

SEIL /MoEF/Chennai/EC/2020/020
30th June'2020

To
The Regional Director
Regional Office (South Eastern Region)
Ministry of Environment, Forests & Climate Change
1st & 2nd Floor, HEPC Building, No 34, Cathedral Garden Road
Nungambakkam, Chennai - 600034

Sembcorp Energy India Limited
(Formerly Thermal Powertech Corporation India Ltd)
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Sub: SEIL (formerly known as Thermal Powertech Corporation India Limited – TPCIL) - Submission of Six-monthly EC Compliance Report (Oct'19 to March'2020) – Reg.

Ref: EC Letter No J 13012/02/2009 – IA.II (T) dated 04-11-2009, amended 02.03.2015


Respected Sir,

With reference to above mentioned subject matter and references cited, we herewith submit the Six-monthly EC compliance report (Oct'2019 to March'2020) along with supporting attachments to the conditions specified under Environmental Clearance issued to SEIL (Formerly known as Thermal Powertech Corporation India Limited – TPCIL), Nellore.

We hope you will find the above documents in order.

Thanking you,

Yours faithfully,
For Sembcorp Energy India Limited,


(Pavan Kumar Rao V)
Head HSE - SEIL

Enclosures attached.

CC: 1. The Director, IA.I, MoEF & CC, New Delhi
2. The Environmental Engineer (APPCB), Nellore

COMPLIANCE STATUS REPORT OF

Sembcorp Energy India Limited

(Formerly Known as THERMAL POWERTECH CORPORATION INDIA LTD)

1980 MW COAL FIRED SUPERCRITICAL THERMAL POWER PLANT

(STAGE I - 2 X 660 MW & STAGE II - 1X660 MW)

AT PAINAMPURAM & NELATURU VILLAGES, MUTHUKUR MANDAL

SPSR NELLORE DISTRICT

ANDHRA PRADESH

INDIA



Compliance to Environment Clearance Conditions

Period: (October 2019 to March 2020)

June 2020

01. Background:

Sembcorp Energy India Ltd (SEIL) [formerly known as Thermal Powertech Corporation India Limited (TPCIL)] is a leading independent power company in India. SEIL is promoted by Sembcorp Utilities Pvt. Ltd., which is part of the Singapore based Sembcorp Group.

SEIL is in the process of developing 3X660 MW (Stage I: 2 X 660 MW & Stage II: 1X660 MW) Coal fired thermal power plant at Painampuram & Nelaturu Villages, Muthukur Mandal in SPSR Nellore District (A.P.) using Supercritical Technology.

Currently, Stage-I power plant consisting of 2x660 MW is under operation since September 2015. The Stage-II plant (1x660 MW) is under design stage and will be commissioned by 42 months from date of financial closure.

The location map and key map are shown in **Figure-1** & **Figure-2** respectively. The 10 km radius topographical map around the project is shown in **Figure-3**. The latitude & longitude of North South extremes of Site are 80°08'35.956''E & 14°19'5.211''N and 80°09'16.325''E & 14°21'0.874''N respectively.

