

**IN THE HON'BLE NATIONAL GREEN TRIBUNAL,  
EASTERN ZONE BENCH, KOLKATA**

**ORIGINAL APPLICATION NO. 42 of 2023**

**IN THE MATTER OF: -**

**Om Sri Sri Sarbajanina  
Durga Puja Committee**

**.... Applicant**

**Versus**

**Union of India and Others**

**.... Respondent(s)**

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Place: Bhubaneswar

Filed by:

Date: 25-11-2023

Ms. Rashmi Singhee  
Advocate for MoEF&CC

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COUNTER AFFIDAVIT ON BEHALF OF RESPONDENT NO. 5,  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

MOST RESPECTFULLY SHOWETH:

I, Timir Haran Mahato, S/o Shri P.C Mahato, aged about 48 currently working as Scientist 'D' in the Ministry of Environment, Forest and Climate Change, having an office located at Bhubaneswar, do hereby solemnly affirm and state on oath as under:

1. It is submitted that I am working as Scientist 'D' in the Regional Office of the Ministry of Environment, Forest and Climate Change and as such am well acquainted with the facts and circumstances of the case on the basis of records available in my office and am thus duly authorized to file this Affidavit on behalf of the Respondent No. 5 herein, i.e. the Ministry

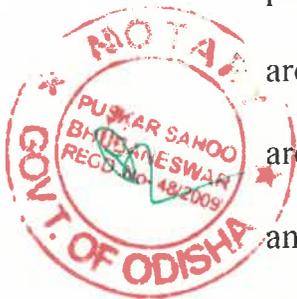
*Timir Haran Mahato*

of Environment, Forest & Climate Change (hereinafter referred as MoEF&CC). Specifically admitted hereunder:

2. It is submitted that present application challenges the illegal and unauthorized dumping of fly ash in a water body (Pond no. 2 and Pond No. 3) in Brundamal Village of Jharsuguda District by Vedanta Ltd. who operates a plant with a 1.8 MTPA aluminium smelting capacity and an associated 3615 MW thermal power generation facility which has led to change in land use and water pollution.
3. That the applicant has alleged that there are four ponds in the said village that have been used by the villagers for hundreds of years for domestic purposes. It is stated that the Pond No.1 is situated on Plot No.773 in an area of 0.44 Acre. The Pond No.2 is situated on Plot No.769/1588 in an area 3.50 Acre. The Pond No.3 is situated on Plot No.1063 and 1070 in an area of 0.7 Acres and 1.85 Acres respectively. The Pond No.4 is situated on Plot No.752 having 1.10 Acres of area.

It has been further alleged that the second pond was dug out with the help of machines after which it was filled with fly ash which has led to concerns such as:

- a. the possibility of skin diseases when people bathe in ash-mixed water,

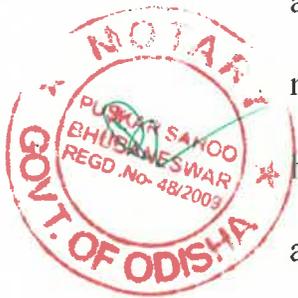


*Timid Haran Mahab*

- b. a loss of government revenue generated by auctioning the pond for fish farming,
- c. and a shortage of clean water and air for villagers to live in a healthy environment.

In addition to this, it is alleged that despite the availability of 740 acres of government land, the project proponent has dug out almost 30 feet deep earth from pond number 2, located in plot no. 769/1588, and filled the water body with fly ash.

4. The applicant has prayed to direct the State respondents to remove the fly ash dumped in the water body (Plot no 769/1588 and Pond no 3 in Plot no – 1063, 1070) and restore the land to its pristine condition. Further, it has also been prayed to impose exemplary environmental compensation and initiate prosecution against the Project proponent for violation of environmental norms and dumping of fly ash without consent of the State Pollution Control Board.
5. That in consideration of the aforesaid contentions made in the instant application, the Hon'ble Tribunal vide order dated 24.04.2023 constituted a Committee comprising the following members and directed to submit the Committee Report.:-



*Timir Hasan Mehab*

- District Collector and District Magistrate or his/her nominee not below the rank of ADM, Jharsuguda, Odisha;
- Senior Scientist/ Environmental Engineer from Odisha State Pollution Control Board; (Nodal body)
- Senior Scientist/Environmental Engineer from Central Pollution Control Board, New Delhi;

The Inspection Report dated 18.05.2023 was filed by the Odisha State Pollution Control Board before this Hon'ble Tribunal wherein it was concluded that "...*Very small amount of ash quantity was found to be dumped in the Pond no. 2...*"

6. That the MoEF&CC grants Environmental Clearance (hereinafter referred as 'EC') to Thermal Power projects in accordance with the provisions laid down in Environment Impact Assessment Notification, 2006 and its amendments thereof. The EIA Notification, 2006 clearly specifies the purpose of such grant of EC before start of any construction work in case of new projects or expansion and modernization of existing projects or activities. The proposed project falls under project activity 1(d) Coal Based Thermal Power Plant of Category A. The process involved for grant of EC is as following:

- Stage (1) – Screening



*Purnima Sahoo Mahapatra*

- Stage (2) - Scoping – i.e. prescribing Terms of Reference (TOR) or undertaking detailed Environment Impact Assessment Studies.
- Stage (3) - Public Consultation – to be conducted by the respective State Pollution Control Board/UT Pollution Control Committee.
- Stage (4) - Appraisal – by Expert Appraisal Committee (EAC).

7. The process involving grant of EC is transparent & is placed in public domain including the application for grant of EC, submissions and supporting documents filed by the project proponent, the minutes of meeting of the EAC/SEAC and the EC issued in the case.

8. It is submitted that based on the information submitted by the Project proponent and after considering the said project in accordance with the provisions of the EIA Notification, 2006, the Environmental Clearance (hereinafter referred to as 'EC') for 2400 MW Coal based Thermal Power Plant (TPP), Jharsuguda was accorded to M/s Sterlite Energy Ltd. by the Ministry vide letter no. J-13011/3/2007-IA.II (T) dated 07.12.2007 which includes 230 acres of ash pond near Siriapali village. Subsequently, amendment to the EC dated 07.12.2007 was issued vide letter dated 12.05.2008 to M/s Sterlite Energy Ltd for additional ash pond areas.

Further, it has been noted that EC for 675 MW Captive Power Plant was also accorded by the Ministry vide letter no. J-13011/10/2006-IA(T)



*Limin Hasan mehat*

dated 14.03.2007 to M/s Vedanta Aluminium Ltd. The approval was granted for 315 ha plant area, besides ash pond areas of 191.92 ha.

The copy of the EC Letter dated 07.12.2007; 12.05.2008 and 14.03.2007 are annexed as **Annexure R-5/1 to Annexure R-5/3**.

9. That based on the information provided and documents submitted by the Project Proponent namely, M/s Vedanta Limited that the company name i.e. M/s Sterlite Energy Ltd. and M/s Vedanta Aluminium Ltd. has been changed to M/s Vedanta Ltd. due to amalgamation of companies by a court order a court order, the Ministry transferred the EC dated 14.03.2007 and 07.12.2007 and its amendment dated 12.05.2008 in the name of M/s Vedanta Limited on 16.10.2018.

The copy of the Transfer letter dated 16.10.2018 is annexed as **Annexure R-5/4**.

10. That in view of the above, the Regional Office of the Ministry situated in Bhubneshwar was requested vide letter dated 01.09.2023 to conduct a Site Visit and submit a factual status report w.r.t the contentions raised in the instant application.

In this regard, the Regional Office, vide letter dated 26.09.2023, comprising of its observations along with monitoring report, informed that site visit was conducted and it



*Timir Hatan mehat*

was observed that "...the dugout soil from the filled area has been found with fly ash (Photo 5 and Photo 6). M/s Vedanta limited has denied of any dumping of fly ash in the said pond no. 2. The google image dated 02.03.2022 and dated 18.12.2022 indicated filling of part of the pond no. 2. During visit, pond no. 2 was not in use. However, pond no 3 was in use by the villagers."

The copy of the Ministry's letter dated 01.09.2023 to conduct a Site Visit and the Site Inspection Report dated 26.09.2023 carried out by the Regional Office of the Ministry situated in Bhubneshwar is annexed as **Annexure R-5/5 and Annexure R-5/6** respectively.

11. That as per the said Monitoring Report annexed with the Site Inspection Report, following specific condition stipulated to the EC dated 14.03.2007 and 07.12.2007 relevant to the issue raised in the instant matter was found to be non-complied. The relevant extract is reproduced below:

S.No.	Specific Condition (EC dated 14.03.2007 and 07.12.2007)	Status of Compliance
x	Ash pond shall be lined with impervious lining to avoid leaching into ground water.	<i>Impervious lining has been visible in one ash pond. PP reported that the ash pond has been lined with</i>

*Timir Hasan Meher*



<p>Adequate safety measures shall also be taken so that pond ash does not become air born to cause air pollution in the surrounding areas.</p>	<p><i>impervious HDPE lining to avoid any leaching in to ground water. However, dust suppression measure at the ash pond has been provided in one not in all. During the visit fly ash outside the pond has also been observed without any protection measure</i></p>
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Further, several other specific conditions were also found to be partially non-complied which has also been mentioned in the Monitoring report.

12. Further, several other specific conditions were also found to be non-complied which has also been mentioned in the Monitoring report. The detailed examination of the Monitoring Report revealed that there have been following significant non-compliances posing immediate threat to environment:

- i. the fluoride consumption as per stipulated condition has not been achieved,
- ii. three-tier green belt all along the periphery has not been developed,
- iii. legacy SPL carbon (36320 T) stock has not been disposed as committed,

*Liquid Hazardous material*

- iv. plan for utilization of legacy fly ash has not been furnished,
- v. detailed implementation report of wildlife management plan has not been furnished,
- vi. fugitive emissions have not been monitored,
- vii. wind shelter fence to the coal stock pill has not been provided,
- viii. levels of SO2 exceeded norms of power plant,
- ix. rainwater recharge facility has not been provided,
- x. flue gas de-sulphurisation plant has not been installed,
- xi. dust suppression measure has not been provided at all the ash ponds,
- xii. fly ash has been deposited outside the ash pond without any protection measure,
- xiii. Level of Hg exceeded the norms as per online stack monitoring data



13. That in light of the above , after perusal of the said Site Inspection Report dated 26.09.2023, the Ministry has issued a Show Cause Notice dated 14.11.2023 under Section 5 of the Environment (Protection) Act, 1986 to the Project Proponent (M/s Vedanta Limited) on account of non-compliance of environmental conditions.

Copy of Show Cause Notice dated 14.11.2023 is annexed as **Annexure R-5/7.**

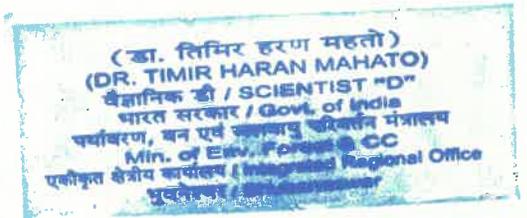
*Limix Hutan mehat*

14. It is submitted that the present reply affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s) as deemed fit and proper under the facts and circumstances of the present case.

15. That other/ancillary issues raised in the application under reply do not pertain to the answering respondent. The Answering Respondent seeks leave to make additional submissions, if required, during the course of the proceedings.

*Timir Haran Mahato*

**DEPONENT**



**VERIFICATION**

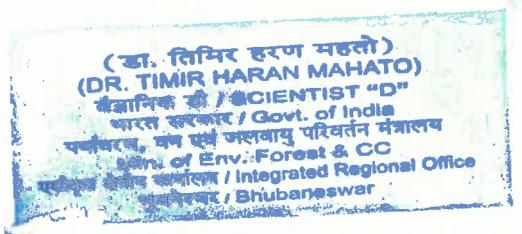


I, the above named deponent do hereby solemnly affirm and state that the contents of the aforesaid affidavit are true and correct to my personal knowledge and have been derived from the official records maintained by the Respondent. No part of it is false nor has anything material been concealed there from.

Verified at Bhubaneswar on this 25th day of November, 2023.

*Timir Haran Mahato*

**DEPONENT**



*Puskar Sahoo*  
25.11.23  
**PUSKAR SAHO**  
**NOTARY, BHUBANESWAR**  
**GOVT. OF ODISHA**  
**MOB - 9337129137**

**Annexure R-5/1****BY SPEED POST**

No. J-13011/3/2007-IA.II(T)  
 Government of India  
 Ministry of Environment & Forests

Paryavaran Bhawan  
 CGO Complex, Lodi Road  
 New Delhi-110 003

Dated: 7<sup>th</sup> December, 2007

To

M/s Sterlite Energy Ltd  
 Beheramal Chowk,  
 Old Maruti Service Station  
 Jharsuguda- 768 203  
 Orissa.

**Sub: 2400 MW Coal based Power Project at Brundamal, Jharsuguda, Orissa by M/s Sterlite Energy Ltd - Environmental Clearance regarding.**

Sir,

The undersigned is directed to refer to your communication no. nil dated 04.01.2007 regarding the subject mentioned above. Subsequent information furnished vide letter No. SEL/MoEF/SEA-301/2007-001 dated 30.05.2007; 20.08.2007; 20.09.2007 and 2.10.2007 have also been considered. In addition, the letters no. IWL(c)-FC-370/07/5865 dated 18.09.2007 and no. IWL(c)-FC-370/07/6532 dated 16.10.2007 from the Conservator of Forests (WL), Govt. of Orissa confirming that the site of the proposed project is not coming on the migratory path of elephants have also been considered.

2. The proposal is for grant of environmental clearance under EIA Notification, 1994 for setting up of a 2400 MW (4x600 MW) pulverized coal fired power plant. The land requirement is estimated as 839.50 acres. Out of which 322 acres is for greenbelt and 230 acres for ash pond. The coal requirement is estimated as 32250 TPD at 80% PLF which will be obtained from Mahanadi Coalfields at a distance of about 45 km. The water requirement is 5235 m<sup>3</sup>/hr and will be obtained from Hirakud Reservoir. No National Park or Wildlife Sanctuary is located within 10 km of radius of the proposed power project. There are 71 PAFs and 465 PAPs due this project. Total cost of the project is Rs 7481.50 crores, which includes Rs 200.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14<sup>th</sup> September, 2006 read with sub clause (i) of clause 2.1.1 of sub para 2.1 of para 2.0 of the Circular No. J-11013/41/2006 – IA.II (I) dated 13<sup>th</sup> October, 2006. Based on the recommendations of the Expert Appraisal Committee for Thermal Power and Coal Mine Projects, the Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of EIA Notification 2006, subject to implementation of the following terms and conditions:-

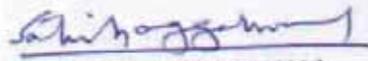
- (i) The total land requirement shall not exceed 839.50 acres for all the activities/facilities of the power project.
- (ii) Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.
- (iii) Two bi-flue stack of 275 m height each with exit velocity of not less than 25 m/s shall be provided with continuous online monitoring system.
- (iv) High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.98% shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm<sup>3</sup>.
- (v) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency of removal of SO<sub>2</sub>, if required at a later stage.
- (vi) Water requirement shall not exceed 5235 m<sup>3</sup>/hr. No ground water shall be extracted for the project at any stage.
- (vii) Closed Circuit Cooling system with cooling towers shall be provided.
- (viii) For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.
- (ix) The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization.
- (x) The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.
- (xi) Project proponent shall commission a study to be undertaken by Wildlife Institute of India, Dehradun to determine the quantum and scale of mitigation measures to offset the impact, if any, on the safety of the elephants and

security of their migration areas. The study would have to be completed before starting work at site and the safeguards so suggested shall be implemented by the project. The requisite allocation of funds for the same shall be built into the project cost.

- (xii) The District Collector / Revenue Divisional Commissioner shall be informed regarding R&R and all other benefits to be provided by the project proponent and their effective implementation shall have to be overseen by the District Authorities.
- (xiii) All the measures suggested by the Wildlife Department, Govt. of Orissa (Chief Wildlife Warden) for this project as contained in their letter no. IWL(c)-FC-370/07/6532 dated 16.10.2007 and any other measure as may be considered necessary for the conservation of wildlife in the area shall be taken up on priority before commissioning the project.
- (xiv) Rain water harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance.
- (xv) Waste water generated shall be recycled and reused in the plant premises. There shall be no discharge of waste water outside the plant boundary except during monsoon. Treated effluents conforming to the prescribed standards shall be discharged during the monsoon period.
- (xvi) Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.
- (xvii) A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of 322 acres.
- (xviii) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xix) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.
- (xx) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.

