

## **File No:** J-11011/131/2022-IA.II (IND-1)

## **Government of India** Ministry of Environment, Forest and Climate Change **IA Division**

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Date 25/07/2024



To,

#### M/s. ARCELORMITTAL NIPPON STEEL INDIA LIMITED

ArcelorMittal Nippon Steel India Limited, Reg Office- 27km Surat-Hazira road, Hazira, Surat, Gujrat 394270

Email: satyaprasad.koduri@amns.in

**Subject:** 

Expansion of Iron Ore Pelletization from 7.0 MTPA to 11.0 MTPA in existing plant area of 110 acre located at Survey No. 15A, Kancharapalem, Near Flyover, Scindia Road, Vishakhapatnam Urban, Vishakhapatnam district, Andhra Pradesh by M/s Arcelor Mittal Nippon Steel India Limited (Formerly Essar Steel India Limited) - Grant of Environmental Clearance under the provisions EIA Notification, 2006 -regarding.

Sir/Madam,

This refers to your proposal no IA/AP/IND1/455218/2023 Dated 30.12.2023 along with copy of EIA report, Forms (Part A, B and C) seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. Further, the PP has uploaded the information on portal on 07.02.2024.

2. The particulars of the proposal are as below:

(i) EC Identification No. EC23A1006AP5290681N

(ii) File No. J-11011/131/2022-IA.II (IND-1)

(iii) Clearance Type Fresh EC

(iv) Category

(vii) Name of Project

3(a) Metallurgical Industries (ferrous and non (v) Project/Activity Included Schedule No.

ferrous),1(d) Thermal Power Plants

Industrial Projects - 1 (vi) Sector

> Expansion of Iron Ore Pelletization from 7.0 MTPA to 11.0 MTPA in existing plant area of 110 acre located at Survey No. 15A, Kancharapalem, Near Flyover, Scindia Road, Vishakhapatnam

Urban, Vishakhapatnam district, Andhra Pradesh -530004 by M/s. Arcelor Mittal Nippon Steel India

Limited (Formerly Essar Steel India Limited)

(viii) Name of Company/Organization

(ix) Location of Project (District, State)

(x) Issuing Authority

(xi) Applicability of General Conditions as per **EIA Notification, 2006** 

ARCELORMITTAL NIPPON STEEL INDIA

LIMITED

VISAKHAPATANAM, ANDHRA PRADESH

MoEF&CC

No

3. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is covered schedule S. No. 3(a) Metallurgical Industries (ferrous & non-ferrous) and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

- 4. The proposal is considered in the 52<sup>nd</sup> meeting of the EAC for Industry-I sector held during 23<sup>rd</sup> -25<sup>th</sup> January, 2024, wherein the Committee, after detailed deliberations, recommended the proposal. The proposal was examined in Ministry and referred back to EAC for further deliberation. The EAC in its 59th meeting for Industry-I sector held on 24th May, 2024 has reconsidered the proposal, wherein the committee reiterate its decision and recommended instant proposal for grant of Environment Clearance. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <a href="https://parivesh.nic.in.">https://parivesh.nic.in.</a>
- 5. The details of the proposal are as per the EIA/EMP report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1 Sector) are given at Annexure 1, Unit configuration and capacity are given at Annexure II.
- 6. The EAC, in its meeting held during 23<sup>rd</sup> to 25<sup>th</sup> January, 2024, inter-alia, deliberated the following:
- i. The instant proposal is for expansion of Iron Ore Pellet Plant Manufacturing Unit (7 MTPA) by inclusion of Pelletisation Plant – III in an existing plant area of 110 acres.
- ii. The EAC noted that M/s. Arcelor Mittal Nippon Steel India Limited (Formerly Essar Steel India Limited), has established initially 4 MTPA Iron Ore Pellet Plant during 1991 after obtaining Consent to Establish (CTE) from APPCB on 12/07/1991. There after the plant was commissioned after obtaining Consent to Operate (CTO) from APPCB on 30/10/1997. Later PP went for expansion of the Pelletisation plant from 3.3 MMTPA to 7.0 MMTPA under-II vide APPCB order No. 13060/PCB/C.Estt/RO-VSP/EE/2-2001-3719 dated 13.03.2001 envisaging to carry the beneficiated ore fines in slurry form rom the beneficiation plant located at Kirandul, Chhattisgarh state. PP also established a Coal based captive power plant to generate Electricity of net 25 MW for captive use vide Consent to Establish dated 19/09/2003 & Consent to Operate dated 12/05/2006 from APPCB. As per the Ministry's circular dated 21/11/2006, the projects which are attracting the provisions of EIA, 2006 for which NOC issued before 14/09/2006 are not required to take Environment Clearance under the provisions of EIA Notification, 2006. In the instant case, the proponent has obtained CTE as well as CTO prior to 14/09/2006, hence EC has not been obtained by the PP under the provisions of EIA Notification, 2006. Therafter, the company obtained consent for establishment for fuel change from Low Sulphur Heavy Stock (LSHS) to natural gas 0.4 MMSCMD (fuel oil as standby) vide Order No. 338/APPCB/CFE/RO-VSP/HO/2014, dt: 06.01.2021 valid till 05.01.2028. M/s. AMNS applied for environment clearance for change of fuel from Low Sulphur Heavy Stock (LSHS) to Natural Gas (Fuel Oil as stand by) for existing project and Ministry granted the same vide letter No. F.No. J-11011/131/2022-IA-II(IND-I), EC Identification No. EC22A008AP120408 dated 05.12.2022. The latest Consent to Operate for the existing unit was accorded by APPCB vide Consent Order No: APPCB/VSP/VSP/111/CFO/HO/2019dated 04/10/2019 and subsequent amendment on name change vide Order No: APPCB/VSP/VSP/111/CFO/HO/2020-28/03/2020. The validity of CTO is up to valid up to 31/12/2024.
- iii. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
- iv. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the

EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

- v. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.
- vi. The EAC also took into consideration the drone survey of the project site and kml file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH and made following deliberations accordingly.
- vii. The PP has reported that unit involves a total area of 60.0454 ha (as per VPA Lease agreement) which includes plant area of 44.5154 ha and Stockpile area of 15.53 ha. However, total land area is 62.7644 Ha (as per kml file & Google image) which includes Pellet Plant Area: 44.5154 Ha, Stock pile Area 15.53 Ha and Conveyor (RoW) 2.719 Ha. [The difference is the existing Conveyor corridor area (2.719 Ha) connecting between the existing Pellet plant & Stockpile area. The Right of way for the same will be renewed after the registration of Land lease agreement.] This land is on lease with effective from 20.09.1991 from Visakhapatnam Port Trust along with change of land use for establishing pellet plant as well as CPP. The long term (30 Years) of land lease agreement with Visakhapatnam Port Trust (VPT) was expired in September'2021. Project Proponent applied for renewal for another 30 years and offer of allotment for 30 Years Lease obtained vide Letter with Ref. No. IENG/ESTATE/F100437/1415 dated 29.12.2023. In continuation to the offer of allotment letter dated: 29.12.2023, AMNS India have submitted the lease agreement copy signed from their end to VPA for completing the lease agreement registration on 20.01.2024. The copy of the same is submitted. The land lease agreement registration will be executed by VPA within next 15 days.

viii. PP has reported that Environmental & CRZ clearance letter obtained by VPT for its various facilities vide letter F. No. 11-93/2012-IA-II dated 25<sup>th</sup> May 2016. The existing stockpile area is coming under Ore handling area (OHC) as per the VPA layout Plan submitted. Further, as per EC & CRZ Clearance letter F. No. 11-93/2012- IA III, dated 25.05.2016, mentions that the OHC area of VPA is non-CRZ area. AMNS India have also confirmed the same by latest certified CRZ map prepared by NIO, Visakhapatnam in Jan'24 and the copy of the same is submitted. As this stockpile area is coming under non-CRZ area, hence no restrictions on type of cargos/ products for storing in this area. AMNS India is not storing or handling any hazardous material/substances except Iron Ore fines/pellets.

ix. For the Specific ToR condition, PP requested APPCB vide letter dated: 29.09.2023 for certificate that the existing plant do not fall under CPA/SPA. PP further checked on the CPCB website for the status of CPA/SPA, and found that Visakhapatnam is not covered under the CPA/SPA area list as per the status updated on 10.11.2022. In this regard, AMNS further requested CPCB also to provide the current status. The copy of the correspondence in this regard is submitted. x. The nearest habitations to plant are Gnanapuram (0.9 km, E), Kancharpalem (0.9 km, NE), Velampeta (2 km, SE), Akkyapalem (2.8 km, NE) and Gandhigram (3.3 km, SW) from the project site boundary. Further, there is a school at a distance of 0.79 km from the project site along with other sensitive areas. The EAC is of the opinion that PP shall prepare and strictly implement the environmental safeguard measures to minimise the impact of the project activities on these sensitive areas.

