13	All recharge should be limited to shallow aquifer.
3.14	No ground water shall be used during construction phase of the project.
3.15	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
3.16	No sewage or untreated effluent water would be discharged through storm water drains.
3.17	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
3.18	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
3.19	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
4.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

5. Energy Conservation Measures

S. No	EC Conditions
5.1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
5.2	Outdoor and common area lighting shall be LED.
5.3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
5.4	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.

6. Waste Management

S. No	EC Conditions
6.1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
6.2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring 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.
6.3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
6.4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
6.5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
6.6	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
6.7	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
6.8	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

S. No	EC Conditions
6.9	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

7. Green Cover

S. No	EC Conditions
7.1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
7.2	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.
7.3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
7.4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

8. Transport

S. No	EC Conditions
8.1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation.
8.2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

9.

S. No	EC Conditions
9.1	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative

S. No	EC Conditions
	impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

10. Human Health Issues

S. No	EC Conditions
10.1	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
10.2	For indoor air quality the ventilation provisions as per National Building Code of India.
10.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
10.4	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
10.5	Occupational health surveillance of the workers shall be done on a regular basis.
10.6	A First Aid Room shall be provided in the project both during construction and operations of the project.

11. Miscellaneous

S. No	EC Conditions
11.1	The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.
11.2	ii. environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
11.3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
11.4	The project proponent shall submit six-monthly reports on the status of the compliance of the

S. No	EC Conditions
	stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
11.5	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
11.6	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
11.7	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report
11.8	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
11.9	The project proponent 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, commencing the land development work and start of production operation by the project.
11.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.11	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the State Expert Appraisal Committee.
11.12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC)/SEIAA-TN.
11.13	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
11.14	The Ministry/SEIAA-TN may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
11.15	The Ministry/SEIAA-TN reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
11.16	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by

S. No	EC Conditions
	furnishing the requisite data / information/monitoring reports.
11.17	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
11.18	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