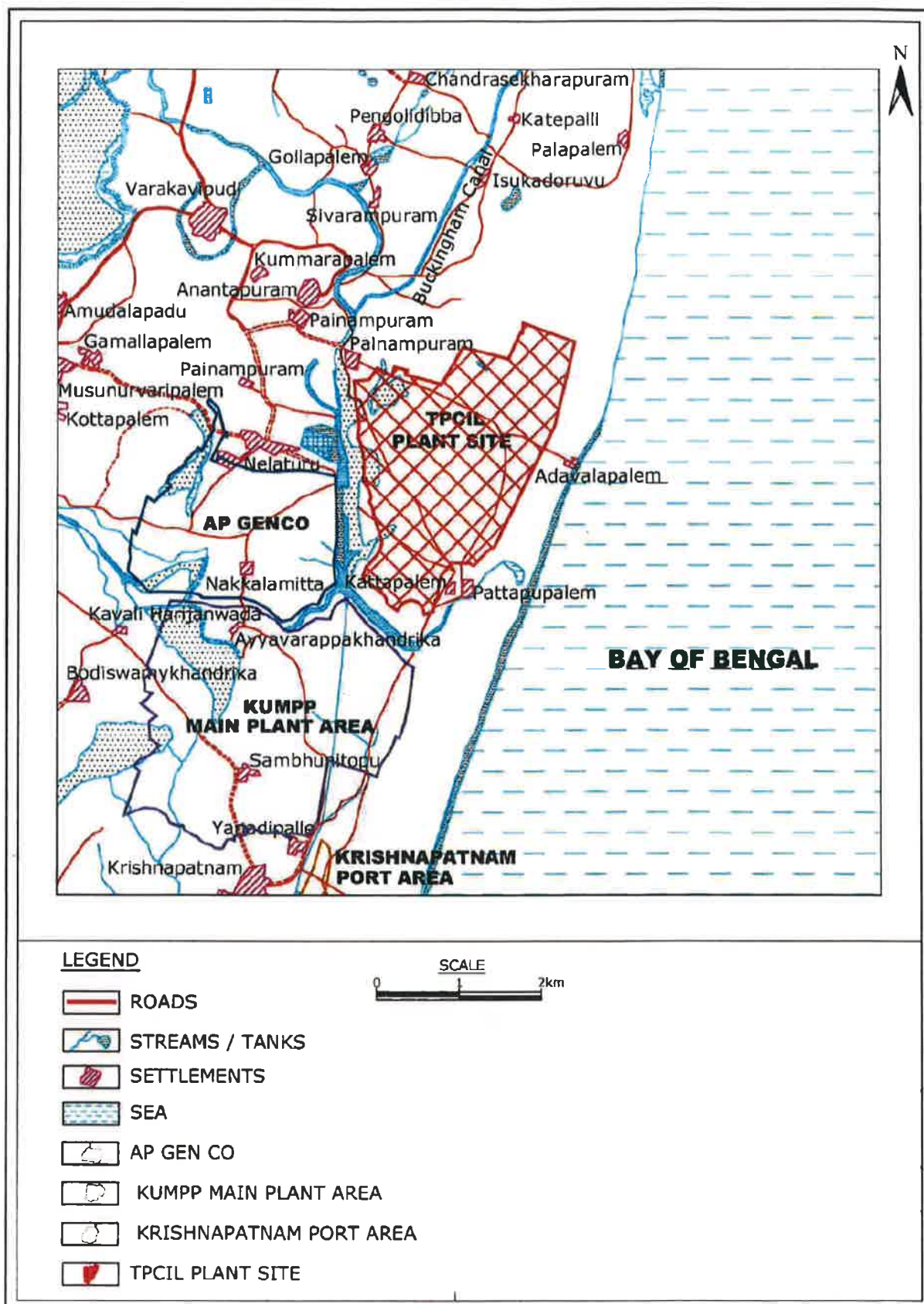


FIGURE-2
KEY MAP OF PROJECT SITE

02. Statutory Approvals/Clearances:

The following statutory approvals and clearances were received for the Project:

S. N.	Permission Description	Accorded By	Permission Details
1	Environment Clearance	Ministry of Environment & Forests, Govt. of India	MoEF Letter dated 4/11/2009. The validity of EC is extended to 7 years by MoEF notification to start operations. Accordingly, SEIL commenced its operations by Sept 2015, well within due date.
2	CRZ Clearance	Ministry of Environment & Forests, GOI	F.No. 11-129/2010-IA.III. Dated: 5 th December, 2011
3	Combined Consent for Operation (CFO) for two units	AP Pollution Control Board, Hyderabad	Order No. APPCB/VJA/VJA/930/HO/CFO/2016 Dated: 15 th Feb 2016. Renewed and is valid till Nov 2021.