- (xxi) The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the <http://envfor.nic.in>.
- (xxii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- (xxiii) Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.
- (xxiv) Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the Regional Office for their use during monitoring.
- (xxv) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
- (xxvi) Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhubaneswar/ the CPCB / the SPCB during monitoring of the project.
4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
5. The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.
6. In case of any deviation or alteration in the project proposed 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 and to incorporate additional environmental protection measures required, if any.

7. 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.

  
(DR. S.K. AGGARWAL)  
DIRECTOR

**Copy to:-**

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Environment and Forests Department, Govt. of Orissa, Bhubaneswar- 751 001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Orissa State Pollution Control Board, A/118, Nilkantha Nagar, Unit-8, Bhubaneswar- 751012 - with request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Eastern Regional Office, Ministry of Environment & Forests, 194, Kharvela Nagar, Bhubaneswar-751001.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

  
(Dr. S.K. AGGARWAL)  
Director

**Annexure R-5/2**By Speed Post

No. J-13011/3/2007-IA.II(T)  
 Government of India  
 Ministry of Environment & Forests

Paryavaran Bhawan  
 CGO Complex, Lodi Road  
 New Delhi-110 003

Dated: 12<sup>th</sup> May 2008

To

M/s Sterlite Energy Ltd  
 Beheramal Chowk  
 Old Maruti Service Station  
 Jharsuguda- 768 203  
 Orissa

Subject: 2400 MW Coal based Power Project at Brundamal, Jharsuguda, Orissa by M/s Sterlite Energy Ltd. - Amendment in condition- reg.

Sir,

The undersigned is directed to refer to your communication no. SEL/MoEF/SEA-301/2008-001 dated 14.01.2008 regarding the subject mentioned above. Subsequent information furnished by Wildlife Institute of India vide letter no. DWII/0149/2008 dated 12.01.2008 and your letter no SEL/MoEF/309/2008-003 dated 21.02.2008 have been considered.

2. The matter has been considered by the Expert Appraisal Committee (EAC) for Thermal Power and Coal Mine projects and based on the recommendation of EAC, the Ministry of Environment and Forests here by amends the conditions no. 3 (xi) contained in this Ministry's letter of even no. dated 7<sup>th</sup> Dec, 2007 to read as under:-

**To read as**

Condition no. 3(xi)- "Project proponent shall commission a study to be undertaken by the Centre for Ecological Sciences, Indian Institute of Science, Bangalore regarding the feasibility of developing viable

-2-

elephant corridors, which may have minimal impact due to the proposed project. The report shall be get vetted by Chief Wildlife Warden, Govt. of Orissa and Director (Project Elephant), Govt. of India. The necessary mitigation measures as may be suggested based on the proposed study shall be implemented by the project proponent along with the State Wildlife Department. The said study should be completed before commissioning of the plant. The implementation of the EMP shall be periodically monitored by a team comprising of Representatives from (i) Indian Institute of Science, Bangalore, (ii) Regional Office of the Ministry at Bhubaneswar and (iii) State Wildlife Department".

**FOR**

Condition no. 3(xi)- "Project proponent shall commission a study to be undertaken by Wildlife Institute of India, Dehradun to determine the quantum and scale of mitigation measures to offset the impact, if any, on the safety of the elephants and security of their migration areas. The study would have to be completed before starting work at site and the safeguards so suggested shall be implemented by the project. The requisite allocation of funds for the same shall be built into the project cost".

3. Apart from the above amendment, the following additional conditions also stipulated:-

- (i) "The site at Sripura village shall only be used for ash disposal for both the phases. Out of the 790 acres of available land, the proponent should carve out 757.3 acres of land as required for the ash pond such that the land so carved out is far away as possible from the river".

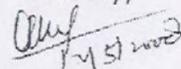
-3-

(ii) "The earlier site for the ash pond, which was close to the elephant corridor, shall be abandoned and no activity relating to the power project in any form shall be taken on that site".

4. All other conditions contained in this Ministry's earlier letter of even no. dated 7<sup>th</sup> Dec, 2007 shall remain unchanged.

This issues with the approval of the Competent Authority.

Yours faithfully;



**(OM PRAKASH)**  
**DEPUTY DIRECTOR**

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Environment and Forests Department, Govt. of Orissa, Bhubaneswar- 751 001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Orissa State Pollution Control Board, A/118, Nilkantha Nagar, Unit-8, Bhubaneswar- 751012 - with request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days..
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Eastern Regional Office, Ministry of Environment & Forests, 194, Kharvela Nagar, Bhubaneswar-751001.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

**(OM PRAKASH )**  
**DEPUTY DIRECTOR**

**Annexure R-5/3****BY SPEED POST**

No.J-13011/10/2006-IA.II(T)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110 003

Dated: 14<sup>th</sup> March, 2007

To

The Project Director  
Vedanta Alumina Limited  
232, Solitaire Corporate Park,  
Andheri-Ghatkopar Road, Chakala,  
Andheri (East), Mumbai-400 093

**Sub: 5x135 MW Captive Power Plant at Jharsuguda, Orissa by  
M/s Vedanta Alumina Ltd - Environmental Clearance reg.**

Sir,

The undersigned is directed to refer to your communication no. VAL/MoEF/ 001-Power dated 06.04.2006 regarding the subject mentioned above. Subsequent information furnished vide letters dated 5.5.2006, 10.06.2006, 20.06.2006 & 12.10.2006 have also been considered. Further the information furnished by State Govt of Orissa vide letters dated 17.06.2006, 19.06.2006, 15.1.2007, 18.1.2007 and 31.1.2007 have also been considered.

2. The proposal is for grant of environmental clearance under EIA Notification, 1994 for setting up of a 5x135 MW (675 MW) captive power plant at Bhurkamunda/Brundamal Villages in Jharsuguda District, Orissa. The land requirement for the power plant has been estimated as 233.92 ha. The power plant will be captive to their proposed aluminium smelter project of 2,50,000 TPA capacity. The total land requirement for the smelter and power plant will be 459.92 ha. It was reported that there will be no homestead oustees in the power plant area, however, there will be 188 land oustees due to the power plant. No forestland is involved in the project. There are 7 reserve forests namely Katikela, Ghichamura, Rampur, Malda, khait Patrapalli and Kurbuga in the close proximity of the site and within 10

km radius. Katikela and Badkhalia Reserve Forests are located at 2 Km from the site. There are three notified Wildlife Sanctuaries namely (i) Badrama, (ii) Khalasuni and (iii) Debrigarh in the project impact area. There are about 188 land oustees however, there are no homestead oustees due the project. Public hearing for the project was held on 09.12.2005 and NOC was issued by Orissa State Pollution Control Board on 31.3.2006. The project cost is Rs 1800 crores including Rs 43.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14<sup>th</sup> September, 2006 read with sub clause (i) of clause 2.1.1 of sub para 2.1 of para 2.0 of the Circular no. J-11013/41/2006 - IA.II (I) dated 13<sup>th</sup> October, 2006 and environmental clearance is hereby accorded under the provisions thereof subject to implementation of the following terms and conditions:

- (i) All the conditions stipulated by Orissa State Pollution Control Board vide their letter no. 8064/ind-II-NOC-3633 dated 31.03.2006 shall be strictly implemented.
- (ii) The total land requirement shall not exceed 233.92 ha for all the activities/facilities of the power project put together.
- (iii) Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.
- (iv) One multi-flue stack of 275 m height shall be provided with continuous online monitoring equipments. Exit velocity of at least 23.6 m/sec shall be maintained.
- (v) High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9 % shall be installed to ensure that particulate emission does not exceed 100 mg/Nm<sup>3</sup>. It shall also be ensured that the AAQ levels in the notified ecologically sensitive areas including Reserve forests and Sanctuaries falling in the impact zone of the project do not exceed the prescribed standards for these areas.
- (vi) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.
- (vii) Closed Circuit Cooling system with Cooling Towers shall be provided. COC shall be optimized for ensuring water conservation.
- (ix) Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the Competent Authority.

- (x) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.
- (xi) A conservation plan for Schedule-I animals reported in the study area of the project, shall be prepared in consultation with an expert organization like Wildlife Institute of India at Dehradun and duly approved by State Wildlife Department of Orissa. A Copy of the same shall be submitted to the Ministry and the Regional Office at Bhubaneswar within six months of the date of issue of this letter. The plan so prepared shall be implemented effectively. Necessary allocation of funds for the same shall be made and will be included as project cost.
- (xi) Adequate dust extraction such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.
- (xii) Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendment. By the end of 9<sup>th</sup> year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry.
- (xiii) Ash pond shall be lined with impervious lining to avoid leaching into ground water. Adequate safety measures shall also be taken so that pond ash does not become air born to cause air pollution in the surrounding areas.
- (xiv) Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/State Ground Water Board and a copy of the same shall be submitted within three months to the Ministry.
- (xv) The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary. In case of emergency, only 30 m<sup>3</sup>/hr discharges from the plant may be done in the drain.
- (xvi) Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and quarterly reports shall be furnished to the Regional Office of this Ministry.

- (xvii) A 50 m wide greenbelt shall be developed all along the plant and ash pond boundary covering 1/3<sup>rd</sup> of the total area .
- (xviii) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xix) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.
- (xx) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.
- (xxi) 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, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.
- (xxii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- (xxiii) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry, Regional Office, CPCB and SPCB.
- (xxiv) Regional Office of the Ministry of Environment & Forests located at **Bhubaneswar** will monitor the implementation of the stipulated conditions. Complete set of 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.
- (xxv) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be

diverted for other purposes and year-wise expenditure should be reported to the Ministry.

(xxvi) Full cooperation should be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at **Bhubaneswar** / the CPCB / the SPCB who would be monitoring the compliance of environmental status.

4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.

5. The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.

6. In case of any deviation or alteration in the proposed project from that submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

7. The above stipulations shall be enforced along with others as 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, The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, Hazardous Wastes (Management and Handling) Rules, 1989, the Public Liability Insurance Act, 1991 and rules there under and the EIA Notification, 2006 and the amendments made therein from time to time.



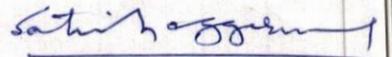
**(Dr. S.K. Aggarwal)**  
**DIRECTOR**

**Copy to:**

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110001.
2. The Secretary, Department of Forests & Environment, Government of Orissa, Orissa Secretariat, Bhubaneswar - 751 001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.

6

4. The Chairman, Orissa Pollution Control Board, Paribesh Bhawan, A/118, Nilakanthanagar, Unit-VIII, Bhubaneswar - **with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.**
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum- Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Eastern Regional Office, Ministry of Environment & Forests, A/3, Chandrashekherpur, Bhubaneswar-751023
7. The Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

  
**(Dr. S.K. AGGARWAL)**  
**DIRECTOR**

**Annexure R-5/4**

**No. J-13014/03/2007-IA.II(T)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**

3<sup>rd</sup> Floor, Vayu Block,  
 Indira Paryavaran Bhawan,  
 Jor Bagh Road, Aliganj,  
 New Delhi-110003

Dated: 16.10.2018

**OFFICE ORDER**

**Sub: 2400 MW Thermal Power Plant (TPP) of Vedanta Limited at village Brundamal, District Jharsuguda, Odisha by M/s Vedant Limited (Formely M/s Sterlite Energy Limited)- reg. transfer of Environmental Clearance.**

With reference to the subject cited above and your letter dated 03.07.2018 wherein a request has been made for transfer to Environmental Clearance to M/s Vedanta Ltd.

2. It has been noted that Environmental Clearance for 2400 MW Thermal Power Plant, Jharsuguda was accorded to M/s Sterlite Energy Ltd. vide Ministry's letter no. J-13011/3/2007-IA.II (T) dated 7.12.2007. Subsequently, amendment to the EC dated 7.12.2007 has been issued vide letter dated 12.5.2008 to M/s Sterlite Energy Ltd. for shifting ash pond from Siriapali village to new site at Sripura village for the area of 757.3 acres. Similarly, Environment Clearance issued for 5x135 MW Captive Power Plant at Jharsuguda, Odisha to M/s Vedanta Aluminium Ltd. vide letter dated 14.03.2007. It has been informed by you that the company name i.e. M/s Sterlite Energy Ltd. and M/s Vedanta Aluminium Ltd. have been changed to M/s Vedanta Ltd.

3. The request has been examined in the Ministry and noted that M/s Sterlite Energy Ltd. and M/s Vedanta Aluminium Limited have been amalgamated with M/s Sesa Goa Limited by a Court Order of the Hon'ble Madras High Court on 25.7.2013. Subsequently, M/s Sesa Sterlite Limited has again changed to M/s Vedanta Limited in the Registrar Office of Goa on 21.4.2015. Besides, the Registered Office earlier located at Goa has also been changed to Mumbai in the Registrar of Companies on 19.02.2017.

4. In view of the documents submitted by you, the **Ministry hereby transfers the EC dated 14.03.2007 and 7.12.2007 and its amendment dated 12.5.2008 in the name of M/s Vedanta Limited.**

5. All other conditions stipulated in the Ministry's above Environmental Clearance letters shall remain same, as applicable.

This issues with the approval of the Competent Authority.

  
**(Dr. S. Kerketta)**  
**Director (IA.I)**

To

**The Chief Executive Officer**  
**M/s Vedanta Limited. (Formerly known as Sesa Sterlite Ltd.)**  
 1<sup>st</sup> Floor, 'C' Wing, Unit 103, Corporate Avenue,  
 Atul Projects, Chakala, Andheri (East),  
 Mumbai-400093, Maharashtra.

  
**(Dr. S. Kerketta)**  
**Director (IA.I)**

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Additional Principal Chief Conservator of Forests (C), MoEF&CC, Regional Office (EZ), A/3, Chandrasekharapur, Bhubaneswar – 751023.
5. The Additional Chief Secretary, Environment Department, Govt. of Odisha, 96, Chandaka Road, Near Axis Bank ATM, Khandagiri, Bhubaneswar, Odisha-751030.
6. The Chairman, Odisha State Pollution Control Board, A-118, Nilkanta Nagar, Unit – VIII, Bhubaneshwar- 751 012.
7. The District Collector, Jharsuguda District, Govt. of Odisha, Jharsuguda.
8. Guard file/Monitoring file.
9. Website of MoEF&CC.

  
**(Dr. S. Kerketta)**  
**Director (IA.I)**

**URGENT**  
**NGT MATTER**

**L-11011/07/2023-IA-I(T)**  
**Government of India**  
**Ministry of Environment Forest & Climate Change**  
**Impact Assessment Division (Thermal Sector)**

2<sup>nd</sup> Floor, Vayu Wing,  
Indira Paryavaran Bhawan,  
Jor Bagh Road,  
New Delhi-110003  
Tele: 011-24695365  
E-mail: yogendra78@nic.in

**Date: 1<sup>st</sup> September, 2023**

To

Addl. Principal Chief Conservator of Forests (C),  
Ministry of Environment, Forest and Climate Change, Regional Office (EZ),  
A/3, Chandrasekharpur, District Bhubaneswar-751023 (Odisha)  
Email- **Email: roez.bsr-mef@nic.in**

**Sub: OA No. 42 of 2023 titled as Om Sri Sri Sarbajanina Durga Puja Committee vs. Union of India & others before the Hon'ble National Green Tribunal, Chennai- reg.**

Sir,

This has a reference to the above mentioned subject matter wherein, the applicant has alleged illegal and unauthorized dumping of fly ash in a water body in Brundamal Village of Jharsuguda District by Vedanta Ltd. which has led to change in land use and water pollution.

2. In this regard, a Joint committee was set up by the Hon'ble Tribunal to conduct project site inspection. The Hon'ble Tribunal vide order dated 25.07.2023 (copy enclosed) made an observation on the Joint Committee report stating that "...there has been dumping of fly ash in Pond No.2...".

3. In light of the above, it is requested to verify the current status of the project by conducting a project site visit w.r.t the contentions raised in the instant application as well as compliance of EC conditions regarding fly ash dumping and submit a factual status report to the MoEF&CC forthwith. A copy of the application along with the latest order dated 25.07.2023 of the Hon'ble Tribunal is enclosed for reference.

5. It is requested to provide the factual status report on priority, latest by 05.09.2023.

**Encl. as above**

Yours faithfully,



**Yogendra Pal Singh**  
**(Scientist 'E')**



भारत सरकार / Government of India  
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय / Ministry of Environment, Forest & Climate Change  
 क्षेत्रीय कार्यालय, भुवनेश्वर / Regional Office, Bhubaneswar  
 ए ३, चंद्रसेखरपुर / A/3, Chandrasekharpur  
 भुवनेश्वर - ७५१ ०२३ / Bhubaneswar - 751 023



Telephone: 0674 - 2301213, 2301248, 2302452, 2302453. E-mail: [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in)

File No: 101-1121/EPE

Date: 26.09.2023

To

Shri Yogendra Pal Singh,  
 Scientist "E"  
 Impact Assessment Division(Thermal)  
 Ministry of Environment, Forest and Climate Change,  
 Indira Paryavaran Bhawan, Jorbagh Road,  
 Aliganj, New Delhi - 110003. (E mail: [yogendra78@nic.in](mailto:yogendra78@nic.in))

Sub: Complaint against M/s Vedanta Ltd for illegal and unauthorised dumping in fly ash in water body in Brundamal village, Jharsuguda district, Odisha reg.