xi. There are two streams namely Mehadri Gedda (1.1 km, SW), Narava Gedda (1.7 km, W) align with Bay of Bengal (3.3 Km, E) and Mehadri Gedda Lake (9.2 km, NW) which exists within the study area. The EAC is of the opinion that the water body shall not be disturbed. Mitigation measures w.r.t. safeguarding the water body shall be prepared and implemented.

xii. The Kambalakonda Wildlife Sanctuary falls in study area, which is located on the Kailashgiri Hills about 7.8 km north of the project site. The Kambalakonda Wildlife Sanctuary has been notified by MoEF&CC vide Draft Notification No. S.O. 62 (E) dated 7<sup>th</sup> January, 2016. Satellite map shows Kambalakonda WLS ESZ boundary as per gazette notification dated 28<sup>th</sup> April 2017 and project boundary. The ESZ boundary of Kambalkonda WLS is 5.6 km from project boundary & 6.17 km from project centre.

xiii. There are 8 Schedule-I species namely Leopard cat, Mouse Deer, Leopard, Pangolin, Indian Python, Pea fowl, Pied Hornbill and Vultures as per the forest working plan. Total fund earmarked for implementation of conservation plan are

Rs. 4 lakhs (capital cost) and Rs. 1.5 lakhs (recurring cost).

xiv. Existing Fresh Water requirement is 1200 m<sup>3</sup>/day, which is obtained from Greater Visakhapatnam Municipal Corporation (GVMC) and permission for the same has been obtained from GVMC vide File No. 10935, dated 18.01.2022. The water requirement for the proposed project is estimated as additional 3010 m<sup>3</sup>/day. The permission for additional drawl of surface water is under process. Post expansion project the total water requirement from GVMC will be 4210 m<sup>3</sup>/day. PP also submitted water Balance Diagram for the post expansion project.

xv. The Committee has deliberated on the baseline data and revalidated data along with incremental GLC due to the proposed project and is of the opinion that stringent action plan to minimise the level of particulate matter shall be prepared and implemented.

xvi. The PP has submitted that existing green belt has been developed in 17.49 ha area with total plantation of about 41580 saplings which is about 38.0% of the total plant area of 44.52 ha. Out of the existing greenbelt area about 2.323 ha. greenbelt with 5740 number of small trees will be shifted / cut for the proposed Pellet Plant 3 (PP3). Proposed greenbelt will be developed in 0.675 ha with 3900 numbers of trees shifted from PP3 site which is about 1.52% of the total project area. Thus post expansion total of [(17.49 - 2.323 + (0.675ha.)] 15.18 ha area (34.1% of total project area) with 39740 numbers of trees will be as greenbelt. In addition to this, AMNS is committed develop additional 6 Ha plantation in VPA & Greater Visakhapatnam Municipal Corporation (GVMC) area within 2 years. This will bring the overall greenbelt area 34% considering the total project area of 62.76 Ha. Further, project proponent has submitted an undertaking to develop additional green belt in about 6 Ha in the areas allotted for plantation purpose by VPA & GVMC. The EAC deliberated on the greenbelt layout plan along with action plan and the budget earmarked and is of the opinion that greenbelt shall be completed within a period of 1 year.

xvii. Total number of 3900 trees will be uprooted and shifted and nurtured in 0.675 hectares' area along eastern plant boundary in one year. To compensate for the 1840 number of trees to be cut, three times the number of trees cut i.e. 5600 number of trees will be planted outside the project area, in surrounding areas and along eastern plant boundary after taking due permission from Port / District Authorities. Tall plants will be used for greenbelt development for better survival rate. Permission from State Forest Department for shifting of 3900 small trees and cutting of 1840 number of small trees has been applied vide AMNS application dated 21.12.2023. PP has reported that the survey (assessment of the trees) by Forest Department has been conducted on 08.01.2024 and the permission will be given in due course to time.

xviii. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.

xix. The Committee also deliberated on the public hearing issues along with revised action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

xx. The EAC deliberated on the certified compliance report of IRO along with the ATR and updated status on the ATR submitted by the project proponent and is of the opinion that PP shall strictly comply with the observations of IRO and submit the compliance of the same to IRO with the half yearly compliance report.

xxi. The EAC deliberated on the compliance of earlier EC condition specifically w.r.t. installation of air cooled condenser for power plant. The PP reported that new Air cooled condenser will require additional space and need to change the entire Power plant layout and design as per the feasibility study. Also, AMNS need to use the slurry filtered water to achieve the Zero Liquid discharge. Considering this, AMNS requested EAC/Ministry to waive off this condition. A proper technical justification for the waiver of this condition of installation of Air cooled Condenser in existing Captive Power Plant is submitted. The EAC deliberated and agreed to the request of project proponent.