GREEN BELT/ GREEN COVER DEVELOPMENT IN SITE



GREEN COVER AROUND BOILER AREA



GREEN COVER ALONG PLANT ROADS



GREEN COVER ALONG PIPE RACK & INTERNAL ROADS



GREEN COVER IN SITE



GREEN COVER ALONG MAIN PLANT ROAD



AVENUE PLANTATION



GREEN COVER NEAR PLANT SERVICE BUILDING



GREEN COVER NEAR SERVICE BUILDING



GREEN COVER IN NORTH EAST AREA



COAL YARD WATER SPRINKLING



CONTINUOUS AMBIENT AIR QUALITY MONITORING WITHIN SITE



CONTINUOUS AMBIENT AIR QUALITY MONITORING WITHIN SITE



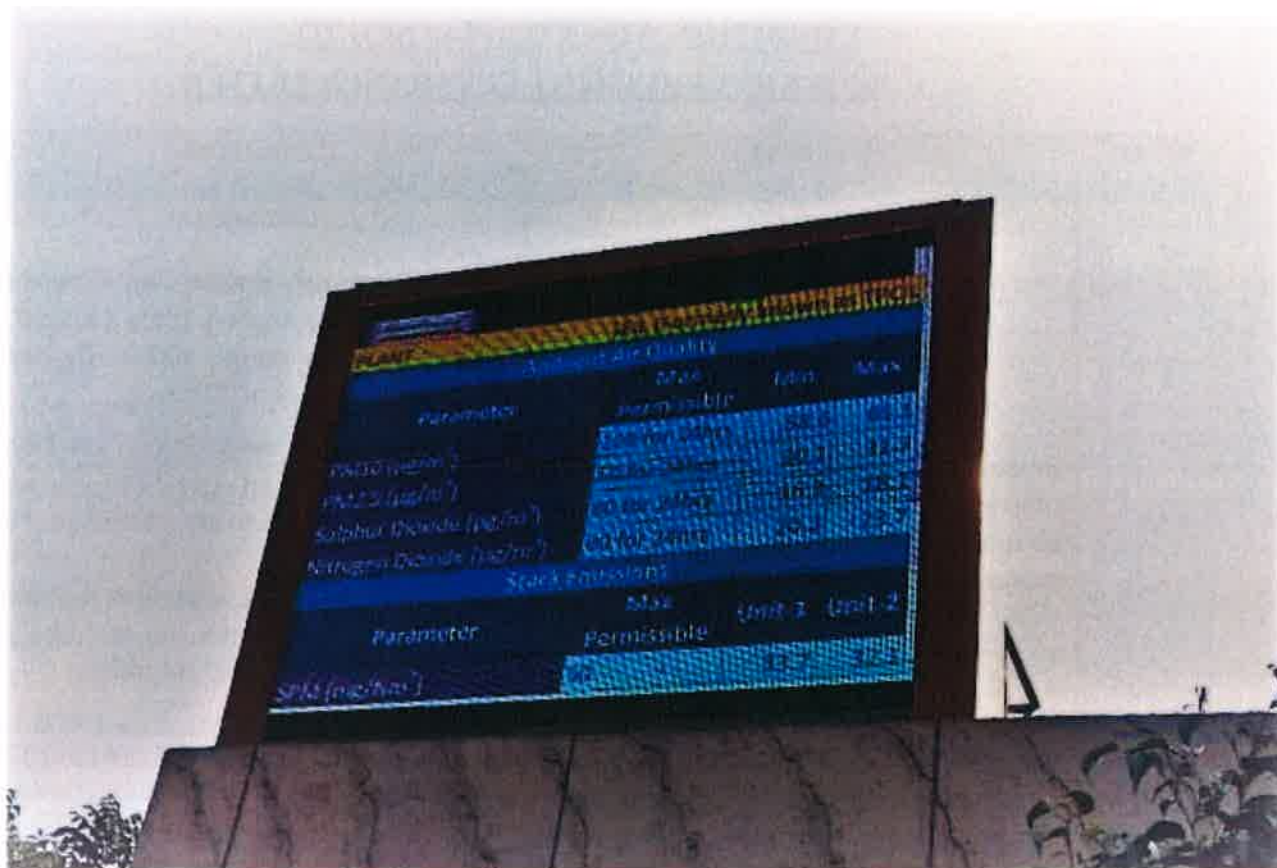
WIND BREAK PLANTATION AROUND COAL YARD



CONTINUOUS MONITORING OF DUST SUPPRESSION AT COAL YARD USING PTZ CAMERAS




DUST EXTRACTION AT TRANSFER POINTS







MAIN GATE DISPLAY - SITE AIR QUALITY & EMISSIONS

CONDITION WISE COMPLIANCE TO
MOEF ENVIRONMENT CLEARANCE LETTER

Sr. No.	Condition	Compliance
4 (i)	Status of implementation of 100% utilisation of Fly Ash generated shall be submitted to the Ministry within six months of operation of the plant.	<p>Complied.</p> <p>SEIL (formerly known as Thermal Powertech Corporation India Limited - TPCIL) is achieving 100% fly ash utilization since Nov'2019.</p> <p>Due to Central and State elections from March'2019 to July'2019, fly ash off-take was severely affected as there were no construction works which in turn lead to very less demand to Cement. Due to this no off-take of ash by cement & brick industries.</p> <p>(Attached letter submitted to CPCB on Annual ash utilization for 2019-2020 vide letter no. SEIL/APPCB /Nellore /2020 /016 dated 20th April'2020 as Annexure - I).</p>
(ii)	Stacks of 275 m height (Bi-Flue for Stage -1 and Single Flue for Stage II) shall be provided with continuous online monitoring equipment for SO _x , NO _x and PM. Exit Velocity of flue gases shall not be less than 25 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	<p>Complied.</p> <p>One bi-flue chimney of 275 m height (Stage-I) is provided along with continuous online emission monitoring equipment for measuring SO_x, NO_x and Particulate Matter.</p> <p>Mercury is monitored on periodical basis.</p> <p>SEIL is complying with the exit velocity norm.</p> <p>APPCB approved third Party Stack Emissions Monitoring Reports are attached as Annexure - II.</p>
(iii)	Possibility for installation of combined intake with neighbouring Power Plants shall be examined and in the event of non-feasibility adequate justification shall be submitted with a period of six months.	Compliance submitted through Ltr. No: TPICL/MoEF/007 on dated: 7 th March-2011.

Sr. No.	Condition	Compliance
(iv)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50mg/Nm ³ .	<p data-bbox="1082 203 1214 232">Complied.</p> <p data-bbox="884 266 1417 448">Electrostatic Precipitators (ESPs) with more than 99.9% efficiency (72 fields each) are installed to limit the Particulate Emission to much less than 50 mg/Nm³.</p> 

Sr. No.	Condition	Compliance