Ref: Ministry's EC letter no. (i) J-11011/03/2007-IA.II (I) dated 07.12.2007

(ii) J-13011/03/2007-IA.II (T) dated 12.05.2008

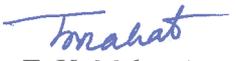
Ministry letter no. IA-H-11011/1/2023-IA-I dated 26.06.2023

Sir,

I am directed to draw your kind attention to the subject and reference letter cited above and to state that the site inspection of the project was done by Dr. T. H. Mahato, Scientist 'D', Regional Office, Bhubaneswar on 11.09.2023. Based on the observations made during inspection and documents submitted, Inquiry report is enclosed as **Annexure-A** and Monitoring Report is attached as **Annexure-B**.

This is for kind information and further needful action.

Yours faithfully,

  
 (Dr. T. H. Mahato)  
 Scientist 'D'

Encl : as above

Copy to:

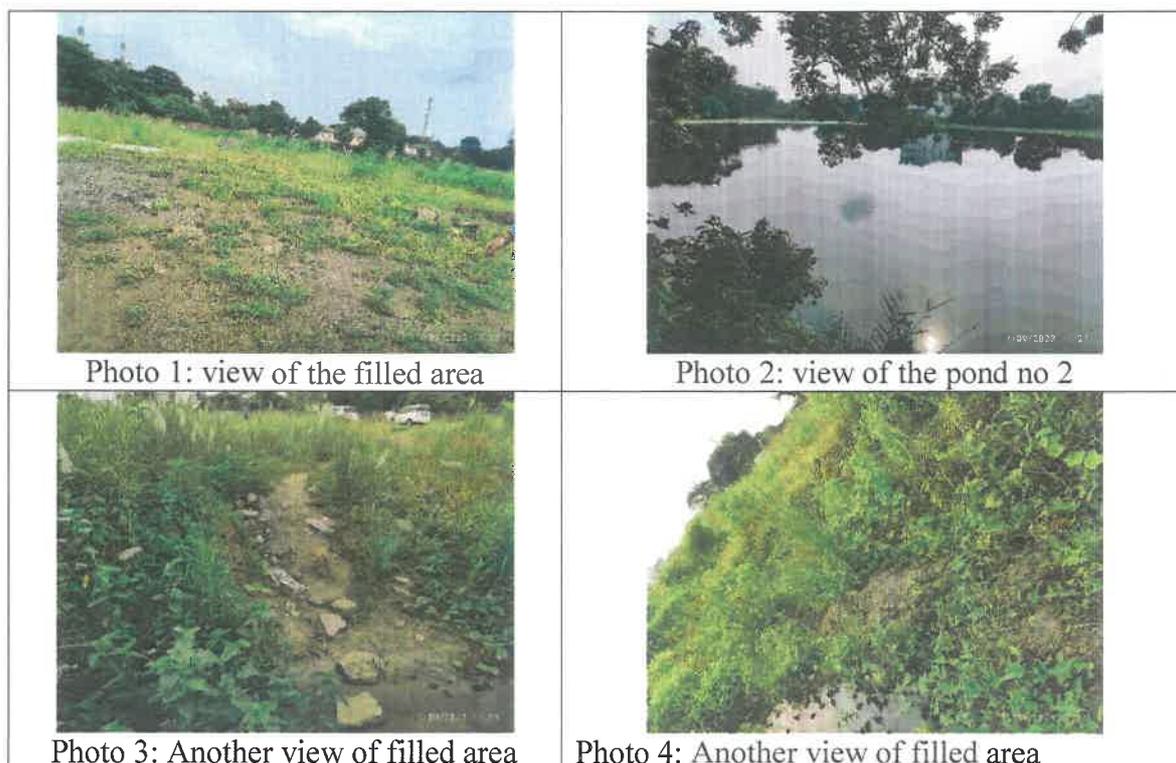
1. The PPS to Director General of Forest & Special Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, Aliganj, New Delhi – 110 003 (Email: [dgfindia@nic.in](mailto:dgfindia@nic.in))
2. Inspector General of Forests (FC), Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, Aliganj, New Delhi – 110 003, Email: [ramesh.pandey@nic.in](mailto:ramesh.pandey@nic.in)
3. Mrs. Shruti Rai Bhardwaj, Scientist-F, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, Aliganj, New Delhi – 110 003, (Email: [shruti.rai@nic.in](mailto:shruti.rai@nic.in))
4. Dr. Amit Kumar Tyagi, Head & AVP- Environment, M/s. Vedanta Limited, Bhurkamunda, District- Jharsuguda, Odisha-768202

**ANNEXURE -A****OA no 42 of 2023 titled as OM Sri Sri Sarbajanina Durga Puja Committee vs Union of India & others before the Honble National Green Tribunal.**

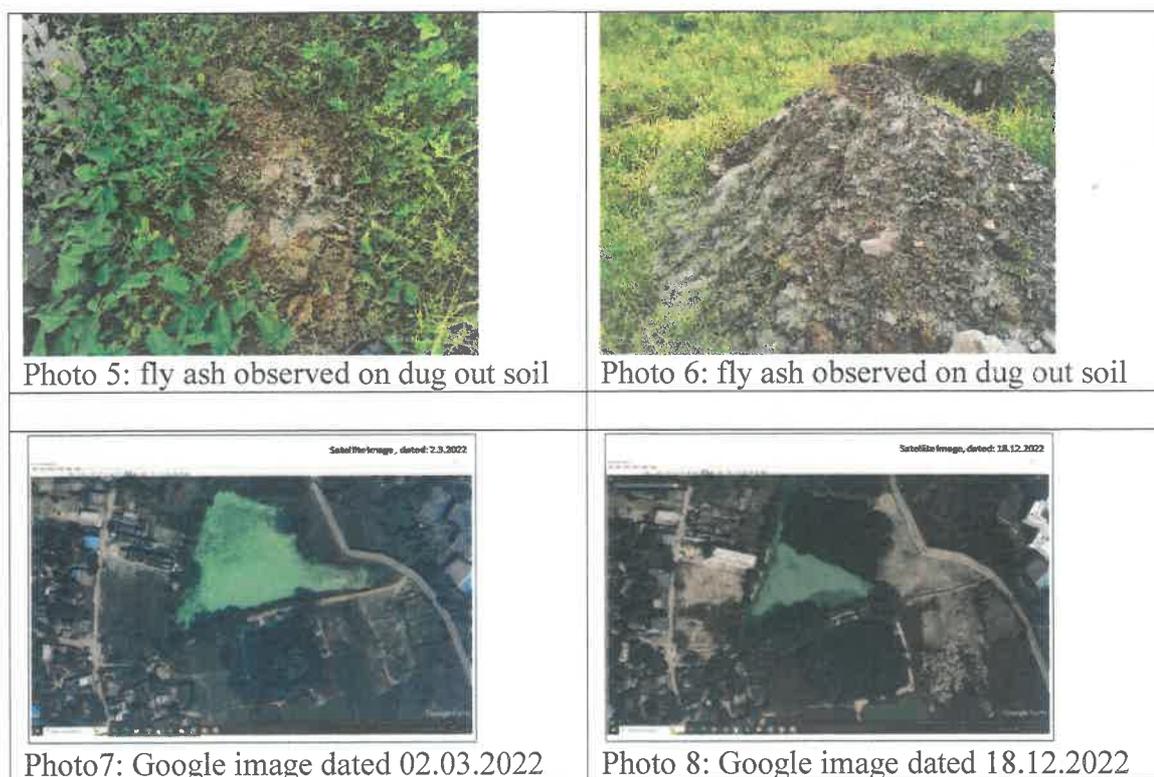
The site inspection of the project (M/s. Vedanta Limited) was conducted by Dr. T. H. Mahato, Scientist 'D', Regional Office Bhubaneswar on 11.09.2023. Shri Vijay Ingole, Head Power Plant and Ash Management, Shri Birendra Tiwary Lead Power Project, Shri Bharat Saxena, Dy Head, Environment, and other officers joined during visit time to time. Based on the site visit and documents submitted, observations made are submitted below:

**OBSERVATIONS:**

1. Ministry of Environment Forest and Climate Change has accorded Environmental Clearance (EC) to M/s Vedanta Aluminium Ltd vide letter no J-11011/144/2006-IA-II (1) dated 7th March 2007 for Aluminum Smelter 2.5 LTPA. Subsequently vide letter No. J-13011/10/2006-IA-II(T) dated 14<sup>th</sup> March 2007 Environment Clearance accorded for Captive Power Plant (CPP)- 675 MW, Further vide letter no. J- 11011/29/2007-IA II (I) dated 11<sup>th</sup> June, 2008 EC accorded for Expansion of Aluminium Smelter (2.5 to 16 LTPA) and CPP (675 MW to 1350 MW). Further EC accorded for proposed expansion of Alluminium Smelter production capacity from 16 LTPA to 18LTPA without increasing the CPP capacity of 1215 MW by M/s Vedanta Limited vide letter no F No J-11011/29/2007-IA II(I) dated 05.05.2022 located at Burkhamuunda, PO. Kalimandir, District. Jharsuguda, Odisha
2. Ministry of Environment Forest and Climate Change has accorded Environmental Clearance (EC) to M/s Sterlite energy Ltd vide letter no J-13011/03/2007-IA. II (T) dated 07.12.2007 for 2400 MW coal-based power plant project at Brundamal, Jharsuguda. The above EC has been amended vide EC letter no. J-13011/03/2007-IA. II (T) dated 12.05.2008 and 16.10.2018. The above EC has been transfers in the name of M/s Vedanta Limited vide letter dated 16.10.2018.



3. Alleged location as per the OA no 42 of 2023 titled as OM Sri Sri Sarbajanina Durga Puja Committee vs Union of India & others has been visited. At location  $21^{\circ}48'41.4''N$   $84^{\circ}01'31.0''E$  the area of the pond has been filled up and levelled up to the level of the road. On top of the filled area natural vegetation has been grown and Soil on the top of filled area has been observed (Photo 1 to Photo 4). However, the dugout soil from the filled area has been found with fly ash (Photo 5 and Photo 6). M/s Vedanta limited has denied of any dumping of fly ash in the said pond no 2.
4. The google image dated 02.03.2022 and dated 18.12.2022 indicates filling of part of the pond no 2. During visit pond no 2 was not in use. However, pond no 3 was in use by the villagers.



*T. Mahato*  
 (Dr. T. H. Mahato)  
 Scientist 'D'

**Government of India**  
**Ministry of Environment, Forests and Climate Change (MoEF&CC)**  
**Regional Office – Bhubaneswar**

**MONITORING REPORT**

**PART I**

**DATA SHEET**

File No: 101-1121/EPE/

1		Project Type River valley / Mining / Industry / Thermal / Nuclear / Other Specify	:	Thermal
2		Name of the project	:	2400 MW Thermal Power Project at Brundamal, Jharsuguda
3		Clearance letter(s) / OM No. and dated	:	EC letter no. J-13011/3/2007-IA.II(T) dated 07.12.2007 Amendment EC letter no. J-13011/3/2007-IA.II(T) dated 12.05 2008 and 16.10.2018
		CTE		Details has not been furnished.
		CTO		Details has not been furnished.
4		<u>Locations</u>	:	
	a.	Taluk(s) District	:	Village- Bhurkamunda, PO Kalimandir, District Jharsuguda, Odisha
	b.	State (s)	:	Odisha
	c.	Latitudes / Longitudes	:	
5		<u>Address of correspondence</u>		
	a.	Address of concerned project Chief Engineer (with Pin Code & telephone / telex / fax numbers		<b>Dr. Amit Kumar Tyagi</b> Head & AVP- Environment M/s Vedanta Limited Village-Bhurkhamunda, P.O. Kali Mandir District – Jharsuguda, Odisha, 768202 Telephone – 8093009508 Email: <a href="mailto:AmitKumar.Tyagi@vedanta.co.in">AmitKumar.Tyagi@vedanta.co.in</a> Tel: 6645-666634
	b.	Address of Executive Project Engineer/ Manager (with Pin Code/fax numbers)	:	<b>Dr. Amit Kumar Tyagi</b> Head & AVP- Environment M/s Vedanta Limited Village-Bhurkhamunda, P.O. Kali Mandir District – Jharsuguda, Odisha, 768202 Telephone – 8093009508 Email: <a href="mailto:AmitKumar.Tyagi@vedanta.co.in">AmitKumar.Tyagi@vedanta.co.in</a>
6		<u>Salient features:</u>		
	a.	Salient features of the project		2400 MW Thermal Power Project
	b.	of the environmental management plans		Covered in the EIA/EMP's submitted to the MoEF&CC, New Delhi from time to time for approval at the time of grant of Environmental Clearance (EC).
7		<u>Breakup of the project area:</u>		
	a	Project area	:	839.50 acre (as per the EC accorded)

*Tranahet*

8		Break up of project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers / artisans	145 nos (as reported by PP)
	a	SC,ST/Adivasis	: SC-16 nos , ST 78 nos (as reported by PP)
	b	Others	: OBC 51 no (as reported by PP)
9		<u>Financial Details:</u>	
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	: Project cost Rs. 7481.50 Crore (as per the EC accorded)
	b	Allocations made for environmental management plans, with item wise and year wise breakup	: Rs 200 Crore(as per the EC accorded)
	c	Benefit cost ratio / internal rate of return and the years of assessment	: Details has not been furnished.
	d	Whether (c) includes the cost of environmental management as shown in (b) above	: Details has not been furnished.
	e	Total expenditure on the Project so far	: Details has not been furnished.
	f	Actual expenditure incurred on the environmental management plans so far	: PP reported an expenditure of Rs. 1130.37 crore on Environment capex and Rs. 229.6939848 crore as requiring expenditure for F.Y. 2022-23.
10		<u>Forest land requirement:</u>	:
	a	The status of approval for a diversion of forest land for non-forestry use	: Details has not been furnished.
	b	The status of compensatory afforestation, if any	: Details has not been furnished.
	c	The status of clear felling	: Details has not been furnished.
	d	Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	: Details has not been furnished.
11		The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	: Details has not been furnished.
12		<u>Status of construction:</u>	
	a	Date of commencement	: Details has not been furnished.
		Date of completion (actual and / or planned)	: Details has not been furnished.



13		Reasons for the delay if the project is yet to start.	:	-
14		Date of site visit:		
	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	-
	b	Date of site visit for this monitoring report	:	11.09.2023



Photo 1: Sewage Treatment Plant



Photo 2: Rain water storage Tank



Photo 3: Coal Storage Area



Photo 4: Paved Road and Avenue Plantation



Photo 5: Plantation inside the premises



Photo 6: Movable fog canon

*mnahato*



Photo 7: Tyre washing facility



Photo 8: truk parking area



Photo 9: Road Sweeping Machine



Photo 10: Cover Truck



Photo11: fly ash silo



Photo 12: Water sprinkler at coal yard



Photo 13: Paved Road



Photo 14: Fog at coal yard

*Tonahet*



Photo 15: HDPE lining at ash pond



Photo 16: Another Ash pond



Photo 17: Ash pond

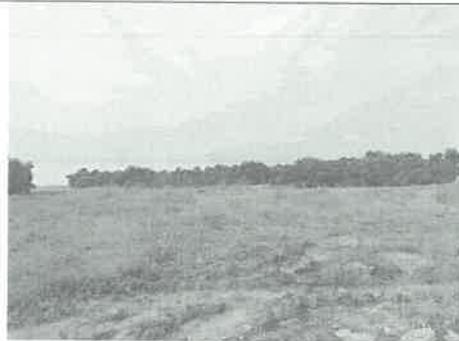


Photo 18: Reclaimed ash pond



Photo 19: Reclaimed ash pond



Photo 20: Reclaimed ash pond



Photo 21: Ash pond



Photo 22: Plantation on reclaimed pond

*tonahat*

**PART-II&III**  
**DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO THE**  
**CONDITIONS OF THE ENVIRONMENTAL CLEARANCE AND ENVIRONMENTAL**  
**MANAGEMENT**

**Subject:** 2400 MW coal based power plant project at Brundamal, Jharsuguda by M/s Vedanta Limited monitoring regarding.