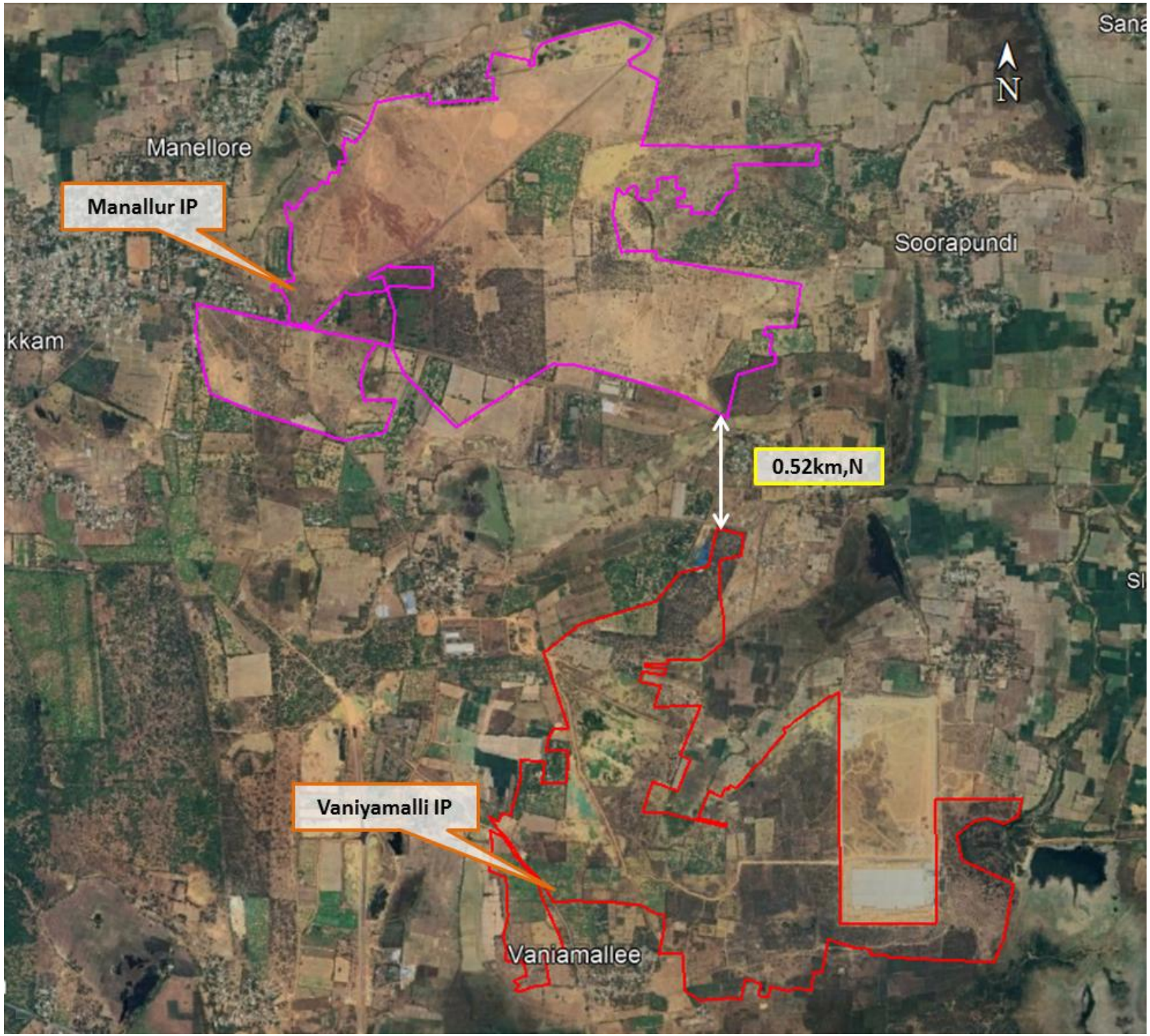
12. Specific Conditions

S. No	EC Conditions
12.1	The project proponent shall develop R& D facilities to develop their own technologies for propylene and polypropylene processing.