(v)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	<p>Complied.</p> <p>Bag filters are provided for coal crusher, transfer points, ash silos and mill bunker etc.</p> <p>Dust extraction and dust suppression systems with auto mode are provided in coal crusher and coal stack yard.</p> <p>Additional water hydrant lines are provided to suppress fugitive emissions, whenever required.</p> <p>SEIL has also provided wind barriers with 3-5 layers of thick Conocarpus trees (wind resistant plants) all around coal yard, which are designed to arrest spreading of fugitive dust emissions.</p>  <p><u>Operation of Coal Yard Sprinklers</u></p>  <p><u>Conocarpus plantations around coal yard</u></p>  <p><u>Bag filters at Transfer Points</u></p>


Sr. No.	Condition	Compliance
(vi)	<p>Fly ash shall be collected in dry form and storage facility (silos) shall be provided (as applicable). 100% fly ash utilisation shall be ensured from 4th year onwards. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.</p>	<p>Fly ash is collected in dry form and stored in silos of 3x2000 cum capacity for disposal to various users. Unutilised fly ash is being disposed to the ash pond in lean slurry form.</p>  <p>SEIL (formerly known as Thermal Powertech Corporation India Limited - TPCIL) is achieving 100% fly ash utilization since Nov'2019.</p> <p>Due to Central and State elections from March'2019 to July'2019, fly ash off-take was severely affected as there were no construction works which in turn lead to very less demand to Cement. Due to this no off-take of ash by cement & brick industries.</p> <p>(Attached letter submitted to CPCB on Annual ash utilization for 2019-2020 vide letter no. SEIL/APPCB /Nellore /2020 /016 dated 20th April'2020 as Annexure – I).</p> <p>SEIL has installed fly ash classification unit of 5 Lakh Tonne per annum within the site for facilitating exports.</p> <p>Bottom Ash heavy metals analysis reports and Piezo Wells ground water quality reports are attached as Annexure III.</p>

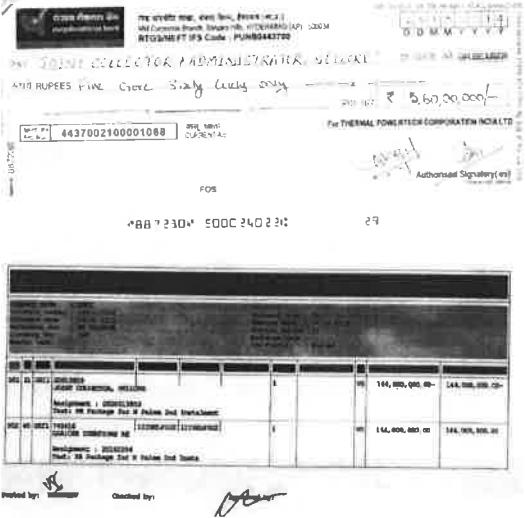
Sr. No.	Condition	Compliance
vii	Ash Pond shall be lined with HDP/LDP lining. Adequate safety measures shall also be implemented to protect the ash dyke from breached.	<p>Complied.</p> <p>Ash pond is lined with impervious HDPE liner.</p>  <p>HDPE sheet layer inside Ash Pond (1mm Thk)</p> <p>The dyke is designed incorporating adequate safety measures.</p>
viii	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	<p>Complied.</p> <p>Natural draft cooling towers are installed at the site.</p> <p>ETP consists of Flash Mixer, Lamella Clarifier, Sludge Pit, Oily Water Separation Unit, Oily water collection tank and Central Monitoring Basin & Dosing system is used to treat effluent to prescribed norms.</p> 
ix	No ground water shall be extracted for the project work at any stage.	<p>Complied.</p> <p>No ground water was extracted for the project work.</p> <p>Entire water requirement of the plant is being met from seawater.</p>