**Reference:** EC letter No. J-13011/03/2007-IA. II (T) dated 12.07.2007  
 Amendment EC no. J-13011/03/2007-IA. II (T) dated 12.05.2008, dated 16.10.2018

**PRESENT STATUS OF THE PROJECT:**

Ministry of Environment Forest and Climate Change has accorded Environmental Clearance (EC) to M/s Sterllite energy Ltd vide letter no J-13011/03/2007-IA. II (T) dated 07.12.2007 for 2400 MW coal based power plant project at Brundamal, Jharsuguda. The above EC has been amended vide EC letter no. J-13011/03/2007-IA. II (T) dated 12.05.2008 and 16.10.2018. The above EC has been transfers in the name of M/s Vedanta Limited vide letter dated 16.10.2018.

The Project monitored by Dr. Timir Haran Mahato, Scientist 'D' on dated 11.09.2023. Following were present during monitoring.

1. Shri Vijay Ingole , Head Power Plant and Ash Management
2. Shri Bharat Saxena, Deputy Head, Environment and Other Officer joined time to time.

The report is submitted on the basis of the field visit and as per the information provided by the PP. The status of compliance on the stipulated conditions contained in the EC cited above is given below:

S No.	Conditions	Status of Compliances
<b>As per the MoEF&amp;CC EC letter no. J-13011/3/2007-IA.II(T) dated 07.12.2007</b>		
<b>Specific Condition</b>		
i.	The total land requirement shall not exceed 839.50 acres for all the activities/ facilities of the power project.	<b>REPORTEDLY COMPLIED</b> PP reported that the facilities of the power project have been set up within 839.50acres.
ii.	Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.	<b>PARTIALLY COMPLIED</b> PP reported that Ash and Sulphur content is within the limit as per notification. However, details of analysis data has not been furnished.
iii.	Two bi-flue stack of 275 m height each with exit velocity of not less than 25 m/s shall be provided with continuous online monitoring system.	<b>PARTIALLY COMPLIED</b> During visit two bi-flue stack has been observed. TPP stack velocity data during Aug. 2023 reported to be above 25m/s. As per the stack monitoring data SO2 exceeds the norms. Online stack monitoring data also indicate exceeding value of Hg.
iv.	High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.98% shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm <sup>3</sup> .	<b>BEING COMPLIED</b> Electrostatic Precipitators (ESPs) has been provided. PP reported that ESP with 99.98% efficiency followed with bag filters have been installed. Particulate emission monitoring data reported was within norms.

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S No.	Conditions	Status of Compliances
v.	Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency of removal of SO <sub>2</sub> , if required at a later stage.	<b>PLEASE REFER BELOW</b> PP reported that Space has been earmarked for Flue Gas De-sulphurisation (FGD). However, FGD yet to be installed.
vi.	Water requirement shall not exceed 5235 m <sup>3</sup> /hr. No ground water shall be extracted for the project at any stage.	<b>BEING COMPLIED</b> Total water consumption in July and August 2023 reported to be with in norms. PP also informed that no ground water is in use.
vii.	Closed Circuit Cooling system with cooling towers shall be provided.	<b>BEING COMPLIED</b> Cooling towers has been provided. PP reported that closed circuit cooling system has been provided.
viii.	For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.	<b>PARTIALLY COMPLIED</b> Dust suppression arrangement provided in the Truck Tripler. Water spray arrangement has been observed in part of the coal storage area not all along. Dust suppression measure at the ash pond has been provided in one ash pond not in all.
ix.	The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization.	<b>PARTIALLY COMPLIED</b> As per the fly ash utilization details furnished for the period 01.04.2022 to 31.03.2023, fly ash generated 3611364.791 MT and bottom ash generated 476043.373 MTPA. Utilization reported to be 108010.260 MTPA for fly ash based product, 164614.306 MTPA for ready mix concrete, 1119081.849 for construction of road, 4583870.006 for filling ash pond and 476047.373 MTPA for filling of low filling area. PP should furnish a plan for utilization of legacy fly ash as per the condition.
x.	The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.	<b>NOT COMPLIED</b> Impervious lining has been visible in one ash pond. PP reported that the ash pond has been lined with impervious HDPE lining to avoid any leaching in to ground water. However, dust suppression measure at the ash pond has been provided in one not in all. During the visit fly ash outside the pond has also been observed without any protection measure.
xi.	Project proponent shall commission a study to be undertaken by Wildlife Institute of India, Dehradun to determine the quantum and scale of mitigation measures to offset the impact, if any, on the safety of the elephants and security of their migration areas. The study would have to be completed before starting work at site and the safeguards so suggested shall be implemented by the project. The requisite allocation of funds for the same shall be built into the project cost.	<b>PARTIALLY COMPLIED</b> PP furnished a copy of the interim report 2 on feasibility of establishing elephant corridor in the Jharsuguda-Sambalpur region of Odisha and Site Specific mitigation and management plan. However, details of its implementation status has not been furnished.



S No.	Conditions	Status of Compliances
	<p><b>The above condition has been amended vide letter dated 12.05.2008 to</b></p> <p>“Project proponent shall commission a study to be undertaken by the Centre for Ecological Science, Indian Institute of Science, Bangalore regarding the feasibility of developing viable elephant corridor, which may have minimal impact due to the proposed project. The report shall be get vetted by Chief Wildlife Warden, Government of Odisha and Director (Project elephant), Government of India. The necessary mitigation measures as may be suggested based on the proposed study shall be implemented by the project proponent along with the State Wildlife Department. The said study should be completed before commissioning of the plant. The implementation of the EMP shall be periodically monitored by a team comprising of Representatives from (i) Indian Institute of Science, Bangalore, (ii) Regional office of the Ministry at Bhubaneswar and (iii) State Wildlife Department”</p>	
xii.	<p>The District Collector / Revenue Divisional Commissioner shall be informed regarding R&amp;R and all other benefits to be provided by the project proponent and their effective implementation shall have to be overseen by the District Authorities</p>	<p><b>REPORTEDLY COMPLIED</b></p> <p>PP reported that the R &amp; R package as finalized by RPDAC based on Govt. R &amp; R policy 2006 is being implemented fully under the supervision of District Administration.</p>
xiii.	<p>All the measures suggested by the Wildlife Department, Govt. of Orissa (Chief Wildlife Warden) for this project as contained in their letter no. IWL(c)-FC-370/07/6532 dated 16.10.2007 and any other measure as may be considered necessary for the conservation of wildlife in the area shall be taken up on priority before commissioning the project.</p>	<p><b>PARTIALLY COMPLIED</b></p> <p>PP reported that the mitigative measures as per revised site specific wild conservation plan as approved by CWLW, Odisha vide letter no.488/7WL-FDWLC -32/2021 dtd 30.04.2021 is under implementation. However details of implementation status of the measures suggested by the Wildlife Department, Govt. of Orissa (Chief Wildlife Warden) for this project as contained in their letter no. IWL(c)-FC-370/07/6532 dated 16.10.2007 has not been furnished.</p>
xiv.	<p>Rain water harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water technology within a period of three months from the date of clearance.</p>	<p><b>PARTIALLY COMPLIED</b></p> <p>Rain water storage tank has been shown. Details of consultation with Central Ground Water Authority / State Ground Water Board has not been furnished.</p>

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S No.	Conditions	Status of Compliances
xv.	Waste water generated shall be recycled and reused in the plant premises. There shall be no discharge of waste water outside the plant boundary except during monsoon. Treated effluents conforming to the prescribed standards shall be discharged during the monsoon period.	<b>BEING COMPLIED</b> Effluent treatment plant has been provided. PP informed that the treated effluents after conforming to standards is recycled and reused within the plant.
xvi.	Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.	<b>PARTIALLY COMPLIED</b> Ground water quality monitoring data including heavy metal around ash dyke has been furnished. However, ground water quality monitoring data around the ash dump area has not been furnished.
xvii.	A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of 322 acres.	<b>PARTIALLY COMPLIED</b> Plantation has been observed at the site. PP reported that 697160 sampling planted in an area of 275.29 ha area of total project. Green belt all along the plant and ash pond yet to be provided.
xviii.	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<b>PLEASE REFER BELOW</b> During visit the industry was in operation. The condition can't be verified at present.
xix.	Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.	<b>BEING COMPLIED</b> Noise level monitoring data has been furnished along with Six monthly compliance for the period of Oct. 2022 to March, 2023. Data reported was within norms.
xx.	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.	<b>PARTIALLY COMPLIED</b> Online continuous ambient air quality monitoring station has been established. Monthly monitoring data has been furnished to Regional Office along with six monthly compliance. However, details of consultation with pollution control board have not been furnished.
xxi.	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	<b>PARTIALLY COMPLIED</b> PP reported that necessary advertisement has been published. However, copy of news paper advertisement indicating the name of news paper and date of publication has not been furnished.



S No.	Conditions	Status of Compliances
xxii.	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards	<b>BEING COMPLIED</b> PP reported that environmental cell has been formed consisting of 09 employee.
xxiii.	Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.	<b>BEING COMPLIED</b> PP furnished a copy of half yearly report for the period Oct. 22 to Mar. 23 on the status of implementation has been uploaded on the portal of the ministry.
xxiv.	Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the Regional Office for their use during monitoring	<b>AGREED UPON</b> PP agreed to abide by the condition.
xxv.	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	<b>BEING COMPLIED</b> PP reported an expenditure of Rs. 1130.37 crore on Environment capex and Rs. 229.6939848 crore as requiring expenditure for F.Y. 2022-23.
xxvi.	Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhubaneswar/ the CPCB / the SPCB during monitoring of the project.	<b>AGREED UPON</b> PP agreed to abide by the condition.
<b>As per the MoEF&amp;CC EC letter no. J-13011/3/2007-IA.II(T) dated 12.05.2008</b>		
i.	The site at Sripura village shall only be used for ash disposal for both the phases. Out of the 790 acres of available land, the proponent should carve out 757.3 acres of land as required for the ash pond such that the land so carved out is far away as possible from the river.	<b>PLEASE REFER BELOW</b> During visit three ash pond has been shown at near Katikela village, Kudebaga village and Siriapalli village. It was informed that site at sripura village has not been developed as ash pond and ash pond will be constructed as per the amendment of EC.
ii.	The earlier site for the ash pond, which was close to the elephant corridor, shall be abandoned and no activity relating to the power project in any form shall be taken on that site.	<b>PLEASE REFER BELOW</b> During visit three ash dyke has been shown at near Katikela village, Kudebaga village and Siriapalli village. PP informed that ash pond will be constructed as per the amendment of EC.
<b>As per the MoEF&amp;CC EC letter no. J-13011/3/2007-IA.II(T) dated 16.10.2018</b>		
S No.	Conditions	Status of Compliances

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S No.	Conditions	Status of Compliances
<b>General Condition</b>		
i.	Ash ponds at Village Siriapali in an area of 230 acres and at village Gudigaon in an area of 191.92 ha is permitted.	<b>PLEASE REFER BELOW</b> During visit an ash pond at village Siriapali has been shown. However, details of ash pond at Gudigaon not furnished. PP reported that the condition as agreed.
ii.	Ash pond expansion at Katikela is not permitted and the said area shall be developed as greenbelt.	<b>NOT COMPLIED</b> PP reported the condition as agreed. PP should clearly mention the status of expansion of the Katikela pond and the status of development of green belt.
iii.	Remediation plan for restoration of Katikela Ash pond near Bhedan river prepared by M/s Tata Consulting Engineers shall be implemented.	<b>PARTIALLY COMPLIED</b> PP reported that Remediation plan prepared by consulting Engineer has been implemented. PP should furnish point wise compliance status.
<b>Stipulated condition</b>		
i.	The protection of elephants moving in the area to be ensured along with ensuring safe passage/corridor for the movement of elephants from one habitat to other safely.	<b>PARTIALLY COMPLIED</b> PP reported the condition as being complied. However, activity details in this regard has not been furnished.
ii.	All the protection and conservation activities to be undertaken as per the directions and recommendations of the Chief Wildlife Warden, Odisha and the local officials.	<b>PARTIALLY COMPLIED</b> PP reported the condition as being complied. However, the activity undertaken has not been furnished.

**Observations:**

The PAs have complied or are in process of complying the conditions stipulated by the Ministry. In this context, information/action plans have been sought on following points:

**As per the EC letter No. J-13011/3/2007-IA.II(T) dated 07.12.2007.**

**The following non-compliance to the environmental clearance conditions was observed:**

1. Impervious lining has been visible in one ash pond. PP reported that the ash pond has been lined with impervious HDPE lining to avoid any leaching in to ground water. However, dust suppression measure at the ash pond has been provided in one not in all. During the visit fly ash outside the pond has also been observed without any protection measure. (Specific condition no. x)

**The following partially compliance to the environmental clearance conditions was observed:**

1. PP reported that Ash and Sulphur content is within the limit as per notification. However, details of analysis data has not been furnished. (Specific condition no. ii)
2. During visit two bi-flue stack has been observed. TPP stack velocity data during Aug. 2023 reported to be above 25m/s. As per the stack monitoring data SO<sub>2</sub> exceeds the norms. Online stack monitoring data also indicate exceeding value of Hg. (Specific condition no. iii)
3. Dust suppression arrangement provided in the Truck Tripler. Water spray arrangement has been observed in part of the coal storage area not all along. Dust suppression measure at the ash pond has been provided in one ash pond not in all. (Specific condition no. viii)

4. As per the fly ash utilization details furnished for the period 01.04.2022 to 31.03.2023, fly ash generated 3611364.791 MT and bottom ash generated 476043.373 MTPA. Utilization reported to be 108010.260 MTPA for fly ash based product, 164614.306 MTPA for ready mix concrete, 1119081.849 for construction of road, 4583870.006 for filling ash pond and 476047.373 MTPA for filling of low filling area. PP should furnish a plan for utilization of legacy fly ash as per the condition. (Specific condition no. ix)
5. PP furnished a copy of the interim report 2 on feasibility of establishing elephant corridor in the Jharsuguda-Sambalpur region of Odisha and Site Specific mitigation and management plan. However, details of its implementation status has not been furnished. (Specific condition no. xi)
6. PP reported that the mitigative measures as per revised site specific wild conservation plan as approved by CWLW, Odisha vide letter no.488/7WL-FDWLC -32/2021 dtd 30.04.2021 is under implementation. However details of implementation status of the measures suggested by the Wildlife Department, Govt. of Orissa (Chief Wildlife Warden) for this project as contained in their letter no. IWL(c)-FC-370/07/6532 dated 16.10.2007 has not been furnished. (Specific condition no. xiii)
7. Rain water storage tank has been shown. Details of consultation with Central Ground Water Authority / State Ground Water Board has not been furnished. (Specific condition no. xiv)
8. Ground water quality monitoring data including heavy metal around ash dyke has been furnished. However, ground water quality monitoring data around the ash dump area has not been furnished. (Specific condition no. xvi)
9. Plantation has been observed at the site. PP reported that 697160 sampling planted in an area of 275.29 ha area of total project. Green belt all along the plant and ash pond yet to be provided. (Specific condition no. xvii)
10. Online continuous ambient air quality monitoring station has been established. Monthly monitoring data has been furnished to Regional Office along with six monthly compliance. However, details of consultation with pollution control board have not been furnished. (Specific condition no. xx)
11. PP reported that necessary advertisement has been published. However, copy of news paper advertisement indicating the name of news paper and date of publication has not been furnished. (Specific condition no. xxi)

**As per the EC letter No. J-13011/3/2007-IA.II(T) dated 16.10.2018**

**The following non-compliance to the environmental clearance conditions was observed:**

1. PP reported the condition as agreed. PP should clearly mention the status of expansion of the Katikela pond and the status of development of green belt. (General Condition no. ii)

**The following Partially compliance to the environmental clearance conditions was observed:**

1. PP reported that Remediation plan prepared by consulting Engineer has been implemented. PP should furnish point wise compliance status. (General condition no. iii)
2. PP reported the condition as being complied. However, activity details in this regard has not been furnished. ( Stipulated Condition no. i)
3. PP reported the condition as being complied. However, the activity undertaken has not been furnished. (Stipulated condition no. ii)



(डॉ. टी. एच. महतो/Dr. T. H. Mahato)

वैज्ञानिक-डी/ Scientist 'D'

**Government of India**  
**Ministry of Environment, Forests and Climate Change (MoEF&CC)**  
**Regional Office – Bhubaneswar**