xxii. The EAC also deliberated on the written submission of the project proponent and found it satisfactory.

xxiii. It was also apprised to the Committee that the monitoring division of MoEF&CC has issued a letter vide letter dated 10.01.2024 seeking information on the existing project based on the compliance of earlier EC granted by MoEF&CC dated 05.12.2022. In this regard, PP vide letter dated 16.01.2024 submitted the ATR and Action Plan w.r.t. verification report dated 13.11.2023. The PP presented the same before the EAC and based on the submission, the EAC found it

satisfactory.

xxiv. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

xxv. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

xxvi. The EAC also reviewed the EC conditions (specific and general) pertaining to Industry-I projects and observed that some of the specific conditions stipulated so far in the previously recommended EC projects are common and applicable to most of the projects in general. In view of the same, the General Conditions (in case of EC projects) have been revised through reallocation of these common conditions from specific to General Conditions (in case of EC projects). Accordingly, the instant project is also being stipulated with the modified General conditions.

- 7. The EAC, in its 52<sup>nd</sup> meeting of Expert Appraisal Committee (Industry-1 Sector) held during 23<sup>rd</sup> to 25<sup>th</sup> January, 2024, based on information & clarifications provided by the project proponent and after detailed deliberations **recommended** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements.
- 8. The MoEF&CC has examined the proposal and referred back to EAC for further deliberation. The EAC in its 59th meeting for Industry-I sector held on 24th May, 2024 has reconsidered the proposal, wherein the committee reiterate its decision and recommended instant proposal for grant of Environment Clearance.
- 9. The EAC, in its meeting held on 24th May, 2024, inter-alia, deliberated the following:
- i. The instant proposal was considered during the 52<sup>nd</sup> meeting of the EAC for Industry-I sector held on 23<sup>rd</sup> 25<sup>th</sup> January, 2024 wherein the EAC recommended the proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions.
- ii. The EAC deliberated in detail on the reply of PP on ADS raised by the Ministry. The EAC further sought additional detailed information related to submission of photo affidavit with the details of the case along with justification for not declaring the same at the time of submission of instant proposal or at the time of appraisal by EAC earlier. Also details of the water requirement for the existing and proposed expansion were sought.
- iii. The PP reported that AMNS had filed the EC application for the proposed project on 12.12.2023 and on submission of EDS on 29.12.2023, our application was finally accepted by MoEF&CC on 30.12.2023. Subsequently our proposed project was appraised by the Honourable EAC committee in the meeting held on 23.01.2024. After the EAC meeting, AMNS India submitted the information for which ADS was raised, subsequently, Minutes of Meeting (MoM) was released on 06.02.2024 by MoEF&CC. AMNS India received a notice from the Hon'ble AP High Court on 20<sup>th</sup> March, 2024 i.e; after completion of EAC meeting and MOM issuance and came to know about the pendency of the present court case. The next Case hearing will be on 26.06.2024.
- iv. It was also brought to the notice of EAC that the instant case has been filed with the prayer to direct the Respondents for non-initiation of action against the Respondent No. 1 to 6 of it illegal activities, non-consideration of the representation dated 25.09.2023 made by the petitioner to the Respondent No. 2 to 6 in controlling the illegal activities of the Respondent no. 7 which is alleged to be highly illegal, arbitrary, unconstitutional and in violation of Article 21 of the Constitution of India. It is stated that court has made order of issuing notice to Respondent no. 7 returnable on 13.03.2024 and Personal notice on respondent no. 7 was also permitted by the Hon'ble High Court. The next date of hearing is 26.06.2024.
- v. The EAC deliberated on the written submission of the project proponent on the aforementioned points and found it satisfactory.
- 10. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA)

Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1 Sector) hereby decided to grant **Environment Clearance** for instant proposal of **M/s Arcelor Mittal Nippon Steel India Limited** under the provisions of EIA Notification, 2006 subject to specific conditions and general conditions at **Annexure III**.

- 11. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.
- 12. 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 the Environment (Protection) Act, 1986.
- 13. Any appeal against this environmental clearance 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.
- 14. 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.
- 15. This issues with approval of the competent authority.