Sr. No.	Condition	Compliance
x	Hydrogeological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Government. In case adverse impact on ground water quality and quantity is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.	<p>Complied.</p> <p>Currently, there is no proposal for extraction of any ground water.</p> <p>Periodic hydrogeology studies are carried out for the site and surroundings. The recent Hydrogeology Study report was submitted on 17th Feb'2020 to MoEF & CC, CPCB and APPCB.</p>
xi	Minimum required environmental flow suggested by the Competent Authority of the State Government shall be maintained in the Channel/rivers even in lean season.	<p>Not applicable.</p> <p>Not applicable as SEIL is not extracting any River/ canal water. Entire plant operations are being met from seawater.</p>
xii	The treated effluents conforming to the prescribed standards should be only discharged. Arrangement shall be made that effluents and storm water do not get mixed.	<p>Complied.</p> <p>ETP & Marine Outfall are in operation for treating wastewater generated in the plant to prescribed standards.</p> <p>Storm water system is adequately designed and has a separate disposal system.</p> <p>ETP & STP Treated effluent analysis reports are attached as Annexure IV.</p>
xiii	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	<p>Complied.</p> <p>Sewage Treatment Plant (STP) is used for treating the domestic sewage.</p> <p>The treated domestic wastewater is used for greenbelt development.</p> <p>STP Treated effluent analysis reports are attached as Annexure V.</p>

Sr. No.	Condition	Compliance
xiv	Rainwater harvesting should be adopted. Central Groundwater Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	<p>Complied.</p> <p>Approved Third party studies are carried out and rainwater harvesting pits are constructed along storm water drains.</p> <p>The sheet flow of rainwater from storm water drains is collected in ponds and is reused.</p> <p>Hydrogeology Study report was submitted on 17th Feb'2020 to MoEF & CC, CPCB and APPCB.</p>
xv	Adequate safety measures shall be provided in the plant area to check /minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	<p>Complied.</p> <p>The coal yard is provided with fire hydrant system and water sprinklers arrangement to control spontaneous combustion of coal.</p>
xvi	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant areas in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	<p>Complied.</p> <p>SEIL provided storage facilities for LDO and HFO.</p> <p>These facilities are certified by the Chief Controller of Explosives, Nagpur. Adequate fire fighting systems are provided to meet any eventuality.</p> <p>A disaster Management Plan is in place to meet any eventuality.</p>
xvii	Regular monitoring of ground water in and around the ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the Project.	<p>Complied.</p> <p>Piezometer wells are drilled around ash pond site.</p> <p>Regular monitoring of ground water in and around the ash pond area is being carried out. Piezo Well Analysis Reports are attached as Annexure III.</p>


Sr. No.	Condition	Compliance
xviii	Shelter Belt consisting of 3 tiers of plantation around the plant of 100 m width and adequate tree density shall be developed.	<p>Complying.</p> <p>SEIL developing scientifically designed greenbelt with adequate tree density. Native species has chosen for plantation. An area of about 415 acres area is being brought under green cover in phased manner.</p> <p>Photos are provided in this report.</p>
xix	First Aid and sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	<p>Complied.</p> <p>Necessary facilities have been provided during construction period.</p> <p>Currently, there are no constructional activities and the labour camp has been closed.</p>
xx	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area requisite personal protective equipment like earplugs /ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc., shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	<p>Complied.</p> <p>SEIL ensured that the ambient noise level at the plant boundary comply with National ambient noise standards. Quarterly monitoring of noise level data is complying with the standards.</p> <p>Workers are provided with personal protective equipment.</p> <p>Necessary medical examinations are conducted and records maintained.</p> <p>APPCB approved third party Noise Quality Monitoring Reports are attached as Annexure VI.</p>


