



**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,  
ODISHA**

SRF-2/1, Unit-IX, Bhubaneswar-751022, Tel: 0674-3510075, Email: seiaaodisha@gmail.com  
(A statutory body constituted by Ministry of Environment, Forest & Climate Change under  
Environment (Protection) Act, 1986)

**File No. SIA/OR/THE/289000/2022**

Dated 06<sup>th</sup> February, 2023.  
Bhubaneswar

To

M/s. Arcelormittal Nippon Steel India Ltd.  
At-Udayabata, Post-Paradip, District-Jagatsinghpur,  
Odisha, Pin-754142

**Sub: Proposal for Transfer of Environmental Clearance for 60 (2 × 30) MW, Phase-I coal based Captive Thermal power plant at Bijaychandrapur, Kujanga Block, Dist-Jagatsinghpur from the name M/s. Essar Power (Orissa) Ltd. to M/s. Arcelormittal Nippon Steel India Ltd -reg.**

- Ref: (i) EC letter no./EC identification no. 219/SEIAA dated 16.04.2011.  
(ii) Letter no. Nil/Sairat dated 12.08.2022  
(iii) Online Application no. SIA/OR/THE/289000/2022 dtd.13.12.2022

Sir,

This has reference to your online application no. SIA/OR/THE/289000/2022 dtd.13.12.2022, wherein you have requested for transfer of Environmental Clearance (EC) granted by SEIAA, Odisha vide letter no./EC identification No. 219/SEIAA dated 16.04.2011. issued earlier in favour of M/s. Essar Power (Orissa) Ltd.

2. The application was examined in the State Environment Impact Assessment Authority (SEIAA), Odisha in its 103<sup>rd</sup> meeting held on 16.12.2022 in accordance with the Para-11 of the EIA Notification, 2006 as amended from time to time and the following points are noted;

(i) As submitted by the project Authority, it is noted that EC was obtained for a period of 5 years from issue of EC letter in favour of M/s. Essar Power (Orissa) Ltd. vide the above-mentioned EC letter under reference. In the meantime, the company name has been changed from M/s. Essar Power (Orissa) Ltd. to M/s. Arcelormittal Nippon Steel India Ltd.

(ii) Now, the project Authority has applied online proposal in Parivesh Portal for Transfer of EC in favour of M/s. Arcelormittal Nippon Steel India Ltd.

(iii) Documents submitted for EC Transfer;

- Form No. 7 for transfer of Environmental Clearance,
- Letter no. nil dated 12.08.2022 of project authority for transfer of EC
- Earlier EC copy, its compliance and CTO

3. **Transfer of Environmental Clearance (EC) of 60 (2 × 30) MW, Phase-I coal based Captive Thermal power plant at Bijaychandrapur, Kujanga Block, Dist-Jagatsinghpur in favour of M/s. Essar Power (Orissa) Ltd. issued vide SEIAA, Odisha EC letter/EC identification no./EC identification no. 219/SEIAA dated 16.04.2011 is allowed to transfer in favour of M/s. Arcelormittal Nippon Steel India Ltd., with below mentioned terms conditions for the validity period 10 (ten) years subject to satisfactory compliance to all the stipulated terms and conditions and the new project authority shall submit six month compliance report on regular basis falling which the EC stands automatically revoked. In case, there is a change in the scope of the project, fresh Environment Clearance shall be obtained.**





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**A. Statutory compliance:**

1. Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305(E) dated 7.12.2015, G.S.R.593(E) dated 28.6.2018 and as amended from time to time shall be complied.
2. Part C of Schedule 11 of Municipal Solid Wastes Rules, 2016 dated 08.04.2016 as amended from time to time shall be complied for power plants based on Municipal Solid Waste.
3. MoEF & CC Notification G.S.R 02(E) dated 2.1.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
4. MoEF & CC Notifications on Fly Ash Utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 as amended from time to time shall be complied.
5. Thermal Power Plants other than the power plants located on coast and using sea water for cooling purposes, shall achieve specific water consumption of 2.5 m<sup>3</sup>/MWh and Zero effluent discharge.
6. The recommendation from Standing Committee of NB WL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
7. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its sitting criteria for height clearance.
8. Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CG WA.

**B. Ash content/ mode of transportation of coal:**

1. EC is given on the basis of assumption of 5 to 8 % of ash content and 500 km distance of transportation in rail/road/conveyor/any other mode. Any increase of %ash content by more than 1 percent, and/or any change in transportation mode or increase in the transport distance (except for rail) require application for modifications of EC conditions after conducting the 'incremental impact assessment' and proposal for mitigation measures.

**C. Air quality monitoring and Management:**

1. Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO<sub>2</sub> emissions standard of 100 mg/Nm<sup>3</sup>.
2. Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NO<sub>x</sub> Burners with Over Fire Air (OFA) system shall be installed to achieve NO<sub>x</sub> emission standard of 100 mg/Nm<sup>3</sup>.
3. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm<sup>3</sup>.
4. Stacks of prescribed height 106 m shall be provided with continuous online monitoring instruments for SO<sub>x</sub>, NO<sub>x</sub> and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.





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6. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> within the plant area at least at one location. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
8. Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

**D. Noise pollution and its control measures:**

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
3. Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

**E. Human Health Environment:**

1. Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study also assess the health impacts due to air polluting agents.
2. Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
3. Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4. Sewage Treatment Plant shall be provided for domestic wastewater.

**F. Water quality monitoring and Management:**

1. Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 2.5 m<sup>3</sup>/MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5 or above for power plants using sea water.
2. In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.