(Dinesh Runiwal)
Scientist 'F'/ Director
Tel: 011-20819289
Email - d.runiwal@gov.in

## Copy To

- 1. The Principal Secretary, Environment and Forests Department Secretariat, Government of Andhra Pradesh, B Block, Secretariat, Hyderabad-500004
- 2. The Director General of Forest, Ministry of Environment, Forest and Climate Change, New Delhi.
- 3. The Principal Chief Conservator of Forests, Government of Andhra Pradesh, Aranya Bhawan, Hyderbad-500 004
- 4. Inspector General of Forests, Integrated Regional Office, Ministry of Environment, Forest and Climate Change, Vijayawada Green House Complex, Vijayawada, Andhra Pradesh 520010
- 5. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi 110032
- 6. The Member Secretary, Andhra Pradesh Pollution Control Board, D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari, Street, Kasturibaipet, Vijayawada 520010
- 7. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
- 8. The Chief Wildlife Warden, Govt. of Andhra Pradesh, Aranya Bhawan, Saifabad, Hyderabad-500004
- 9. The District Collector, District Vishakhapatnam, Andhra Pradesh
- 10. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.

## 11. Guard File/Monitoring File/Record File/ MoEF&CC Website/ Parivesh Portal

(Dinesh Runiwal) Scientist 'F'/ Director

Annexure 1

## **Additional EC Conditions**

No activity shall be permitted in CRZ area adjacent to the stockpile area without prior CRZ clearance as per CRZ Notification, as amended from time to time.



# Details of the proposal are as per the EIA/EMP report

S. No.	Particulars	Details					
a.	Terms of Reference for undertaking EIA study	29.05.2023					
b.	Period of baseline	19th October 2021 to 18th January 2022;	19th October 2021 to 18th January 2022;				
	data collection		Revalidation Monitoring 1st May 2023 to 31st May 2023				
c.	Date of Public Consultation	26th September 2023					
d.	Action plan to	An amount of Rs. 1500 Lakhs has been earmarked for					
	address the PH	implementation of the commitments made during Public					
	issues	Hearing and need based activities. Detail of activities					
	T	proposed attached as Annexure IV.					
e.	Location of the	at Survey No. 15A, Kancharapalem, Near Flyover, Sc					
	project	Road, Vishakhapatnam Urban, Vishakhapatnam dis	strict,				
£	Tadita da and	Andhra Pradesh					
f.	Latitude and	Corner Points Latitude Longitude					
	Longitude of the	Plant Area					
	project site	1. 17° 43' 23.16" N 83° 16' 22.21" E					
		2. 17° 43' 18.84" N 83° 16' 15.96" E					
		3. 17° 43' 0.12" N 83° 16' 18.12" E					
		4. 17° 43' 0.12" N 83° 16' 23.52" E 5. 17° 43' 0.12" N 83° 16' 24.06" E					
	7						
	5	6. 17° 43' 0.84" N 83° 16' 36.84" E 7. 17° 43' 10.2" N 83° 16' 39.36" E					
		8. 17° 43' 7.32" N 83° 16' 38.64" E					
	1						
	8 1	9.   17°43'26.00"N   83° 16' 31.00"E   Conveyor Belt Route Area					
	3	10. 17° 43' 01.02" N 83° 16' 37.02" E					
	70/L	11. 17° 42' 47.16" N 83° 16' 34.68" E					
	(a)	12. 17° 42' 46.08" N 83° 16' 38.64" E					
		13. 17° 42' 45.36" N 83° 16' 38.64" E					
	, G	14. 17° 42' 45.36" N 83° 16' 38.28" E					
		15. 17° 42' 46.08" N 83° 16' 38.28" E					
		16. 17° 42' 46.44" N 83° 16' 34.32" E					
		17. 17° 42' 45".00 N 83° 16' 32.52" E					
		Stock Pile Area					
		18. 17° 42' 44.64" N 83° 16' 36.12" E					
		19. 17° 42' 12.06" N 83° 16' 39.72" E					
		20. 17° 42' 14.04" N 83° 16' 33.96" E					
		21. 17° 42' 41.04" N 83° 16' 31.08" E					
		22. 17° 42' 45.72" N 83° 16' 33.06" E					
g.	Total land	• Land area as per VPA Lease agreement (Tender NIT NOIENGG/EST/Z-4-ESSAR/T2023, 18.07.2023):	vide dtd.				
		o Pellet Plant Area: 44.5154 Ha (110 Ac)					