**MONITORING REPORT**

**PART I**

**DATA SHEET**

**File No: 101-1095/20/EPE**

1		Project Type River valley / Mining / Industry / Thermal / Nuclear / Other Specify	:	Industry (Aluminium & Power)
2		Name of the project	:	Aluminium Smelter Production Capacity (18 LTPA), CPP 1215 MW
3		Clearance letter(s) / OM No. and dated	:	1. EC letter No. J-11011/144/2006-IA.II (I) dated 07.03.2007 2. EC letter No. J-13011/10/2006-IA.II (T) dated 14.03.2007 3. EC letter No. J-11011/29/2007-IA.II (I) dated 11.06.2008 4. EC letter No. J-11011/29/2007-IA.II (I) dated 05.05.2022
		CTE		2814/IND/-II-CTE-6650 dated 21.02.2022 (NIPL CTE from 16 to 17.5 LTPA) 11767/IND-II-CTE-6607 dated 06.07.2022 (for 0.5 LTPA from 17.5 to 18 LTPA)
		CTO		4695/IND-I-CON-6079 dated 27.03.2023 valid till 31.03.2024
4		<u>Locations</u>	:	
	a.	Taluk(s) District	:	Village- Bhurkamunda, PO Kalimandir, District Jharsuguda, Odisha
	b.	State (s)	:	Odisha
	c.	Latitudes / Longitudes	:	Latitude & Longitude 21°49' 43.0''N 84° 02' 40.7'' E 21°48' 32.2''N 84°03' 53.7'' E 21°46' 52.5''N 84°03' 2.91'' E 21°48' 6.51''N 84°01' 48.29''E 21°49' 3.01''N 84°01' 30.55'' E
5		<u>Address of correspondence</u>		
	a.	Address of concerned project Chief Engineer (with Pin Code & telephone / telex / fax numbers)		<b>Dr. Amit Kumar Tyagi</b> Head- Environment M/s Vedanta Limited Village-Bhurkhamunda, P.O. Kali Mandir District – Jharsuguda, Odisha, 768202 Telephone – 8093009508 Email: envvljsgsc@vedanta.co.in; Tel: 6645 666634
	b.	Address of Executive Project Engineer/ Manager (with Pin Code/fax numbers)	:	-
6		<u>Salient features:</u>		

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	a.	Salient features of the project	Aluminium Production capacity 18 LTPA Power Production capacity – CPP1215 MW
	b.	of the environmental management plans	Covered in the EIA/EMP's submitted to the MoEF&CC, New Delhi from time to time for approval at the time of grant of Environmental Clearance (EC).
7		<u>Breakup of the project area:</u>	
	a	Project area	: 834.236 ha (As reported by PP)
8		Break up of project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers / artisans	It has been carried out as per the R&R policy of Govt. of Orissa in consultation with RPDAC (as reported by PP).
	a	SC,ST/Adivasis	: ST-78, SC-16, (As reported by PP)
	b	Others	: OBC 51(As reported by PP)
9		<u>Financial Details:</u>	
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	: Project cost Rs. 22240 Cr  (as reported by PP)
	b	Allocations made for environmental management plans, with item wise and year wise breakup	: The allocations made towards environmental management of Rs.840.22 Cr (capex) has been implemented in phased manner along with the project implementation (As reported by PP)
	c	Benefit cost ratio / internal rate of return and the years of assessment	: Details has not been furnished.
	d	Whether (c) includes the cost of environmental management as shown in (b) above	: Details has not been furnished.
	e	Total expenditure on the Project so far	: 22240 Crores ,(as reported by PP)
	f	Actual expenditure incurred on the environmental management plans so far	: The allocations made towards environmental management of Rs.840.22 Cr (capex) has been implemented in phased manner along with the project implementation. (As reported by PP)
10		<u>Forest land requirement:</u>	
	a	The status of approval for a diversion of forest land for non-forestry use	: NA (As reported by PP)
	b	The status of compensatory afforestation, if any	: NA (As reported by PP)
	c	The status of clear felling	: NA (As reported by PP)
	d	Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	: NA (As reported by PP).



11		The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	:	NA (As reported by PP)
12		<u>Status of construction:</u>		
	a	Date of commencement	:	Aluminium Smelter – April 2007 (SM1) & June 2008 (SM2) CPP 1215 MW – April 2007 (As reported by PP)
		Date of completion (actual and / or planned)	:	Aluminium Smelter 1 – 21 <sup>st</sup> August 2008 Aluminium Smelter 2 – 1 <sup>st</sup> April 2015 & October 2022 CPP 1215 MW – 3 <sup>rd</sup> July 2008 (As reported by PP)
13		Reasons for the delay if the project is yet to start.	:	NA
14		<u>Date of site visit:</u>		
	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	24.12.2020
	b	Date of site visit for this monitoring report	:	11.09.2023

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Photo 1: Sewage Treatment Plant



Photo 2: Rain water storage Tank



Photo 3: Coal Storage Area



Photo 4: Paved Road and Avenue Plantation



Photo 5: Plantation inside the premises



Photo 6: Movable fog canon



Photo 7: Tyre washing facility



Photo 8: truk parking area

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Photo 9: Road Sweeping Machine



Photo 10: Cover Truck



Photo 11: fly ash silo



Photo 12: Water sprinkler at coal yard



Photo 13: Paved Road



Photo 14: Fog at coal yard



Photo 15: Alumina silo



Photo 16: Alumina smelter



Photo 17: HDPE lining at ash pond



Photo 18: Another Ash pond



Photo 19: Ash pond



Photo 20: Reclaimed ash pond



Photo 21: Reclaimed ash pond



Photo 22: Reclaimed ash pond



Photo 23: Ash pond



Photo 24: Plantation on reclaimed pond

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**PART-II&III**  
**DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO THE**  
**CONDITIONS OF THE ENVIRONMENTAL CLEARANCE AND ENVIRONMENTAL**  
**MANAGEMENT**

**Subject:** Environmental Clearance(EC) for proposed expansion of Aluminium Smelter production capacity from 16 LTPA to 18LTPA without increasing the CPP capacity of 1215 MW by M/s Vedanta Limited vide letter no F No J-11011/29/2007-IA II(I) dated 05.05.2022 located at Burkhamuunda, PO. Kalimandir, District. Jharsuguda, Odisha- Monitoring Regarding

**Reference:** EC letter No. F No J-11011/29/2007-IA II(I) dated 05.05.2022

**PRESENT STATUS OF THE PROJECT:**

1. Ministry of Environment Forest and Climate Change has accorded Environmental Clearance (EC) to M/s Vedanta Aluminium Ltd vide letter no J-11011/144/2006-IA-II (1) dated 7th March 2007 for Aluminum Smelter 2.5 LTPA. Subsequently vide letter No. J-13011/10/2006-IA-II(T) dated 14<sup>th</sup> March 2007 Environment Clearance accorded for Captive Power Plant (CPP)- 675 MW, Further vide letter no. J- 11011/29/2007-IA II (I) dated 11<sup>th</sup> June, 2008 EC accorded for Expansion of Aluminium Smelter (2.5 to 16 LTPA) and CPP (675 MW to 1350 MW). Further EC accorded for proposed expansion of Alluminium Smelter production capacity from 16 LTPA to 18LTPA without increasing the CPP capacity of 1215 MW by M/s Vedanta Limited vide letter no F No J-11011/29/2007-IA II(I) dated 05.05.2022 located at Burkhamuunda, PO. Kalimandir, District. Jharsuguda, Odisha
2. Ministry of Environment Forest and Climate Change has also accorded Environmental Clearance (EC) to M/s Sterlite energy Ltd vide letter no J-13011/03/2007-IA. II (T) dated 07.12.2007 for 2400 MW coal-based power plant project at Brundamal, Jharsuguda. The above EC has been amended vide EC letter no. J-13011/03/2007-IA. II (T) dated 12.05.2008 and 16.10.2018. The above EC has been transfers in the name of M/s Vedanta Limited vide letter dated 16.10.2018

The site inspection of the project (M/s. Vedanta Limited) was conducted by Dr. T. H. Mahato, Scientist 'D', Regional Office Bhubaneswar on 11.09.2023. Sri Vijay Ingole, Head Power Plant and Ash Management, Birendra Tiwary Lead Power Project, Sri Bharat Saxena, Dy Head, Environment, and other officers joined during visit time to time. Based on the site visit and documents submitted, observations made are submitted below:



As per the EC letter No. J-11011/29/2007-IA-II(I) dated 05.05.2022

S No.	Conditions	Status of Compliances
	<b>A. Specific Condition</b>	
i.	The project proponent shall abide by all orders and judicial pronouncements, made from time to time in OA No. 10/2021/EZ pending before the National Green Tribunal (NGT), Eastern Zone, Kolkata.	<b>BEING COMPLIED</b> PP furnished a copy of the letter addressed to Member Secretary, OSPCB regarding deposit of Rs. 1 crore an environmental compensation. PP also furnished a report on Geotechnical strength of the earth Embankment and thickness of soil covering of the reclaimed area.
ii.	The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall not exceed 2 mg/Nm <sup>3</sup> . The data on PAH shall be monitored quarterly and report shall be submitted regularly to the Ministry/Regional Office at Bhubaneswar and Odisha Pollution Control Board	<b>BEING COMPLIED</b> Poly-aromatic hydrocarbons (PAH) monitoring data has been furnished along with the six monthly compliance for the period of October, 2022 to March 2023. Data reported was with in norms.
iii.	A nallah is passing through the project site, PP shall maintain the nallah in its natural form and provide the green buffer zone of 10 m on both side of the nallah	<b>BEING COMPLIED</b> Nallah is flowing through the site. During visit PP informed that nallah is maintained in it natural form.
iv.	Particulate fluoride emissions shall not be more than 0.65 mg/Nm <sup>3</sup> and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm <sup>3</sup>	<b>PARTIALLT COMPLIED</b> Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished.
v.	proponent shall maintain the Fluoride consumption less than 10 kg/tonne of Aluminium production by April, 2022 and reduce further at 8.0 kg/t by April, 2023 as committed by PP.	<b>NOT COMPLIED</b> As per the submitted six monthly compliance report Fluoride consumption as per condition yet to be achieved.
vi.	Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all along the periphery of 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. This shall include development of green belt of 50 width from the project site towards the Jhasuguda village located at 0.2km from the site. In addition to this,	<b>PARTIALLY COMPLIED</b> Plantation has been observed at the site. However, three tire green belt all along the periphery yet to be developed. 50m green belt towards Jhasuguda village yet to be developed. PP reported that 697160 sampling planted in an area of 275.29 ha area. Details of Plantation over 37.5 ha outside plant premises has not been furnished.

*Mahab*

	<p>following activities shall also be undertaken as committed by the proponent:</p> <ul style="list-style-type: none"> <li>• Green cover on reclaimed ash ponds over an area of 40 Ha shall be developed by June 2022.</li> <li>• PP shall undertake plantation over 37.5 ha outside plant premises in consultation with DFO, Jharsuguda.</li> </ul>	
vii.	Present stock of SPL carbon (36320 T) and legacy SPL stock shall be liquidated by Sep, 2023 as committed.	<p><b>PARTIALLY COMPLIED</b></p> <p>As per the document furnished around 11383 MT of SPL carbon disposed till September 2022.</p>
viii.	Refractory SPL stock (40000 T) stored in covered shed on concrete floors shall be disposed of Dec, 2025 as committed	<p><b>PLEASE REFER BELOW</b></p> <p>Details of disposal of refractory SPL stock has not been furnished. PP reported that the material is being stored till an approved disposal mechanism is in place.</p>
ix.	PM levels shall be less than 30 mg/Nm <sup>3</sup> for all units under expansion. In case of older units, PP shall initiate retrofitting/modification action to achieve the PM emission level of 30 mg/Nm <sup>3</sup> by October, 2024.	<p><b>PLEASE REFER BELOW</b></p> <p>Online particulate monitoring data from the CPP stack was higher than 30 mg/Nm<sup>3</sup>. PP should initiate retrofitting/modification action to achieve the PM emission level of 30 mg/Nm<sup>3</sup> by October, 2024.</p>
x.	Wastes shall be sent to RAMKY TSDF located at Sukinda. Further, waste disposed in this SLF shall be evacuated and disposed to authorized agency for detoxification as committed by PP	<p><b>PARTIALLY COMPLIED</b></p> <p>PP informed that hazardous wastes such as SBD, drain cleaning Sludge, House Keeping waste, ETP Sludge etc. are being sent to RAMKY TSDR. Details of disposal of waste in the SLF has not been furnished. However, PP furnished an communication from OSPCB for approved of secured landfill of Vedanta Aluminium Limited.</p>
xi.	PP shall use Roof Top Rainwater Harvesting systems with a total capacity of around 10000 m <sup>3</sup> of rainwater and re-use the water in the plant	<p><b>PARTIALLY COMPLIED</b></p> <p>Roof top rain water storage tank has been provided. However, total capacity of tank has not been furnished. It was started that stored water used for gardening.</p>
xii.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented	<p><b>PARTIALLT COMPLIED</b></p> <p>CREP recommendation such as dry scrubber system have been installed in smelter and the fugitive fluoride emission ranges between 0.35 to 0.39 kg/MT of Al. Additionally, laser-based fluoride monitoring system have been installed in pot room for monitoring of fugitive fluoride. Fluoride consumption reported to be to achieved 10.59 kg/T of Al till March 2023. Setting up a centralized SPL treatment &amp; disposal facility with Aluminium fluoride recovery and utilization of SPL in steel/Cement industries yet to be implemented. PP reported that SPL generated the plant sent to OSPCB</p>



		authorized agency M/s Green Energy Resources located in Sambalpur. Particulate emission of bake oven is reported between 4.1 to 5.9 mg/Nm <sup>3</sup> during October 2022 to march 2023.
xiii.	PP shall utilize 100% ash as per Fly Ash Notification 2021 and its subsequent amendments. Further, legacy ash shall be utilized completely by 31/05/2027 as committed by PP.	<b>PARTIALLY COMPLIED</b> As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated in 2832436.504 MT and bottom ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash.
xiv.	Dust Suppression measures such as water sprinkling through mobile tankers is being carried out especially during the dry season. Ash laden trucks are covered with tarpaulin to avoid spillage	<b>BEING COMPLIED</b> Dust Suppression measures such as water sprinkling through mobile tankers has been provided. Ash laden trucks are covered with tarpaulin to avoid spillage.
xv.	Regular monitoring of Air, Water & Soil quality shall be carried out in the Ash Pond area	<b>BEING COMPLIED</b> PP furnished ground water quality from ash pond bore well. Soil quality from village and ambient air quality data of 10 locations along with the submitted six monthly compliance.
xvi.	Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to RO.	<b>PARTIALLT COMPLIED</b> PP reported that Performance monitoring of pollution control equipment has been completed and report submitted to board. PP should furnish a copy to Regional Office also.
xvii.	The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the sixmonthly compliance report to the concerned Regional Office of the MoEF&CC	<b>PARTIALLT COMPLIED</b> PP reported that recommendations as per the approved Wildlife Management Plan is under implementation. However, details implementation report has not been furnished.
xviii.	The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further, fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption	<b>BEING COMPLIED</b> Forage fluoride monitoring data in nearby village has been furnished. Fluoride monitoring data in soil has also been furnished.
xix.	The major emissions are from the pot room	<b>BEING COMPLIED</b>

	roof. The sampling frequency should be increased, and sampling is done at multiple locations. The laser-based advance technology shall be adopted to continuously monitor gaseous fluoride emissions from pot rooms on real time basis by March, 2023	Laser-based technology has been provided to continuously monitor gaseous fluoride.
xx.	Wheel Washing mechanism shall be provided in entry and exit gates with complete water recirculation system	<b>PARTIALLY COMPLIED</b> Wheel Washing system has been provided in part not in all the entry and exist.
xxi.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface	<b>BEING COMPLIED</b> Road are mostly paved.
<b>General Condition</b>		
<b>I. Statutory compliance:</b>		
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	<b>AGREED UPON</b> PP agreed to abide by the condition.
<b>II. Air quality monitoring and preservation</b>		
i.	The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) 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.	<b>BEING COMPLIED</b> Continuous Emission Monitoring System (CEMS) has been provided at the stack for PM, SO <sub>2</sub> , NO <sub>2</sub> and CO in CPP and PM and HF in smelter stack 04 no of continuous ambient air quality station has been provided.
ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	<b>NOT COMPLIED</b> Fugitive emission monitoring data has not been furnished.
iii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	<b>REPORTREDLY COMPLIED</b> PP reported that leakage detection and mechanized bag cleaning facilities have been provided for maintenance of bags.
iv.	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage	<b>PARTIALLY COMPLIED</b> Covered transportation has been observed during visit. However, fly ash found to be