Signature Not Verified

Digitally Signed by : A R Rahul Nadh IAS
Member Secretary, SEIAA

Date: 23/04/2024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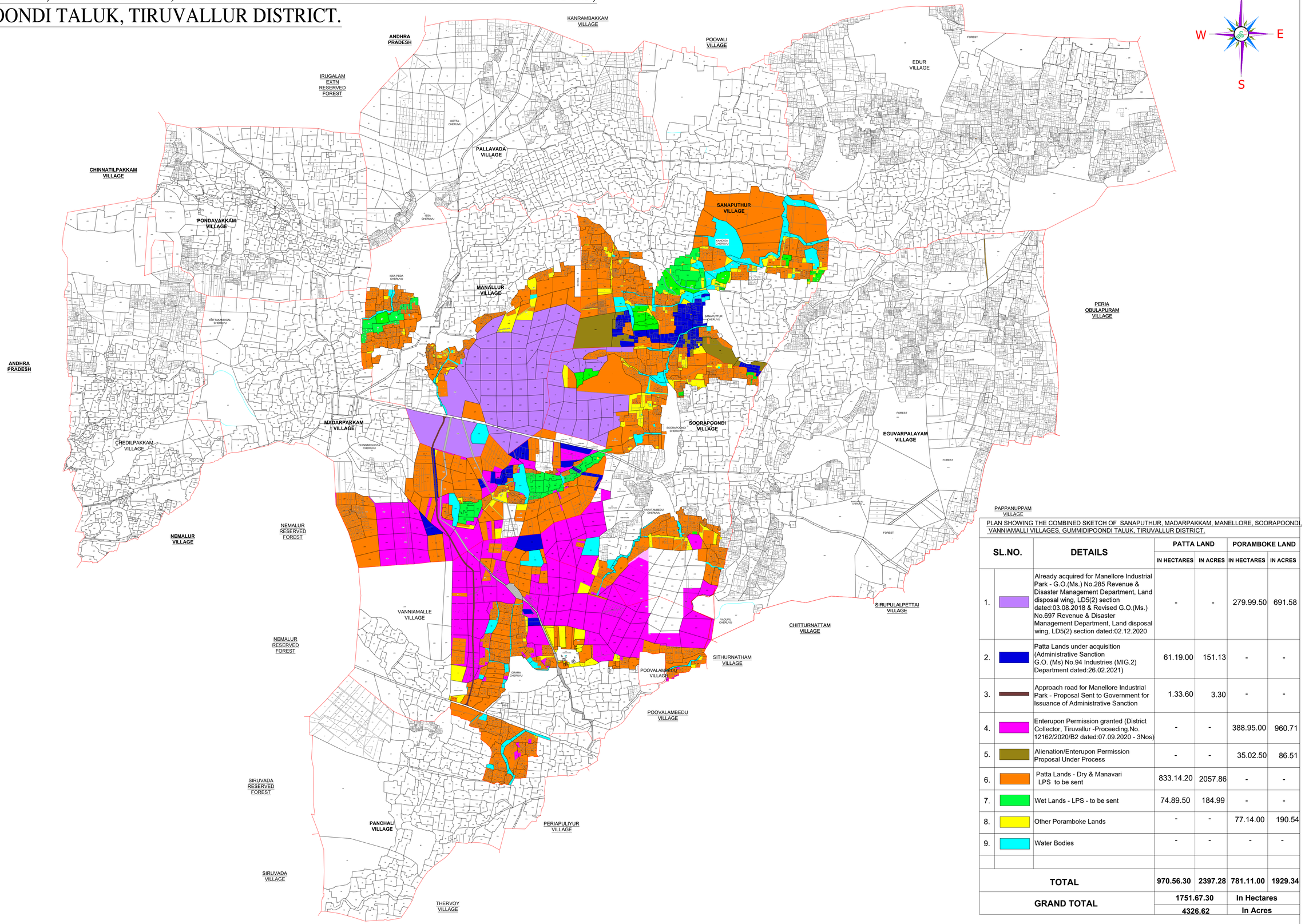
PLAN SHOWING THE COMBINED SKETCH OF SANAPUTHUR, MADARPAKKAM, MANELLORE, SOORAPOONDI AND VANNIAMALLI VILLAGES, GUMMIDIPOONDI TALUK, TIRUVALLUR DISTRICT.



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SL.NO.		DETAILS	PATTA LAND		PORAMBOKE LAND	
			IN HECTARES	IN ACRES	IN HECTARES	IN ACRES
1.		Already acquired for Manellore Industrial Park - G.O.(Ms.) No.285 Revenue & Disaster Management Department, Land disposal wing, LD5(2) section dated:03.08.2018 & Revised G.O.(Ms.) No.697 Revenue & Disaster Management Department, Land disposal wing, LD5(2) section dated:02.12.2020	-	-	279.99.50	691.58
2.		Patta Lands under acquisition (Administrative Sanction G.O. (Ms) No.94 Industries (MIG.2) Department dated:26.02.2021)	61.19.00	151.13	-	-
3.		Approach road for Manellore Industrial Park - Proposal Sent to Government for Issuance of Administrative Sanction	1.33.60	3.30	-	-
4.		Enterupon Permission granted (District Collector, Tiruvallur -Proceeding.No. 12162/2020/B2 dated:07.09.2020 - 3Nos)	-	-	388.95.00	960.71
5.		Alienation/Enterupon Permission Proposal Under Process	-	-	35.02.50	86.51
6.		Patta Lands - Dry & Manavari LPS to be sent	833.14.20	2057.86	-	-
7.		Wet Lands - LPS - to be sent	74.89.50	184.99	-	-
8.		Other Poramboke Lands	-	-	77.14.00	190.54
9.		Water Bodies	-	-	-	-
TOTAL			970.56.30	2397.28	781.11.00	1929.34
GRAND TOTAL			1751.67.30		In Hectares	
			4326.62		In Acres	