S. No.	Particulars	Details				
		<ul> <li>Stock pile Area: 15.53 Ha (38.38 Ac)</li> <li>Total: Area: 60.0454 Ha (148.38 Ac)</li> </ul>				
		<ul> <li>Land area as per kml file &amp; Google image:         <ul> <li>Pellet Plant Area: 44.5154 Ha (110 Ac)</li> <li>Stock pile Area: 15.53 Ha (38.38 Ac)</li> <li>Conveyor (RoW): 2.719 Ha (6.72 Ac)</li> </ul> </li> <li>Total: 62.7644 Ha (155.1 Ac)</li> <li>The difference is the existing Conveyor corridor area (2.719 Ha) connecting between the existing Pellet plant &amp; Stockpile area</li> <li>The Right of way for the same will be renewed after the registration of Land lease agreement.</li> </ul>				
	e-1	Undertaking by Project proponent on the pellet plant are measuring 44.5154 Ha, is not covered in the Environmenta Clearances obtained by Visakhapatnam port Authority(VPA). The same is submitted.				
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	This land is on lease with effective from 20.09.1991 from Visakhapatnam Port Trust along with change of land use for establishing pellet plant as well as CPP.  The long term (30 Years) of land lease agreement with Visakhapatnam Port Trust (VPT) was expired in September'2021. Project Proponent applied for renewal for another 30 years and offer of allotment for 30 Years Lease obtained vide Letter with Ref. No. IENG/ESTATE/F100437/1415 dated 29.12.2023. In continuation to the offer of allotment letter dated: 29.12.2023, AMNS India have submitted the lease				
	Comp.	agreement copy signed from their end to VPA for completing the lease agreement registration on 20.01.2024. The copy of the same is submitted. The land lease agreement registration will be executed by VPA within next 15 days.				
i.	Existence of	No R&R is involved	, s	9		
	habitation & involvement of	Study Area: Habitation Dista	ngo Dinastian			
	R&R, if any	Velampeta 2.0 K				
		Gnanapuram 0.9 K				
		Kancharpalem 0.9 K				
		Akkyapalem 2.8 K Gandhigram 3.3 K				
j.	Elevation of the project site	4.7 m above mean sea				
k.	Involvement of Forest land if any.	No Forest Land Involved				
1.	Water body exists within the project	Project site: Nil				
	site as well as study					
	area	Water body	Distance	Direction		

S. No.	Particulars	Details				
110		Narava Gedo	la	1.7	W	
		(Stream)				
		Mehadri Gedda		1.1	SW	
		(Stream)	(Stream)			
		Bay of Beng	Bay of Bengal		Е	
		Narava Gedo	Narava Gedda		W	
		Mehadri Geo	lda	9.2 km	NW	
m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve etc. if any within the study area	Notified vie (E) dtd. 28.0  ESZ bound project boun Status of NI  List of Research RF / I Kambalkonda Kailasa Konda Yeraakonda R Sitakonda RF  A. Environme for its var IA-II dated B. APCZMA stockpile boundary: Further PP has  The exist handling submitted Further, a 93/2012-OHC area AMNS Ir certified C Jan'24 an As this st hence no storing in	e ESZ/ES f WLS: He MoEF 04.2017. ary of Kadary & 6 BWL appreried and erved a	Cambalkonda CCC Gazette I Cambalkonda 5.17km from proval: Not Apple of I I protected for I I protected	WLS, ESZ Bound Notification. S.O.1  WLS is 5.6km for oject centre.  Policable  Prests:  Direction  N  N  NE  Retter obtained by Ver F. No. 11-93/20  In which the AM ling outside the Common of the VPA layout Presented the Same by layout rea.  Red the same by layout Properties.	Ore Plan 11- the test in in rea, for
		material/substances except Iron Ore fines/pellets.				
n.	Project cost	Proposed – INR Rs 985 Crores				
0.	EMP cost	Type		apital	Recurring	
				n Crores)	(Rs. in Crores)	

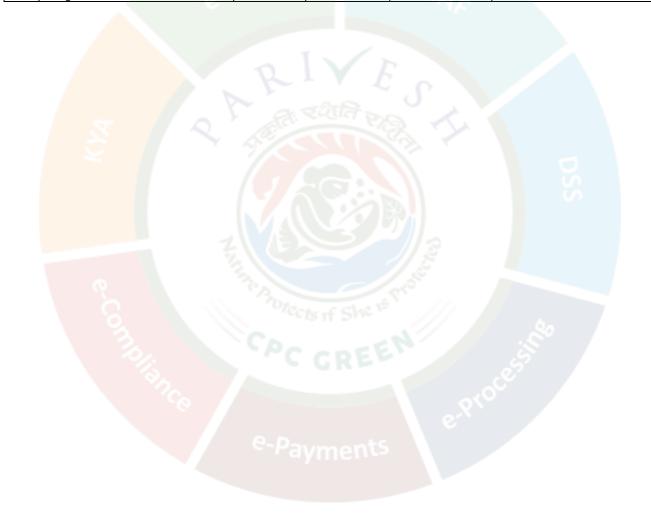
S. No.	Particulars	Details			
		Proposed	107.8	5.19	
p.	Employment opportunity	375 persons			
q.	Water and Power requirement	(Total )Water –13300 KLD(4210 form GVMC and 9120 Water recovered from Iron Ore Slurry (Pipe Line)), Power –66 MW			