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3. Records pertaining to measurements of daily water withdrawal and river flows (obtained from Irrigation Department/Water Resources Department) immediately upstream and downstream of withdrawal site shall be maintained.
4. Rainwater harvesting in and around the plant area he taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
5. Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
6. The treated effluents emanating from the different processes such as DM plant, boiler blow down, ash pond/dyke, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
7. Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
8. Based on the commitment made by the Project Proponent, Sewage Treatment Plants within the radius of 50 km from proposed project, the treated sewage of 20 KLD from STP 10 KLD shall be used as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies.
9. Wastewater generation of 20 KLD from various sources (viz. cooling tower blowdown, boiler blow down, wastewater from ash handling, etc) shall be treated to meet the standards of pH: 6.5-8.5; Total Suspended Solids: 100 mg/i; Oil & Grease: 20 mg/I; Copper: 1 mg/1; Iron:1 mg/I; Free Chlorine: 0.5; Zinc: LO mg/1; Total Chromium: 0.2 mg/I; Phosphate: 5.0 mg/I;
10. Sewage generation of 05 KLD will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/I; Total Suspended Solids: 100 mg/1; Fecal Coliforms (Most Probable Number): <1000 per 100 ml.

**G. Risk Mitigation and Disaster. Management:**

1. Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.
2. Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organisation (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
5. Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.





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**H. Green belt and Biodiversity conservation:**

1. Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant.
2. In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
3. Suitable screens shall be placed across the intake channel to prevent entrainment of life forms including eggs, larvae, juvenile fish, etc., during extraction of seawater.

**I. Waste management:**

1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
2. Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the ground water.
3. Ash Pond shall be lined with impervious liner as per the soil conditions. Adequate dam/dyke safety measures shall also be implemented to protect the ash dyke from getting breached.
4. Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Fly Ash Utilization issued by the Ministry and amendment thereto. By the end of 4th year, 100% fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. Fly ash utilization details shall be submitted to concerned Regional Office along with the six-monthly compliance reports and utilization data shall be published on company's website.
5. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry/Medium Concentration Slurry/Lean Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.
6. In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up:
  - i) Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled.
  - ii) Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.

**J. Monitoring of compliance:**

1. Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.





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3. Energy Conservation Plan to be implemented as envisaged in the ER EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.
4. Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
5. Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
6. Environment Cell (EC) shall be constituted by taking members from different divisions, headed by a qualified person on the subject, who shall be reporting directly to the Head of the Project.
7. The project proponent shall (Post-EC Monitoring):
  - a. Send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
  - b. Upload the clearance letter on the web site of the company as a part of information to the general public.
  - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <http://parviesh.nic.in>.
  - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
  - e. monitor the criteria pollutants level namely; PM (PM<sub>10</sub> & PM<sub>2.5</sub> in case of ambient AAQ), SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
  - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (upload in Parivesh side and the copies as well as by e-mail) to the Regional Office of MoEF & CC, the respective Zonal Office of CPCB, SEIAA, Odisha and the SPCB;
  - g. 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;
  - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.





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**K. Effluent Release:**

1. At the effluent release point, maximum temperature of the discharge water shall not be more than 5°C and salinity shall not exceed 50 ppt with respect to that of the ambient seawater.
2. Use of antifouling agents like chlorine / hypochlorite, shall be carefully controlled. The chlorine concentration shall not exceed 0.2 ppm at the effluent release point.
3. The effluent when released at the selected location shall attain sufficient dilution so that near ambient water quality (particularly temperature and salinity) is attained within 500 m from the release location, at low tide.
4. The location of the diffuser shall be marked with a solar lighted buoy to avoid accidents.
5. The site selected based on mathematical modeling shall ensure absence of recirculation of the effluent plume in the seawater intake area under all tidal conditions.
6. The effluent shall be released through a properly designed multiport diffuser above the seabed to facilitate its efficient initial mixing with the receiving seawater.
7. Efficacy of the diffuser shall be ascertained at least once in 2 years through scientific studies and corrective actions such as cleaning of the diffuser from marine growth, removal of silt deposits, etc. shall be taken up, if warranted.
8. Continuous online monitoring system for Temperature and Salinity shall be installed to monitor the quality of effluent.

**L. Common to intake and effluent:**

- I. The pipeline shall be buried below the seabed at a depth to ensure its stability under rough sea conditions particularly during cyclone / tsunami. The depth of burial will depend on the seafloor strata but normally the top of the pipeline shall be at least 1m below the bed level. In the surf and intertidal zones, the pipeline shall be buried below the maximum scour level.
1. In case of open channel, the channel shall be constructed as per the recommendations of State Coastal Zone Management Authority (SCZMA).
2. If the substratum is rocky the pipeline may be anchored to the rock provided the geology of the area satisfactorily supports the structure which shall be ascertained through geo-technical investigations.
3. Exposed pipeline section and riser shall be protected by armour stone from waves, boats anchoring, fishing activities etc.
4. The location of the riser & diffuser shall be marked with a solar lighted buoy to avoid accidents from boats.

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Yours faithfully,

*[Handwritten signature]*  
**Member Secretary**



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**Encl: Copy of the Original EC**

Copy to

1. Joint Secretary (Environment), Ministry of Environment, Forests and Climate Change Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110003 for information.
2. Principal Secretary, Forests & Environment Dept., Government of Odisha for information.
3. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for information.
5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032 for information.
6. Member Secretary, CGWA, 18/11, Jamnagar House, Man Singh Road, New Delhi-110011 for information.
7. Copy to the Collector/Sub Collector, Jatsinghpur for information and necessary action.
8. Chairman/Member / Member Secretary, SEIAA for information.
9. Chairman, SEAC/Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
10. Guard file for record.

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**Member Secretary**