PROJECT CHRONOLOGY

SIPCOT INDUSTRIAL PARK, VANIAMALLEE

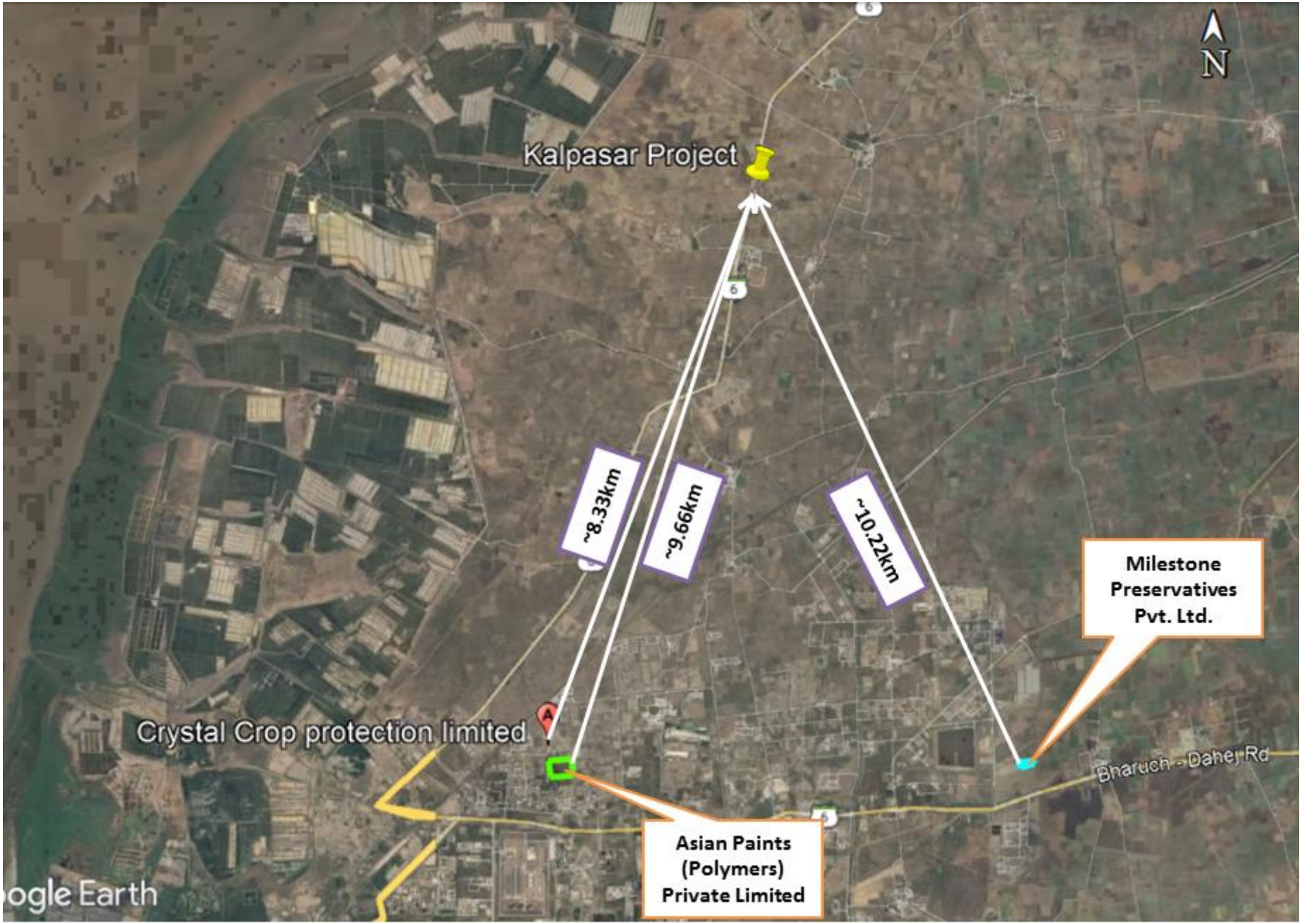
S. No.	Activity	Date
1	Submission of ToR application for the proposed IP over an area Extent of 203.69 Ha (503.12 Acres) vide Proposal No. SIA/TN/MIS/76835/2022	18.05.2022
2	Attended 287th TNSEAC Meeting for ToR application on	22.06.2022
3	Earlier ToR issued vide F. No. 9263/2022 by TNSEIAA	14.07.2022
4	Baseline Conducted during	March 2023 to May 2023
5	Submission of ToR Amendment (Online – PARIVESH portal) for the proposed IP over an area Extent of 215.834 Ha (533.11 Acres) vide Proposal No. SIA/TN/MIS/303835/2023	01.09.2023
6	Submission of NBWL Application (Online – PARIVESH portal) vide Proposal No. WL/TN/INFRA/442689/2023	01.09.2023
7	Attended 416th TNSEAC Meeting for ToR amendment on	13.10.2023
8	Obtained ToR Amendment vide Letter No. SEIAA-TN/F.No.9263/SEAC/ToR-1213/2022/Amendment/2023	06.11.2023
9	NBWL Application (Recommended by SCNBWL & PCCF)	30.01.2024
10	Submission of EC application for the proposed IP over an area Extent of 215.834 Ha (533.11 Acres) vide Proposal No. SIA/TN/INFRA2/463400/2024	20.02.2024
11	EDS raised by TNSEIAA on	22.02.2024
12	Submission of EDS by SIPCOT	23.02.2024
13	450th TNSEAC Meeting scheduled for EC application on	08.03.2024