	and dust generation; Use closed bulkers for carrying fly ash	transported in covered truck in place of closed bulkers.
v.	The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;	<b>NOT COMPLIED</b> Wind shelter fence to the coal stock pill has not been observed.
vi.	Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.	<b>PLEASE REFER BELOW</b> During visit tunnel, cement bagging plant not observed. PP informed that plant has been designed with proper ventilation system.
vii.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly	<b>PARTIALLY COMPLIED</b> During visit mobile vacuum cleaner observed to be plying on road. However, the road nearby fly ash silo was found to be full of fly ash.
viii.	Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process	<b>REPORTEDLY COMPLIED</b> PP reported that fluoride gas captured and recycled back.
ix.	Practice use of low-Sulphur tars for baking anodes.	<b>PARTIALLY COMPLIED</b> PP reported that low-Sulphur tars is being used for making anodes. However, sulphur analysis data of tar has not been furnished.
x.	Make efforts to increase the life of pot lining through better construction and operating techniques	<b>REPORTEDLY COMPLIED</b> PP reported that efforts are being taken to increase the pot life with better operational practice and installation of graphitized cathod.
xi.	Design the pot roofs with louvers and roof ventilators	<b>BEING COMPLIED</b> Louvers and roof ventilators provided.
<b>III. Water quality monitoring and preservation</b>		
i.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 742 (E) dated 30th August 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006 (Aluminium); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) 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	<b>BEING COMPLIED</b> Continuous effluent monitoring system has been provided to ETP.
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 recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories	<b>BEING COMPLIED</b> Ground water quality monitoring data furnished along with the submitted Six monthly compliance for the period of Oct. 2022 to March, 2023.
iii.	Sewage Treatment Plant shall be provided	<b>BEING COMPLIED</b>



	for treatment of domestic wastewater to meet the prescribed standards	Sewage Treatment plant has been provided for treatment of domestic waste water.
iv.	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	<b>NOT COMPLIED</b> Garland drain along the coal stock pile has not observed.
v.	Water meters shall be provided at the inlet to all unit processes in the cement plant.	<b>PLEASE REFER BELOW</b> Water meter has been provided. PP reported that total water consumption on July, 2023 as 2209.259 m <sup>3</sup> /hr and on August 2023 as 2248.352 m <sup>3</sup> /hr for CPP and Smelter.
vi.	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water	<b>PLEASE REFER BELOW</b> During visit cement plant has not been observed. ETP has been provided to recycle treated water.
<b>IV. Noise monitoring and prevention</b>		
i.	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	<b>BEING COMPLIED</b> Noise level monitoring data has been furnished along with Six monthly compliance for the period of Oct. 2022 to March, 2023.
<b>V. Energy Conservation measures</b>		
i.	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases.	<b>PLEASE REFER BELOW</b> During visit waste heat recovery system has not been observed.
ii.	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;	<b>NOT COMPLIED</b> Solar power generation of roof top has not been observed.
iii.	Provide LED lights in their offices and residential areas	<b>BEING COMPLIED</b> LED lights area in use.
<b>VI. Waste management</b>		
i.	Used refractories shall be recycled.	<b>NOT COMPLIED</b> Used refractories store in the premises and yet to be recycled.
ii.	Oily scum and metallic sludge recovered from ETP shall be mixed, dried, and briquetted and reused	<b>PLEASE REFER BELOW</b> PP reported that ETP studge is being disposed off to common hazardous waste, TSDF at Sukinda.
<b>VII. Green Belt</b>		
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 including plantation	<b>NOT COMPLIED</b> GHG emission inventory for the plant and the programme for reduction has not been furnished.
ii.	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's	<b>NOT COMPLIED</b> Study report on de-carbonization program has not been furnished.



	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	
<b>VIII. Public hearing and Human health issues</b>		
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	<b>BEING COMPLIED</b> PP furnished a copy of the letter from director of factories and boiler regarding acceptance of updated on site emergency plan.
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	<b>NOT COMPLIED</b> Heat stress analysis data has not been furnished.
iii.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	<b>BEING COMPLIED</b> PP reported that Occupational health surveillance of the workers is being under taken and record mention. Sample copy of periodical medical examination and pre medical examination has been furnished.
<b>IX. Environment Management</b>		
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	<b>NOT COMPLIED</b> Status of compliance as per the condition has not been furnished.
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	<b>PARTIALLY COMPLIED</b> PP reported that Environmental Policy is in place. However, copy of board resolution in this regard has not been furnished along with six monthly compliance.



	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	<b>BEING COMPLIED</b> PP reported that separate Environmental Cell consisting 09 members.
<b>X. Miscellaneous</b>		
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.	<b>COMPLIED</b> PP reported that the accord of EC has been published in two widely circulated newspaper the Samaj 11 <sup>th</sup> May 2022 and Orissa Port on 11 <sup>th</sup> may 2022. EC has been displayed on the website of the company.
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	<b>COMPLIED</b> PP reported that copies of the Environmental Clearance has been submitted vide letter no. VL/PH007/2022001 dated 14.05.2022.
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.	<b>BEING COMPLIED</b> Six monthly compliance for the period of October 2022 to March 2023 has been uploaded on their website.
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	<b>BEING COMPLIED</b> Monitoring data uploaded on the website along with six monthly compliance. Display board provided to display the pollution level before the main gate.
v.	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	<b>BEING COMPLIED</b> PP furnished a copy of Six monthly compliance reports has been uploaded on the website of the company.
vi.	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	<b>BEING COMPLIED</b> Environmental Statement has been uploaded on the website of company.
vii.	The project proponent shall inform the Regional Office as well as the Ministry, the	<b>NOT COMPLIED</b> Details of "date of financial closure and final



	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	approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project" has not been furnished.
viii.	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	<b>NOT COMPLIED</b> Implementation status Commitment and recommendation made during public hearing has not been furnished, the status of commitment during their presentation has not been furnished. PP should furnished the point wise compliance of recommendation of EIA/EMP.
ix.	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)	<b>AGREED UPON</b> PP agreed to abide by the condition.
x.	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	<b>AGREED UPON</b> PP agreed to abide by the condition.
xi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	<b>AGREED UPON</b> PP agreed to abide by the condition.
xii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions	<b>AGREED UPON</b> PP agreed to abide by the condition.
xiii.	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	<b>AGREED UPON</b> PP agreed to abide by the condition.
xiv.	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	<b>AGREED UPON</b> PP agreed to abide by the condition.

*Jonahet*

**Expansion of Aluminium Smelter (2.5 to 16 LTPA) and CPP (675 MW to 1350 MW) vide letter no. J- 11011/29/2007-IA II (I) dated 11<sup>th</sup> June, 2008**

S No.	Conditions	Status of Compliances
<b>A. Specific Condition</b>		
i.	The gaseous emissions (PM, SO <sub>2</sub> , NO <sub>x</sub> , PAH, HC, VOCs and Fluoride) from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The OSPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the uni., the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. The particulate emissions from the bake oven plant shall not exceed 50 mg/Nm <sup>3</sup> .	<b>PARTIALLT COMPLIED</b> Stack monitoring data of PM, SO <sub>2</sub> , NO <sub>x</sub> and Hg of CPP has been furnished for the month of July 2023. SO <sub>2</sub> exceed norm of power plant. Stack monitoring data from pot room for particular matter and total fluoride and bake oven fume treatment plant has been furnished for particular matter total fluoride and total PAH. The particulate emission from the backoven plant reported to be within 50 mg/Nm <sup>3</sup> .
ii.	Particulate fluoride emissions shall not be more than 0.65 mg/Nm <sup>3</sup> and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm <sup>3</sup> .	<b>PARTIALLT COMPLIED</b> Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished.
iii.	The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall not exceed 2 mg/Nm <sup>3</sup> . The data on PAH shall be monitored quarterly and report submitted regularly to the Ministry/Regional Office a: Bhubaneswar and OSPCB.	<b>BEING COMPLIED</b> Poly-aromatic hydrocarbons (PAH) monitoring data has been furnished along with the six monthly compliance for the period of October, 2022 to March 2023. Data reported was with in norms.

*Sanjay*

iv.	In-plant control measures like fume extraction and dust extraction system for controlling fugitive emissions from all the material handling/transfer points shall be provided to control dust emissions. Fugitive Fluoride emissions from the pot room and in the forage around the smelter complex shall be monitored and data submitted regularly to the Ministry's Regional Office at Bhubaneswar and OSPCB. Further dry scrubbing system to control the emissions from the pot lines shall be provided.	<p style="text-align: center;"><b>PARTIALLT COMPLIED</b></p> <p>Dry scrubbing system to control the emissions from the pot lines has been provided. Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished.</p>
v.	Electrostatic precipitator (ESP) will be provided to Captive Power Plant (CPP) to control emissions below 100 mg/Nm <sup>3</sup> . The company shall provide bag-filters, dry scrubbing system and dust suppression system to control the all the emissions including fluoride emissions from all melting and casting units. Tar, dust and fluoride in the fumes shall be controlled in baking furnace by providing dry scrubber. The emissions shall conform to the standards prescribed by the Ministry/CPCB/SPCB whichever is more stringent.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>The Electrostatic precipitator has been provided along with bag filter to maintain emission level below in 50 mg/Nm<sup>3</sup>. Dry scrubbing system has been provided. As per the data furnished for back oven fume treatment plant for particular mater, total fluoride and total PAH reported to be within norms.</p>
vi.	Fluoride consumption shall be less than 10 kg/ton of Aluminium produced as specified in the CREP guidelines.	<p style="text-align: center;"><b>NOT COMPLIED</b></p> <p>Fluoride consumption reported to be to achieved 10.59 kg/T of Al till March 2023.</p>
vii.	Anode butts generated from the pots shall be cleaned and recycled to the Anode Plant. The spent pot lining generated from the smelter shall be properly treated in spent pot lining treatment plant to remove fluoride and cyanide and disposed off in secured landfill. The location and design of the landfill site shall be approved by the OSPCB as per Hazardous Wastes (Management and Handling) Rules, 2003. Leachate collection facilities shall be provided to the secured landfill facility (SLF). The dross shall be recycled in the cast house. STP sludge shall be utilized as manure for green belt development. All the used oil and batteries shall be sold to the authorized recyclers/ reprocessors.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>PP informed that anode butts generated from the pots is being recycled in the green anode plant. Dross is being recycled in the cast house. STP sludge is utilized as manure. SPL carbon is being sent to authorized re-processor. It was also informed that secured land fill site has been reclaimed.</p>

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viii.	Integrated Ash Management Plan shall be prepared for the utilization of fly ash as per Fly Ash Notification, 1999 as amended in 2003 and implemented. A copy of the plan shall be submitted to the Ministry's Regional Office. Fly ash shall be collected pneumatically in silos and used by cement and brick manufacturers for further utilization. Bottom Ash shall be disposed off in ash pond using high concentrated slurry disposal method.	<p style="text-align: center;"><b>PARTIALLY COMPLIED</b></p> <p>Integrated Ash Management Plan has not been furnished to regional office. Fly ash silo provided for collection of dry fly ash. As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated is 2832436.504 MT and button ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash.</p>
ix.	As proposed, spent pot lining waste shall also be provided to cement and steel industries for further utilization.	<p style="text-align: center;"><b>PARTIALLY COMPLIED</b></p> <p>PP informed that SPL carbon portion is being sent to authorized re-processor for detoxification and further utilization in cement and steel industry.</p>
x.	Regular ground water monitoring shall be carried out by installing Piezometers all around the secured landfill site in consultation with the Orissa Pollution Control Board, Central Ground Water Authority and State Ground Water Board and data submitted to the Ministry's Regional Office and OSPCB.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>Ground water quality monitoring data furnished along with the submitted Six monthly compliance for the period of Oct. 2022 to March, 2023.</p>
xi.	Total water requirement for the expansion from Hirakud Reservoir shall not exceed 2,580 m <sup>3</sup> /hr and prior permission for the existing and proposed expansion shall be obtained from the concerned department before commissioning of the plant. All the effluent including from cooling tower and de-mineralization plant shall be treated in the effluent treatment plant and treated effluent shall be recycled / reutilized in the process in the smelter and CPP and also for fire protection, dust suppression, green belt development etc. Domestic effluent shall be treated in Sewage Treatment Plant (STP) and treated domestic wastewater will be used for green belt development	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>PP reported water consumption as 2209.259m<sup>3</sup>/hr for July 2023 and 2248.352 m<sup>3</sup>/hr for August 2023. Effluent treatment plant has been provided for collection treatment and re use of waste water.</p>

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xii.	No effluent shall be discharged outside the premises during the non-monsoon period and shall be discharged during the monsoon period only after proper treatment and meeting the norms of the OSPCB/CPCB.	<p align="center"><b>PARTIALLY COMPLIED</b></p> <p>Effluent treatment plant has been provided. PP reported that treated effluent is recycled and re-used within the plant for ash slurry preparation sprinkling in yard etc. it was also reported that in case of exigency treated waste water is discharged after meeting prescribed norms. However details of discharge and its quality has not been furnished.</p>
xiii.	Green belt of adequate width and density around the project site shall be developed in 33 % area in consultation with the DFO as per the CPCB guidelines having density of 2,000 trees/ha.	<p align="center"><b>PARTIALLY COMPLIED</b></p> <p>Plantation has been observed at the site.. PP reported that 697160 sampling planted in an area of 275.29 ha area. However, plantation as per the CPCB guideline yet to be developed.</p>
xiv.	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	<p align="center"><b>BEING COMPLIED</b></p> <p>PP reported that Occupational health surveillance of the workers is being under taken and record mention. Sample copy of periodical medical examination and pre medical examination has been furnished.</p>
xv.	The company shall develop rainwater structures to harvest the runoff water for recharge of ground water in consultation with the Central Ground Water Authority/Board.	<p align="center"><b>PARTIALLY COMPLIED</b></p> <p>During visit rain water storage tank has been observed. Rain water recharge facility has not been observed.</p>
xvi.	Rehabilitation and Resettlement (R & R) Plan prepared and submitted to the State Govt. shall be implemented as per the R & R Policy of the State Government. All the recommendations mentioned in the R & R Plan shall be strictly followed including suitable employment and other facilities to all the oustees.	<p align="center"><b>REPORTEDLY COMPLIED</b></p> <p>PP reported that the R &amp; R package as finalized by RPDAC based on Govt. R &amp; R policy 2006 is being implemented fully under the supervision of District Administration.</p>

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xvii.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.	<p style="text-align: center;"><b>PARTIALLY COMPLIED</b></p> <p>CREP recommendation such as dry scrubber system have been installed in smelter and the fugitive fluoride emission ranges between 0.35 to 0.39 kg/MT of Al. Additionally, laser-based fluoride monitoring system have been installed in pot room for monitoring of fugitive fluoride. Fluoride consumption reported to be to achieved 10.59 kg/T of Al till March 2023. Setting up a centralized SPL treatment &amp; disposal facility with Aluminium fluoride recovery and utilization of SPL in steel/Cement industries yet to be implemented. PP reported that SPL generated the plant sent to OSPCB authorized agency M/s Green Energy Resources located in Sambalpur. Particulate emission of bake oven is reported between 4.1 to 5.9 mg/Nm<sup>3</sup> during October 2022 to march 2023.</p>
xviii.	All the environmental conditions stipulated by the Ministry vide letter no. J-11011/144/2006- IA II (I) dated 7th March, 2007 for the Aluminium Smelter Plant (2,50,000 TPA) at Village Bhurkamunda / Brundamal, District Jharsuguda, Orissa by M/s Vedanta Aluminium Ltd. shall be satisfactorily be complied and regular compliance report submitted to the Ministry's Regional Office at Bhubaneswar.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>Compliance report for the period of Oct. 2022 to March 2023 has been furnished to Regional Office, Bhubaneswar.</p>
xix.	Prior permission from the State Forest Department shall be obtained due to likely impact of transport of raw material and end product and gaseous emissions from the smelter on the surrounding reserve forests and wildlife. Recommendations regarding mitigative measures suggested by the State Forest Department and Chief Wildlife Warden, Govt. of Orissa shall be strictly followed.	<p style="text-align: center;"><b>PARTIALLY COMPLIED</b></p> <p>PP reported that recommendations as per the approved Wildlife Management Plan is under implementation. However, details implementation report has not been furnished.</p>
xx.	Ministry of Environment and Forests shall regularly be informed about the source and quantity of Alumina procured from captive/indigenous/imported sources.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>As per the document furnished aluminum procured during Oct. 2022 to march 2023 is captive 933 KMT indigenous and 83 KMT imported.</p>
xxi.	Alumina shall be obtained only from those refineries, which have been accorded environmental clearance by the Ministry of Environment and Forests.	<p style="text-align: center;"><b>BEING COMPLIED</b></p> <p>PP informed that aluminum, is being sourced from own refinery or from refinery in India which has environmental clearance.</p>
<b>B. General Conditions</b>		

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i.	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution Control Board and the State Government.	<b>BEING COMPLIED</b> Orissa State Pollution Control Board has accorded CTO vide letter no. 4695/IND-I-CON-6079 dated 27.03.2023 valid till 31.03.2024.
ii.	No expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	<b>PLEASE REFER BWELOW</b> Ministry has accorded expansion vide letter dated 05.05.2022.
iii.	Adequate number of ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the OSPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and Orissa State Pollution Control Board once in six months.	<b>PARTIALLY COMPLIED</b> Online continuous ambient air quality monitoring station has been established. However, details of consultation with pollution control board have not been furnished
iv.	Industrial wastewater should be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. The treated wastewater should be recycled in the plant as well as utilization for plantation purposes.	<b>BEING COMPLIED</b> Effluent treatment plant has been provided for collection treatment and re use of waste water.
v.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the OSPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.	<b>BEING COMPLIED</b> Hazardous wastes authorization has been obtained from OSPCB vide letter dated 21.03.2023.
vi.	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	<b>BEING COMPLIED</b> Noise level monitoring data has been furnished along with Six monthly compliance for the period of Oct. 2022 to March, 2023.



vii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP /risk analysis and DMP report.	<b>PARTIALLY COMPLIED</b> PP reported that all measure are being implemented. PP need to furnished details in this regards.
viii.	As proposed in EIA/EMP, Rs. 505.00 Crores earmarked toward the capital cost and recurring the expenditure/annum for environmental protection measures shall be used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purposes.	<b>BEING COMPLIED</b> PP reported that Environment Capex is Rs. 1099.12 cores and Recurring Environment Expenditure for the period of 2022-23 reported to be Rs. 694.91 crores.
ix.	The Regional Office of this Ministry at Bhubaneswar/Central Pollution Control Board/ OSPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	<b>BEING COMPLIED</b> Six monthly compliance for the period of Oct. 2022 to March 2023 has been furnished to Regional Office.
x.	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised 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 of the locality concerned and a copy of the same should be forwarded to the Regional office.	<b>PARTIALLY COMPLIED</b> PP informed that necessary advertisement has been released in two local news paper. However, the copy of the advertisement has not been furnished. Details of new paper and date of publication has not been furnished.
xi.	The Project Authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<b>NOT COMPLIED</b> Details has not been furnished.