Sr. No.	Condition	Compliance
xxi	<p>Regular monitoring of ground level concentration of SO_x, NO_x, RSPM and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and the frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry. The data shall also be put on the website of the company.</p>	<p>Complied.</p> <p>Continuous AAQ stations (with online analysers) are provided at 3 locations. In addition, manual air quality monitoring is carried out by engaging third party laboratory (approved by state PCB). The location and monitoring is in consultation with PCB.</p> <p>The data is continuously uploaded to CPCB & APPCB websites.</p> <p>APPCB approved third party Ambient Air Quality Monitoring Reports are attached as Annexure VII.</p> <div data-bbox="887 797 1345 999">  </div>
xxii	<p>A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.</p>	<p>Not applicable.</p> <p>There are no homesteads on the land acquired for the Project. Hence, no R&R is applicable for the project.</p>

Sr. No.	Condition	Compliance
xxiii	<p>An amount of Rs 32.0 crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 6.4 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.</p>	<p>Complied.</p> <p>An amount of Rs. 20 crores deposited with District Administration in (Rs. 5.6 crores in 2014 & Rs. 14.4 crores in 2016) for shifting of Fishermen Village of Nelaturupalem.</p> <p>In addition, an amount of Rs 22 crores spent in surrounding area during Project Period.</p> <p>The details of CSR activities being implemented by SEIL are attached as Annexure VIII.</p> 

Sr. No.	Condition	Compliance
xxiv	<p>As part of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc., can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.</p>	<p>Complied.</p> <p>Sembcorp Energy India Limited had carried out a Household survey to identify the skill development needs among 4 surrounding Panchayats of Muthukur and TP Gudur Mandal's. Unemployed Youth and women had shown their choice of vocation in 12 trades under Skill Development and 8 Trades for initiating Entrepreneurship Development Programs. Accordingly SEIL has set-up an "Entrepreneurship Development Centre". Till End of June'2020:</p> <ul style="list-style-type: none"> • 553 women and youth were trained in Sembcorp Entrepreneurship development Centre. • Free bus transportation arranged to the trainees from the surrounding villages to the center daily to attend the Training. • SEDC has 4 Class rooms and 2 workshops with more than 10,000 sq. feet area and can accommodate 200 trainees at a time. • SEDC partners with Blaze IT Solutions, Kandukuri Garments, Naandi Foundation, KP port etc. <div data-bbox="890 1144 1428 1854">  </div>

Sr. No.	Condition	Compliance
xxv	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	Complied.
xxvi	The Project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at the Website of the Ministry of Environment and Forests at http://envfor.nic.in .	Complied. Advertisements have been given in Telugu newspaper on dated: 04 th July-2009 and in English newspaper on dated: 03 rd July 2009.
xxvii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad /Municipal corporation, urban local body and the local NGO, if any from whom suggestions/representations, if any, received while processing the proposal. The Clearance letter shall also be put on the website of the Company by the Proponent.	Complied. Clearance letter was sent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, urban local body. Clearance letters are also uploaded in Sembcorp website at https://www.sembcorpenergyindia.com/AboutUs/Disclosure
xxviii	A dedicated Environment Management Cell with suitable qualified personnel shall be set up under the control of a Senior executive who will report directly to the head of the organization.	Complied. SEIL established an Environment Management Cell with suitable qualified personnel under the supervision of Head-HSE, who reports directly to the Business Head.

Sr. No.	Condition	Compliance
xxix	<p>The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely: SPM, RSPM, SO_x, NO_x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>Complied.</p> <p>Regular compliance reports are submitted to ministry. SEIL uploaded the status reports including the monitored data in the Sembcorp website at https://www.sembcorpenergyindia.com/AboutUs/Disclosure</p> <p>The environmental monitored data including Ambient Air Quality for criteria pollutants and stack emissions is displayed at the main gate.</p>  <p><u>Main Gate display of AAQ data</u></p>
xxx	<p>The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data to the respective Regional Office of MOEF, the respective Zonal office of CPCB and SPCB.</p>	<p>Complied.</p> <p>SEIL submitting the six monthly reports on status of compliance and the monitored data to the concerned regulatory authorities.</p>
xxxi	<p>The Environment Statement for each financial year ending 31st March in Form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry.</p>	<p>Complied.</p> <p>Environmental Statements (Form V) for the annual operations are being submitted to APPCB (Ref. No.: SEIL/APPCB/Nellore/2020/016 dated 15th May'2020).</p>