# Unit configuration and capacity

S.	Description	Units	Existing/	Proposed	Total after Expansion
No			Permitted		
1	Pelletisation Plant-I	MTPA	7.0		7.0
2	Pelletisation Plant-II	MITA	7.0		7.0
3	Pelletisation Plant-III	MTPA		4.0	4.0
	Total	MTPA	7.0	4.0	11.0
4	<b>Captive Power Plant (CPP)</b>	MW	25		25



#### **Specific and General EC conditions**

### A. Specific Condition:

- i. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.
- ii. The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- iii. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.
- iv. The project proponent shall complete the land lease agreement registration prior to commence of expansion project.
- v. The project proponent shall monitor the health of the soil in the vicinity of the Plant (radius of 5 Km) and report the data to the IRO, MoEFCC once in a year.
- vi. The nearest habitations to plant are Gnanapuram (0.9 km, E), Kancharpalem (0.9 km, NE), Velampeta (2 km, SE), Akkyapalem (2.8 km, NE) and Gandhigram (3.3 km, SW) from the project site boundary. Further, there is a school at a distance of 0.79 km from the project site along with other sensitive areas. Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The project proponent needs to strengthen green belt all around the plant area to reduce the dust pollution. The PP shall also include some of these locations in its environmental monitoring programme.
- vii. There are two streams namely Mehadri Gedda (1.1 km, SW), Narava Gedda (1.7 km, W) align with Bay of Bengal (3.3 Km, E) and Mehadri Gedda Lake (9.2 km, NW) which exists within the study area. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.
- viii. The water requirement of 4210 m³/day shall be met from Greater Visakhapatnam Municipal Corporation (GVMC) only after obtaining necessary permission from the Competent Authority.
- ix. Three tier Green Belt shall be developed in at least 33% of the project area in a period of 1 year along the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall also develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with tall trees & broad leaves with thick canopy along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards sensitive areas such as Villages and Schools nearby project site. Also

- as committee, AMNS shall develop additional 6 Ha plantation in VPA & Greater Visakhapatnam Municipal Corporation (GVMC) area and nearby school within 1 year. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- x. All the commitments made towards socio-economic development of the nearby villages shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 amounting to Rs. 15 Crores shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xi. The project proponent shall undertake village adoption programme and prepare and implement the action plan to develop them into a model village.
- xii. The project proponent shall obtain prior necessary permission from the Competent Authority w.r.t. tree felling / translocation of trees involved in the proposed project.
- xiii. The project proponent shall strictly comply with the observations of IRO and submit the compliance of the same to IRO with the half yearly compliance report.
- xiv. AMNS shall approach SPCB and SPCB shall take all the industrial stakeholders on board to reduce the pollution level in the area.
- xv. The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
- xvi. No activity shall be permitted in CRZ area adjacent to the stockpile area without prior CRZ clearance as per CRZ Notification.

#### **B.** General Conditions

## I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

#### II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NOx in reference to SO<sub>2</sub> and NOx emissions) within and outside the plant area (at least at four locations one within and

- three outside the plant area at an angle of  $120^{\circ}$  each), covering upwind and downwind directions.
- iii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iv. Sampling facility at process stacks shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- ix. The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
- x. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xi. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
- xii. Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.
- xiii. The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.
- xiv. Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.
- xv. Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.
- xvi. The particulate matter emissions from the process stacks shall be less than 30 mg/Nm<sup>3</sup> and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.
- xvii. Following additional arrangements to control fugitive dust shall be provided:
  - a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
  - b. Proper covered vehicle shall be used while transport of materials.

- c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.
- xviii. During operational phase at Captive Power Plant, Action Plan to monitor coke/coal dust exposures in different process plants using personal and area air samplers and to compare with permissible limits as per Indian Factories Act, 1948 shall be implemented.
  - xix. The coal dust should be monitored at coal unloading, crushing, furnace areas and should be within 2 mg/m³, respirable dust fraction containing less than 5% quartz as per Indian Factories Act, 1948.