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As per the EC letter No. J-13011/10/2006-IA. II(T) dated 14.03.2007		
S No.	Conditions	Status of Compliances
i.	All the conditions stipulated by Orissa State Pollution Control Board vide their letter no. 8064/ ind-II-NOC-3633 dated 31.03.2006 shall be strictly implemented.	<b>COMPLIED</b> Consent to operate has been accorded by OSPCB vide letter dated 27.03.2023.
ii.	The total land requirement shall not be exceed 233.92 ha for all the activities/ facilities of the power project put together.	<b>REPORTEDLY COMPLIED</b> PP reported that the total land on which the plant facilities of CPP has been set up within 233.92 Ha
iii.	Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.	<b>PARTIALLY COMPLIED</b> Ash and Sulphur analysis data has not been furnished. PP reported that Ash and Sulphur content is within the limit as per notification.
iv.	One multi-flue stack of 275 m height shall be provided with continuous online monitoring equipments. Exit velocity of at least 23.6 m/sec shall be maintained.	<b>PLEASE REFER BELOW</b> The project has accorded expansion vide letter dated 16.06.2008.
v.	High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9% shall be installed to insure that particulate emission does not exceed 100 mg/NM <sup>3</sup> . It shall also be ensured that the AAQ levels in the notified ecologically sensitive areas including Reserve forests and Sanctuaries falling in the impact zone of the project do not exceed the prescribed standards for these areas.	<b>PARTIALLY COMPLIED</b> As per the documents furnished ESPs with 99.9% efficiency have been provided and ESP's have been upgraded to hybrid ESP (ESP followed by bag filters). However, details of AAQ levels in the notified ecologically sensitive areas including Reserve forests and Sanctuaries falling in the impact zone of the project as per the condition has not been furnished.
vi.	Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.	<b>PARTIALLY COMPLIED</b> PP reported that necessary space has been earmarked for setting up of Flue Gas Dcsulphurisation Plant (FGD). However, FGD yet to be installed.
vii.	Closed Circuit Cooling system with Cooling Towers shall be provided. COC shall be optimized for ensuring water conservation.	<b>REPORTEDLY COMPLIED</b> PP reported that closed circuit cooling system with cooling towers (IDCT) has been provided and an optimum level of COC is being maintained as part of water conservation measures.
viii.	Environmental clearance is subjected to obtaining clearance under the Wildlife (Protection) Act, 1972 from the Competent Authority.	<b>PLEASE REFER BELOW</b> PP reported that the project does not fall either in a National Park or a Wild life sanctuary. Wildlife (Protection) Act, 1972 is not applicable.
ix.	Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No. 460 of	<b>PLEASE REFER BELOW</b> PP reported that this condition not applicable at present.



	2004 as may be applicable to this project.	
x.	A conservation plan for Schedule-I animals reported in the study area of the project, shall be prepared in consultation with an expert organization like Wildlife Institute of India at Dehradun and duly approved by State Wildlife Department of Orissa. A copy of the same shall be submitted to the Ministry and the regional Office at Bhubaneswar within six months of the date of issue of this letter. The plan so prepared shall be implemented effectively. Necessary allocation of funds for the same shall be made and will be included as project cost.	<b>PARTIALLY COMPLIED</b> As per the documents furnished Rs 530.904 lacs has been deposited towards implementation of site-specific wildlife conservation plan in Jharsuguda and Sambalpur Forest Division. However, details of status of implementation has not been furnished.
xi.	Adequate dust extraction such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.	<b>PARTIALLY COMPLIED</b> Water spray arrangement has been observed in part of the coal storage area not all along. Dust suppression measure at the ash pond has been provided in one ash pond not in all.
xii.	Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly ash utilization issued by the ministry in September 1999 and its amendment. By the end of 9 <sup>th</sup> year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry.	<b>PARTIALLY COMPLIED</b> Silo has been provided for collection of dry fly ash. As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated in 2832436.504 MT and button ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash.
xiii.	Ash pond shall be lined with impervious lining to avoid leaching into ground water. Adequate safety measures shall also be taken so that pond ash does not become air borne to air pollution in the surrounding areas.	<b>NOT COMPLIED</b> Impervious lining has been visible in one ash pond. PP reported that the ash pond has been lined with impervious HDPE lining to avoid any leaching in to ground water. However, dust suppression measure at the ash pond has been provided in one ash pond not in all. Fly ash deposit outside ash pond has also been observed without any protection measure.
xiv.	Rainwater harvesting shall be practiced. A detailed scheme for rainwater harvesting to recharge the groundwater aquifer shall be prepared in consultation with Central Ground Water Authority / State	<b>PARTIALLY COMPLIED</b> Rain water storage tank has been shown. However, rain water recharge as per the condition has not been observed. Details of consultation with Central Ground Water Authority / State Ground Water Board has not

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	Ground Water Board and a copy of the same will be submitted within three months to the Ministry	been furnished.
xv.	The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary. In case of emergency, only 30 m <sup>3</sup> /hr discharges from the plant may be done in the drain.	<b>PARTIALLY COMPLIED</b> Effluent treatment plant has been provided. PP reported that treated effluent is recycled and re-used within the plant for ash slurry preparation sprinkling in yard etc. it was also reported that in case of exigency treated waste water is discharged after meeting prescribed norms. However details of discharge and its quality has not been furnished.
xvi.	Regular monitoring of groundwater in and around the ash pond area shall be carried out, records maintained, and quarterly reports shall be furnished to the Regional Office of this Ministry	<b>BEING COMPLIED</b> PP furnished ground water quality from ash pond bore well. Data furnished to Regional Office along with six monthly compliances.
xvii.	A 50 m wide greenbelt shall be developed all along the plant and ash pond boundary covering 1/3 <sup>rd</sup> of the total area.	<b>PARTIALLY COMPLIED</b> Plantation has been observed at the site. However, 50 m wide green belt all long the plant and ash pond yet to be developed. PP reported that 697160 saplings planted in an area of 275.29 ha area.
xviii.	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<b>PLEASE REFER BELOW</b> During visit the industry was in operation. The condition cant be verified at present.
xix.	Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided	<b>BEING COMPLIED</b> Noise level monitoring data has been furnished along with Six monthly compliance for the period of Oct. 2022 to March, 2023.
xx.	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.	<b>PARTIALLY COMPLIED</b> Online continuous ambient air quality monitoring station has been established. However, details of consultation with pollution control board have not been furnished.
xxi.	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, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee	<b>PARTIALLY COMPLIED</b> PP reported that the grant of EC has been published in two widely circulated local newspapers in English and Odia language. However, details of name of the newspaper and date of publication has not been furnished.

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	and may also be seen at the Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	
xxii.	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	<b>BEING COMPLIED</b> PP reported that environmental cell has been formed consisting of 09 employee.
xxiii.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry, Regional Office, CPCB and SPCB.	<b>BEING COMPLIED</b> Half yearly compliance report has been submitted to Regional Office.
xxiv.	Regional Office of the Ministry of Environment and Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact Assessment Report and Environmental Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	<b>AGREED UPON</b> PP agreed to abide by the condition.
xxv.	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the ministry.	<b>BEING COMPLIED</b> PP reported that separate fund has been allocated for implementation of environmental protection measures.
xxvi.	Full co-operation should be extended to the Scientists /officers from the Ministry/ Regional Office of the ministry at Bhubaneswar / the CPCB /the SPCB who would be monitoring the compliance of environmental status	<b>AGREED UPON</b> PP agreed to abide by the condition.

#### Observations:

The PAs have complied or are in process of complying the conditions stipulated by the Ministry. In this context, information/action plans have been sought on following points:

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As per the EC letter No. J-11011/29/2007-IA-II(I) dated 05.05.2022

**The following non-compliance to the environmental clearance conditions was observed:**

1. As per the submitted six monthly compliance report Fluoride consumption as per condition yet to be achieved. (Specific condition v)
2. Fugitive emission monitoring data has not been furnished.(Air quality monitoring and preservation of general condition no. ii)
3. Wind shelter fence to the coal stock pill has not been observed. (Air quality monitoring and preservation of general condition no. v)
4. Garland drain along the coal stock pile has not observed. (Water quality monitoring and preservation of general condition no. iv)
5. Solar power generation of roof top has not been observed. Energy Conservation measures of general condition no. ii)
6. Used refractories store in the premises and yet to be recycled. Waste management of general condition no. i)
7. GHG emission inventory for the plant and the programme for reduction has not been furnished. (Green Belt of general condition no. i)
8. Study report on de-carbonization program has not been furnished. (Green Belt of general condition no. ii)
9. Heat stress analysis data has not been furnished. (Public hearing and Human health issues of general condition no. ii)
10. Status of compliance as per the condition has not been furnished. Environment Management of general condition no. i)
11. Details of "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" has not been furnished. (Miscellaneous of general condition no. vii)
12. Implementation status Commitment and recommendation made during public hearing has not been furnished, the status of commitment during their presentation has not been furnished. PP should furnished the point wise compliance of recommendation of EIA/EMP. (Miscellaneous of general condition no. viii)

**The following Partially compliance to the environmental clearance conditions were observed:**

1. Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished. (Specific condition iv)
2. Plantation has been observed at the site. However, three tire green belt all along the periphery yet to be developed. 50m green belt towards Jhasuguda village yet to be developed. PP reported that 697160 sampling planted in an area of 275.29 ha area. Details of Plantation over 37.5 ha outside plant premises has not been furnished. (Specific condition vi)
3. As per the document furnished around 11383 MT of SPL carbon disposed till September 2022. (Specific condition vii)
4. PP informed that hazardous wastes such as SBD, drain cleaning Sludge, House Keeping waste, ETP Sludge etc. are being sent to RAMKY TSDR. Details of disposal of waste in the SLF has not been furnished. However, PP furnished an communication from OSPCB for approved of secured landfill of Vedanta Aluminium Limited. (Specific condition x)

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5. Roof top rain water storage tank has been provided. However, total capacity of tank has not been furnished. It was started that stored water used for gardening. (Specific condition xi)
6. CREP recommendation such as dry scrubber system have been installed in smelter and the fugitive fluoride emission ranges between 0.35 to 0.39 kg/MT of AI. Additionally, laser-based fluoride monitoring system have been installed in pot room for monitoring of fugitive fluoride. Fluoride consumption reported to be to achieved 10.59 kg/T of AI till March 2023. Setting up a centralized SPL treatment & disposal facility with Aluminium fluoride recovery and utilization of SPL in steel/Cement industries yet to be implemented. PP reported that SPL generated the plant sent to OSPCB authorized agency M/s Green Energy Resources located in Sambalpur. Particulate emission of bake oven is reported between 4.1 to 5.9 mg/Nm<sup>3</sup> during October 2022 to march 2023. (Specific condition xii)
7. As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated in 2832436.504 MT and button ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash. (Specific condition xiii)
8. PP reported that Performance monitoring of pollution control equipment has been completed and report submitted to board. PP should furnish a copy to Regional Office also. (Specific condition xvi)
9. PP reported that recommendations as per the approved Wildlife Management Plan is under implementation. However, details implementation report has not been furnished. (Specific condition xvii)
10. Wheel Washing system has been provided in part not in all the entry and exist. (Specific condition xx)
11. Covered transportation has been observed during visit. However, fly ash found to be transported in covered truck in place of closed bulkers. . (Air quality monitoring and preservation of general condition no. iv)
12. During visit mobile vacuum cleaner observed to be plying on road. However, the road nearby fly ash silo was found to be full of fly ash. (Air quality monitoring and preservation of general condition no. vii)
13. PP reported that low-Sulphur tars is being used for making anodes. However, sulphur analysis data of tar has not been furnished. (Air quality monitoring and preservation of general condition no. ix)
14. PP reported that Environmental Policy is in place. However, copy of board resolution in this regard has not been furnished along with six monthly compliance. (Environment Management of general condition no. ii)

**Expansion of Aluminium Smelter (2.5 to 16 LTPA) and CPP (675 M\V to 1350 MW) vide letter no. J- 11011/29/2007-IA II (I) dated 11<sup>th</sup> June, 2008**

**The following non-compliance to the environmental clearance conditions was observed:**

1. Fluoride consumption reported to be to achieved 10.59 kg/T of AI till March 2023. (Specific condition no. vi)
2. Details has not been furnished. ( General condition no. xi)

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**The following Partially compliance to the environmental clearance conditions were observed:**

1. Stack monitoring data of PM, SO<sub>2</sub>, NO<sub>x</sub> and Hg of CPP has been furnished for the month of July 2023. SO<sub>2</sub> exceed norm of power plant. Stack monitoring data from pot room for particular matter and total fluoride and bake oven fume treatment plant has been furnished for particular matter total fluoride and total PAH. The particulate emission from the backoven plant reported to be within 50 mg/Nm<sup>3</sup>. (Specific condition no. i)
2. Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished. (Specific condition no. ii)
3. Dry scrubbing system to control the emissions from the pot lines has been provided. Particulate fluoride emissions monitoring data for the month of July 2023 has been furnished. Data reported to be found within in norms. Fugitive fluoride emission during Oct. 2022 to march 2023 reported to be varies from 0.35 to 0.39 kg/mt. Al. However, fugitive particulate fluoride emission monitoring data as per the condition has not been furnished. (Specific condition no. iv)
4. Integrated Ash Management Plan has not been furnished to regional office. Fly ash silo provided for collection of dry fly ash. As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated is 2832436.504 MT and button ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash. (Specific condition no. viii)
5. PP informed that SPL carbon portion is being sent to authorized re-processor for detoxification and further utilization in cement and steel industry. (Specific condition no. ix)
6. Effluent treatment plant has been provided. PP reported that treated effluent is recycled and re-used within the plant for ash slurry preparation sprinkling in yard etc. it was also reported that in case of exigency treated waste water is discharged after meeting prescribed norms. However details of discharge and its quality has not been furnished. (Specific condition no. xii)
7. Plantation has been observed at the site.. PP reported that 697160 sampling planted in an area of 275.29 ha area. However, plantation as per the CPCB guideline yet to be developed. (Specific condition no. xiii)
8. During visit rain water storage tank has been observed. Rain water recharge facility has not been observed. (Specific condition no. xv)
9. CREP recommendation such as dry scrubber system have been installed in smelter and the fugitive fluoride emission ranges between 0.35 to 0.39 kg/MT of Al. Additionally, laser-based fluoride monitoring system have been installed in pot room for monitoring of fugitive fluoride. Fluoride consumption reported to be to achieved 10.59 kg/T of Al till March 2023. Setting up a centralized SPL treatment & disposal facility with Aluminium fluoride recovery and utilization of SPL in steel/Cement industries yet to be implemented. PP reported that SPL generated the plant sent to OSPCB authorized agency M/s Green Energy Resources located in Sambalpur.