Non Consideration of Kalpasar Project for Cumulative EIA

Development of Kalpasar project across Gulf of Khambhath, at Vagra Taluka, Bharuch District, Gujarat state for the purpose of obtaining Environmental Clearance and Public people, Public sectors and government bodies are well known and aware of the Kalpasara project and it was published in the News channels and Newspapers.

Near the Kalpasar project location the below EC's are issued by MoEF&CC and SEIAAA without considering the cumulative impact study of Kalpasar project.

S. No	Project name	Project proponent	Category & Schedule	Date of EC Obtained	Distance from Kalpasara Project (~km)	Remarks
1	Proposed Greenfield Project of Vinyl Acetate Monomer (VAM), Vinyl Acetate Ethylene Emulsion (VAE) & Redispersible polymer (RDP) Manufacturing Plant at Plot No. D-2-CH-4-A & D-2/CH/4/B, GIDC Industrial Estate, Dahej II, Taluka Vagra, District Bharuch, Gujarat	Asian Paints (Polymers) Private Limited	Schedule No. 5(f) & Category B	19.04.2024	9.66	Kalpasar project was not considered for the cumulative study
2	Proposed Expansion of Pesticide and Pesticide Intermediates Manufacturing (3175 MT/ Annum to 17625 MT/ Annum) in Existing Premises of M/s. Crystal Crop Protection Pvt. Ltd. at Plot No. D2/CH-14, Dah	Crystal Crop Protection Pvt Ltd	Schedule No. 5(b) & Category A	09.05.2022	8.83	Kalpasar project was not considered for the cumulative study
3	Proposed Synthetic Organic Chemicals (Anti-Oxidants, Preservatives, Dye Intermediate etc. - 8,750 TPA) Manufacturing Unit at Plot No. D-2/18/3, Dahej – 2 GIDC Industrial Estate, Tal. Vagra, Dist. – Bharuch –392012 Gujarat	Milestone Preservatives Pvt. Ltd.	Schedule No. 5(f) & Category B	17.12.2022	10.22	Kalpasar project was not considered for the cumulative study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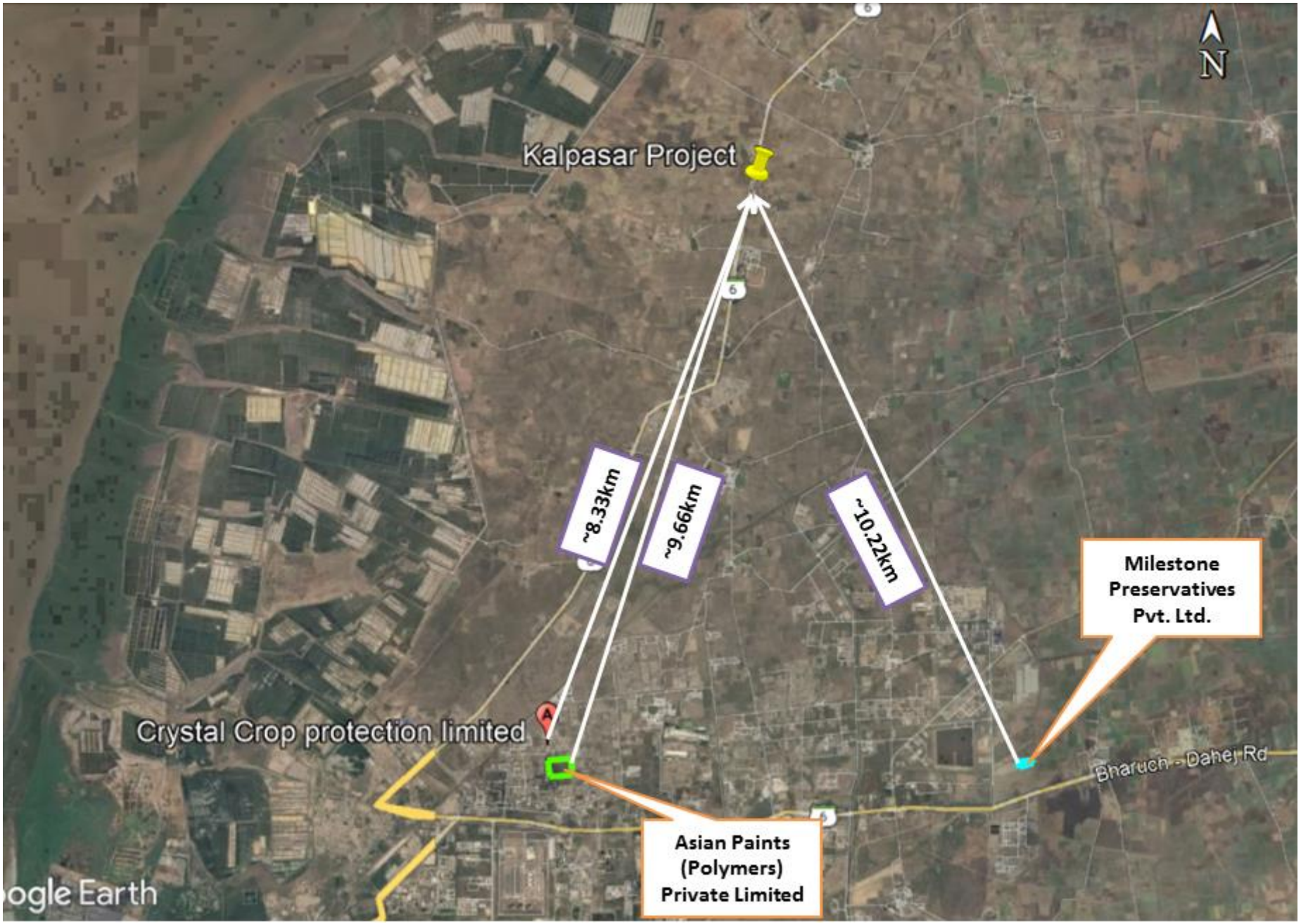
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