### III. Water quality monitoring and preservation

- The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- iv. Water meters shall be provided at the inlet to all unit processes in the plants.
- v. The project proponent shall make efforts to minimise water consumption in the plant complex by segregation of used water, practicing cascade use and by recycling treated water.
- vi. The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.
- vii. All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.
- viii. Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

#### IV. Noise monitoring and prevention

i. Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- iii. PP shall identify extreme hot areas through heat stress survey as well as noise monitoring within process plants to ensure that workers not exposed above 90 dBA levels as per Factories Act, 1948.

#### V. Energy Conservation measures

- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- ii. Provide LED lights in their offices and residential areas.

## VI. Waste management

- i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil.
- ii. Kitchen waste shall be composted or converted to biogas for further use.
- iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- iv. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines-3/. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- v. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

#### vi. Solid waste utilization

- a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
- b. PP shall recycle/reuse solid waste generated in the plant as far as possible.
- c. Used refractories shall be recycled as far as possible.

#### VII. Green Belt

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.
- ii. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/balancing, carbon sequestration activities and carbon capture, use and storage and

offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

iii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

#### VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
- iii. 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

#### IX. **Environment** Management

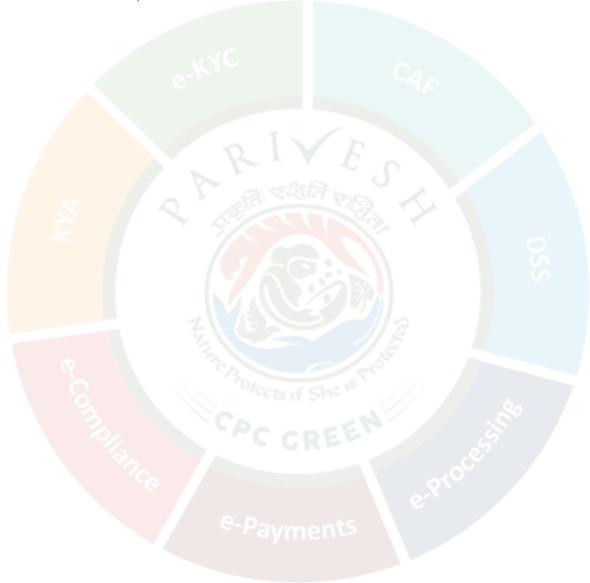
- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
- ii. The company shall have a well laid down environmental policy duly approve 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.
- iii. 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 to the head of the organization.
- iv. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.

#### X. Miscellaneous

i. The project proponent shall 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, of

- which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. 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.
- iii. 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.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (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.
- v. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented
- vi. 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.
- vii. 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.
- viii. 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.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
- xi. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.
- xii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xiii. 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.

- xiv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xvi. 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.
- xvii. 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.



# Action plan as per MoEF&CC O.M. dated 30/09/2020

Scheme Envisaged in Response to Concern Raised During Environmental Public		Year Wise Expenditure (Rs. Lakhs)		
Hearing Hearing	2024-25	2025- 26	2026-	Expenditure (Rs. Lakhs)
<ul> <li>Skill Development &amp; Education</li> <li>Economically poor local meritorious students of 10th / 12th standards will be provided scholarship for higher studies.</li> <li>Meritorious local sports persons will be financially supported for training to enable participation in State / National level competition.</li> <li>Skill development programs to provide skill to local youths to assist them in carrier development.</li> </ul>		TH Pay		DSS
Sub-Total	10	10	10	30
Health & Sanitation	. 01		7	<i>%</i>
• Support to hospitals catering nearby	REEL		-	
population in health care services.			~Co.	
Medical eye care camp in nearby rural		9	C	
areas.  Sub-Total	150	150	150	450
Plantation & Environmental Protection of	150	150	150	450
Nearby Localities				
• Plantation will be undertaken in all	50	50	50	150
Schools and Colleges in nearby locality of				
Gnanapuram and Kancharapalem and in				
the city.	15	15	15	45
• It is proposed to built roof top rain water				
harvesting system for ground water				
recharging in Schools and Colleges in				
nearby locality of Gnanapuram and				
Kancharapalem				

Sub-Total	65	65	65	195
Renewable Energy				
Roof-top solar panels for the schools/				
Hospitals/ Govt. buildings.				
Sub-Total	275	275	275	825
Grand Total of Action Plan	500	500	500	1500