Particulate emission of bake oven is reported between 4.1 to 5.9 mg/Nm<sup>3</sup> during October 2022 to march 2023. (Specific condition no. xvii)

10. PP reported that recommendations as per the approved Wildlife Management Plan is under implementation. However, details implementation report has not been furnished. (Specific condition no. xix)
11. Online continuous ambient air quality monitoring station has been established. However, details of consultation with pollution control board have not been furnished. (General condition no. iii)
12. PP reported that all measure are being implemented. PP need to furnished details in this regards. (General condition no. vii)
13. PP informed that necessary advertisement has been released in two local newspaper. However, the copy of the advertisement has not been furnished. Details of new paper and date of publication has not been furnished. (General Condition no. x)

**As per the EC letter No. J-13011/10/2006-IA. II(T) dated 14.03.2007**

**The following non-compliance to the environmental clearance conditions was observed:**

1. Impervious lining has been visible in one ash pond. PP reported that the ash pond has been lined with impervious HDPE lining to avoid any leaching in to ground water. However, dust suppression measure at the ash pond has been provided in one ash pond not in all. Fly ash deposit outside ash pond has also been observed without any protection measure. (specific condition no. xiii)

**The following Partially compliance to the environmental clearance conditions were observed:**

1. Ash and Sulphur analysis data has not been furnished. PP reported that Ash and Sulphur content is within the limit as per notification. ( Specific Condition no. iii)
2. As per the documents furnished ESPs with 99.9% efficiency have been provided and ESP's have been upgraded to hybrid ESP (ESP followed by bag filters). However, details of AAQ levels in the notified ecologically sensitive areas including Reserve forests and Sanctuaries falling in the impact zone of the project as per the condition has not been furnished. (Specific Condition no. v)
3. PP reported that necessary space has been earmarked for setting up of Flue Gas Desulphurisation Plant (FGD). However, FGD yet to be installed. (Specific Condition no. vi)
4. As per the documents furnished Rs 530.904 lacs has been deposited towards implementation of site-specific wildlife conservation plan in Jharsuguda and Sambalpur Forest Division. However, details of status of implementation has not been furnished. (Specific Condition no. x)
5. Water spray arrangement has been observed in part of the coal storage area not all along. Dust suppression measure at the ash pond has been provided in one ash pond not in all. (Specific Condition no. xi)
6. Silo has been provided for collection of dry fly ash. As per the annual implementation report of ash for the period of 01.04.2022 to 31.03.2023 for the captive power plant, total fly ash generated in 2832436.504 MT and button ash generated is 325435.265 MT. Quantity of fly ash utilization for fly ash based product 2821.640 MT, cement manufacturing 54492.234 MT, Ready mix concrete 381.78 MT construction of road 812769.531 MT, Filling up of low lying area including Kurebaga pond (1 and 2) 3744167.157 MT and filling up of low lying area 328435.263 MT. PP should furnish a plan for utilization of legacy fly ash. (Specific Condition no. xii)

7. Rain water storage tank has been shown. However, rain water recharge as per the condition has not been observed. Details of consultation with Central Ground Water Authority / State Ground Water Board has not been furnished. (Specific Condition no. xiv)
8. Effluent treatment plant has been provided. PP reported that treated effluent is recycled and re-used within the plant for ash slurry preparation sprinkling in yard etc. it was also reported that in case of exigency treated waste water is discharged after meeting prescribed norms. However details of discharge and its quality has not been furnished. (Specific Condition no. xv)
9. Plantation has been observed at the site. However, 50 m wide green belt all long the plant and ash pond yet to be developed. PP reported that 697160 saplings planted in an area of 275.29 ha area. (Specific Condition no. xvii)
10. Online continuous ambient air quality monitoring station has been established. However, details of consultation with pollution control board have not been furnished. (Specific Condition no. xx)
11. PP reported that the grant of EC has been published in two widely circulated local newspapers in English and Odia language. However, details of name of the newspaper and date of publication has not been furnished. (Specific Condition no. xxi)



(डॉ. टी. एच. महतो/Dr. T. H. Mahato)

वैज्ञानिक-डी/ Scientist 'D'

**By Speed Post/Online**



**F. No. IA-H-11011/1/2023-IA-I (M)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(I.A. Division)**

**Indira Paryavaran Bhavan**  
**Jor Bagh Road, Aliganj**  
**New Delhi-110 003**  
E-mail: shruti.rai@nic.in

**Dated: 14<sup>th</sup> November, 2023**

**Sub: Show Cause Notice under Section 5 of Environment (Protection) Act, 1986 for Non-Compliances observed w.r.t Alumina Smelter, Captive Power Plant projects and 2400 MW Thermal Power Project by M/s Vedanta Ltd- reg.**

**Ref: i. Ministry's EC letter No. J-13011/03/2007-IAII (T) dated 07.03.2007, 14.03.2007, 07.12.2007, 11.06.2008, 12.05.2008, 16.10.2018 and 05.05.2022.**

**ii. Monitoring report provided by RO Bhubaneshwar vide letter 101-1095/20/EPE**

**WHEREAS,** following Environmental Clearances (EC's) were granted to **M/s. Vedanta Limited,**

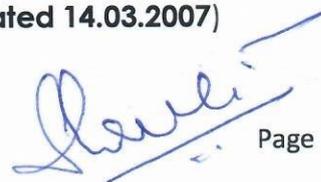
- i. EC No. J-11011/144/2006-IA-II(1) dated **7.03.2007** to the project "Alumina Smelter Plant (2,50,000 TPA) at Village Bhurkamunda/Brundamal, District Jharsuguda, Orissa by M/s Vedanta Aluminium Ltd"
- ii. EC No. J-13011/10/2006-IA-II(T) dated **14.03.2007** accorded for the project "5x135 MW Captive Power Plant (CPP) at Jharsuguda, Orissa by M/s Vedanta Alumina Ltd."
- iii. EC No. J-13011/10/2006-IA-II(T) dated **07.12.2007** to the project '2400 MW Coal based Power Project at Brundamal, Jharsuguda, Orissa by M/s Sterlite energy Ltd.'
- iv. EC amendment letter J-11011/29/2007-IA-II(I) dated **12.05.2008**
- v. EC No. J-11011/29/2007-IA-II(I) dated **11.06.2008** for the project "Expansion of Aluminium Smelter (2.5 to 16 LTPA) and Captive Power Plant (675 MW to 1350 MW) at Bhurkamunda/Brundamal, Jharsuguda, Orissa by M/s Vedanta Aluminium Ltd."
- vi. EC amendment of EC dated 07.12.2007 vide letter dated **16.10.2018** to project '2400 MW Thermal Power Plant (TPP) at village Brundamal, District Jharsuguda, Odisha by M/s Vedanta Limited (Formerly M/s Sterlite Energy Limited)' along with transfer of EC to M/s Vedanta Ltd
- vii. EC No. J-11011/29/2006-IA-II(I) dated **05.05.2022** for "Proposed expansion of Aluminium Smelter production capacity from 16 LTPA to 18 LTPA without increasing the CPP capacity of 1215 MW to M/s Vedanta Limited".

subject to implementation of the various conditions and environmental safeguards contained therein, and

2. **WHEREAS**, the project was monitored for ascertaining compliance to the conditions stipulated in the aforesaid environmental clearance by the Regional Office of this Ministry at **Bhubaneshwar** on **11.09.2023** which has submitted its report to Ministry vide letter No101-1095/20/EPE (**copy enclosed**). The report has been examined by the Ministry and it is observed there have been significant non-compliances as mentioned below:
- i. Details of data analysed for the ash and sulphur content has not been furnished (**Specific condition no. ii of EC dated 07.12.2007**)
  - ii. Fugitive particulate fluoride emission monitoring data has not been furnished (**Specific Condition iv. of EC dated 05.05.2022, General Condition ii. of EC dated 05.05.2022, Specific Condition ii. of EC dated 11.06.2008, Specific Condition iv. of EC dated 11.06.2008**)
  - iii. Fluoride consumption as per condition has not been achieved yet (**Specific Condition v. of EC dated 05.05.2022, Specific Condition vi. of EC dated 11.06.2008**)
  - iv. Details of plantation over 37.5 ha outside plant premises has not been furnished and three-tier green belt all along the periphery has not been developed yet (**Specific Condition vi. of EC dated 05.05.2022, Specific Condition xiii. Of EC dated 11.06.2008**)
  - v. Stock of SPL carbon (36320 T) has not been disposed as committed (**Specific Condition vii. of EC dated 05.05.2022**)
  - vi. Details of disposal of refractory SPL stock has not been furnished (**Specific Condition viii. of EC dated 05.05.2022**)
  - vii. Details of disposal of waste in the SLF has not been furnished yet (**Specific Condition x. of EC dated 05.05.2022**)
  - viii. Total capacity of rain water storage tank has not been furnished (**Specific Condition xi. of EC dated 05.05.2022, Specific Condition xv. of EC dated 11.06.2008**)
  - ix. Setting up a centralized SPL treatment & disposal facility with Aluminium fluoride recovery and utilization of SPL in steel/Cement industries yet to be implemented (**Specific Condition xii. of EC dated 05.05.2022, Specific Condition ix. of EC dated 11.06.2008, Specific Condition xvii. of EC dated 11.06.2008**)
  - x. Plan for utilization of legacy fly ash has not been furnished (**Specific Condition xiii. of EC dated 05.05.2022, Specific Condition viii. of EC dated 11.06.2008, Specific condition xii. of EC dated 14.03.2007, Specific Condition ix. of EC dated 07.12.2007**)
  - xi. Copy of performance monitoring report of pollution control equipment has not been furnished (**Specific Condition xvi. of EC dated 05.05.2022**)
  - xii. Detailed implementation report for the approved Wildlife Management plan has not been furnished (**Specific Condition xvii. of EC dated 05.05.2022, Specific Condition xix. of EC dated 11.06.2008, Specific Condition x. of EC dated 14.03.2007, Specific Condition xi. of EC dated 12.05.2008 and xiii. of EC dated 07.12.2007**)
  - xiii. Wheel washing system has not been provided in all the entry and exits (**Specific Condition xx. of EC dated 05.05.2022**)
  - xiv. Fly ash was observed to be transported in covered truck in place of closed bulkers (**General Condition iv. (Air quality monitoring and preservation) of EC dated 05.05.2022**)



- xv. Wind shelter fence to the coal stock pill has not been observed (**General Condition v. (Air quality monitoring and preservation) of EC dated 05.05.2022**)
- xvi. The road near fly ash silo has been found to be full of fly ash (**General Condition vii. (Air quality monitoring and preservation) of EC dated 05.05.2022**)
- xvii. Sulphur analysis data of tar has not been furnished (**General Condition ix. (Air quality monitoring and preservation) of EC dated 05.05.2022, Specific Condition iii. of EC dated 14.03.2007**).
- xviii. Garland drain along the coal stock pile has not been observed (**General Condition iv. (Water quality monitoring and preservation) of EC dated 05.05.2022**).
- xix. Solar power generation of roof top has not been observed (**General Condition ii. (Energy conservation measures) of EC dated 05.05.2022**).
- xx. Used refractories stored in the premises have not been recycled yet (**General Condition i. (Waste management) of EC dated 05.05.2022**).
- xxi. GHG emission inventory for the plant and the programme for reduction has not been furnished (**General Condition i. (Green belt) of EC dated 05.05.2022**).
- xxii. Study report on decarbonisation program has not been furnished (**General Condition ii. (Green belt) of EC dated 05.05.2022**).
- xxiii. Heat stress analysis data has not been furnished (**General Condition ii. (Public hearing and human health issues) of EC dated 05.05.2022**).
- xxiv. Status of compliance as per the condition has not been furnished (**General Condition i. (Environment management) of EC dated 05.05.2022**).
- xxv. Copy of board resolution w.r.t environmental policy along with six monthly compliance has not been furnished yet (**General Condition ii. (Environment management) of EC dated 05.05.2022**).
- xxvi. Details of 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 has not been furnished (**General Condition vii. (Miscellaneous) of EC dated 05.05.2022, Specific Condition xi. of EC dated 11.06.2008**).
- xxvii. Point wise compliance of recommendation of EIA/EMP has not been furnished (**General Condition viii. (Miscellaneous) of EC dated 05.05.2022, Specific condition vii. of EC dated 11.06.2008**).
- xxviii. Level of SO<sub>2</sub> and Hg exceeded the norms of power plant (**Specific Condition i. of EC dated 11.06.2008, Specific Condition iii. of EC dated 07.12.2007**)
- xxix. Details of effluent treatment plant discharge and its quality has not been furnished (**Specific Condition xii. of EC dated 11.06.2008, Specific Condition xv. of EC dated 14.03.2007**)
- xxx. Online continuous ambient air quality monitoring station has been established. However, details of consultation with pollution control board have not been furnished. (**General condition no. iii of EC dated 11.06.2008 and Specific condition no. xx of EC dated 14.03.2007**)
- xxxi. Details of newspaper wherein EC has been advertised and date of publication has not been furnished (**Specific condition no. x. of EC dated 11.06.2008, Specific Condition xxi. of EC dated 14.03.2007**)
- xxxii. Flue Gas Desulphurisation Plant (FGD) has not been installed yet. (**Specific Condition no. vi of EC dated 14.03.2007**)
- xxxiii. Details of AAQ levels in the notified ecologically sensitive areas including Reserve forests and Sanctuaries falling in the impact zone of the project has not been furnished. (**Specific Condition no. v of EC dated 14.03.2007**)



- xxxiv. Water spray arrangement has not been provided all along the coal storage area and dust suppression measures has not been provided at all the ash pond areas. (**Specific Condition no. xi of EC dated 14.03.2007, Specific condition no. xiii of EC dated 14.03.2007, Specific Condition no. viii of EC dated 07.12.2007 and Specific condition x. of EC dated 07.12.2007**)
- xxxv. Rain water recharge has not been observed as per the condition and details of consultation with CGWA has not been furnished (**Specific condition no. xiv of EC dated 14.03.2007**)
- xxxvi. 50 m wide green belt all along the plant and ash pond has not been developed yet (**Specific Condition xvii of EC dated 14.03.2007**)
- xxxvii. Ground water monitoring data around the ash dump area has not been furnished (**Specific condition no. xvi of EC dated 14.03.2007**)
- xxxviii. The status of expansion of the Katikela pond and the status of development of green belt has not been provided (**General Condition ii. of EC dated 16.10.2018**)
- xxxix. Point wise compliance status of the remediation plan has not been furnished (**General Condition iii. of EC dated 16.10.2018**)
- xl. Activity details for ensuring protection of elephants moving the area has not been furnished (**Stipulated condition i. of EC dated 16.10.2018**)
- xli. Details of protection and conservation activities undertaken has not been furnished (**Stipulated condition ii. of EC dated 16.10.2018**)

3. **WHEREAS**, in the above context, your attention is drawn to provision of Section 5 of the Environment (Protection) Act, 1986 which is as reproduced below:

*"For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes power to direct-*

- a. *The closure, prohibition or regulation of any industry, operation or process; or*
- b. *Stoppage or regulation of the supply of electricity or water or any other service."*

4. NOW, THEREFORE, you are **directed to submit your response as to why this Ministry shall not take action against you under the provisions of Environment (Protection) Act, 1986 for the non-compliance of the environmental conditions mentioned above. You are also advised to submit your reply within 30 (thirty) days of the receipt of this Notice failing which the Ministry will be constrained to initiate action, as deemed fit and appropriate under the provision of Section 5 of the Environment (protection) Act, 1986 and in the circumstances of the case, with or without any further notice to the Project. In your response, it may also be clearly stated whether a hearing is required by the project proponent before a final order is passed by this Ministry. Further, this Show Cause is without prejudice to any other legal action which may be taken against you.**

This issues with the approval of the Competent Authority.



(Dr. Shruti Rai Bhardwaj)  
Director/Scientist 'F'

To,

**The Chief Executive Officer,  
M/s Vedanta Limited**  
Bhurkhamunda, P.O. Kali Mandir,  
District-Jharsuguda, Odisha, 768202.

**Copy to:**

1. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
2. Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilkantha Nagar, Unit-VIII, Bhubaneshwar-751012, Odisha.
3. The Chairman, Petition Committee (Rajya Sabha), Room No.-319 Parliament House Annexe-Extension, New Delhi-110001.
4. Mr. Minaketan Behera, Journalist & nature Activist, R/7, Raja Bagicha Labour Colony, Telenga Bazar, Cuttack, Odisha-753009



**(Dr. Shruati Rai Bhardwaj)**  
**Director/Scientist 'F'**