Sr. No.	Condition	Compliance
xxxii	<p>The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.</p>	<p>Complied.</p> <p>SEIL submitting the six monthly reports on status of compliance and the monitored data to the concerned regulatory authorities.</p> <p>The reports are uploaded on APPCB & Sembcorp website.</p> <p>https://www.sembcorpenergyindia.com/AboutUs/Disclosure</p> <p>https://pcb.ap.gov.in/UI/Submission Compliance of EC CFE CFO Direction.aspx</p>
xxxiii	<p>Regional Office of the Ministry of Environment and Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels including NO_x (from Stack and ambient air) shall be displayed at the main gate of the power plant.</p>	<p>Noted. Being complied.</p> <p>The compliance reports are also uploaded in Sembcorp website.</p> <p>https://www.sembcorpenergyindia.com/AboutUs/Disclosure</p> <p>The environmental monitored data including Ambient Air Quality for criteria pollutants and stack emissions data is being displayed at the main gate.</p>  <p><u>Main Gate display of AAQ data</u></p>

Sr. No.	Condition	Compliance
xxxiv	Separate funds shall be allocated for implementation of environmental protection measures along with item wise break up. These costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year wise expenditure should be reported to the Ministry.	Complied.
xxxv	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the Project by the concerned authorities and the dates of start of land development work and commission of Plant.	Complied and communicated.
xxxvi	Full cooperation shall be extended to the Scientists/Officers from the Ministry /Regional Office of the Ministry at Bangalore/CPCB/SPCB.	Noted for compliance.
xxxvii	Harnessing Solar Power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring reports.	Complied. Solar Panels have been installed above canteen roof and solar power light fixtures are installed at plant and township.
xxxviii	Long term study of radioactivity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analysed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Quarterly Coal heavy metal analysis reports are attached as Annexure IX.

Sr. No.	Condition	Compliance
Xxxix	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	<p>Complied.</p> <p>Stock Pile Dust Suppression system around coal yards, Dry Fog dust suppression System along conveyor belts, Cyclone separators & bag filters at crusher house, Vacuum truck for road dust cleaning are implemented to avoid fugitive dust emissions and prevent the impact on agricultural or non-agricultural land.</p>
xl	Space for FGD shall be provided for future installation as may be required.	Complied.
Xli	No ground water shall be extracted for use in operation of the power plant even in lean season. No water bodies including natural drainage system in the area shall be distributed due to activities associated with the setting up / operation of the power plant.	<p>Complied.</p> <p>Plant water requirement is met with Sea Water treated at WTP.</p>
Xlii	Fly ash not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point f the time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close coordination with the State Pollution Control Board.	Complying.
Xliii	Green belt shall also be developed around the ash pond over and above the green belt around the plant boundary.	Complied.
Xliv	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.	<p>Complied.</p> <p>Separate fund has been allocated for Green belt development and maintenance.</p>

Sr. No.	Condition	Compliance
Xlv	For proper and periodic monitoring of CSR activities, a CSR committee or a social audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	<p>Complied.</p> <p>CSR Committee has been formed and is working.</p>
Xlvi	An Environment Cell comprising of at least one expert in environment science / engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement / mitigation measures.	<p>Environment Management Cell exists in the plant with two full time Environment Officers with Post Graduation Degree in Environmental Science Engineering, who directly reports to Head HSE - SEIL.</p> <p>Services of Marine biologist & ecologist will be hired based on requirements.</p>
Xlvii	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	<p>Complied.</p> <p>Environmental Policy has been incorporated in the QHSE Policy.</p>
4	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.	<p>Noted.</p>
5	The environmental clearance accorded shall be valid for a period of 5 years to start operations by the Power Plant.	<p>Noted. The validity of EC is extended to 7 years by MoEF notification.</p> <p>The 2x660 MW project has already commenced operations since 2015.</p>

Sr. No.	Condition	Compliance
6	Concealing factual data or submission of false /fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act 1986.	Noted.
7	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed to add additional environmental protection measures required, if any	Noted for compliance.
8	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted.
9	Any appeal against this environmental clearance shall lie with the National Environmental Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of National Environmental Appellate Act, 1997.	Noted.

