



# vedanta

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VL/MOEF/006/2023-019

November 27, 2023

The Director  
I.A. Division  
Ministry of Environment, Forest & Climate Change  
Indira Paryavaran Bhawan  
Jor Bagh Road  
New Delhi-110003

**Sub.: Submission of Half Yearly Compliance Report and Environment Quality data of Smelter & CPP of Vedanta Limited, Jharsuguda for the period from April 2023 to September 2023**

**Ref.: 1. Environment Clearance letter No. J-11011/144/2006-IA.II (I) dated 07.03.2007**  
**2. Environment Clearance letter No. J-13011/10/2006-IA.II (T) dated 14.03.2007**  
**3. Environment Clearance letter No. J-11011/29/2007-IA.II (I) dated 11.06.2008**  
**4. Environment Clearance letter No. J-11011/29/2007-IA.II (I) dated 05.05.2022**

Dear Sir,

This has reference to the above subject and cited references. As per the provision of Environment Clearance and EIA notification 2006, we are herewith submitting the half yearly compliance status for conditions in the Environment Clearance for 2.5 LTPA Aluminium Smelter, Captive Power Plant 675 MW, expansion of Aluminium Smelter (2.5 to 16 LTPA) and Captive Power Plant (675 MW to 1350 MW), Aluminium Smelter 18 LTPA (16 to 18 LTPA) and Captive Power Plant at Parivesh Portal along with supporting documents .

Thanking you,  
Yours faithfully,  
**For Vedanta Limited**

**Dr. Amit Kumar Tyagi**  
**Head- Environment**

**Copies to:**

1. The Additional Director, Ministry of Environment, Forests & Climate Change, Regional Office, Odisha, Bhubaneswar
2. The Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar

**VEDANTA LIMITED, JHARSUGUDA**

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T +91-664 566 6000 F +91-664 566 6267 www.vedantalimited.com

REGISTERED OFFICE: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala Andheri (East), Mumbai.400093, Maharashtra, India.  
CIN: L13209MH1965PLC291394



**Your application has been Submitted with following details**

<b>Proposal No</b>	J-13011/10/2006-IA-II (T)
<b>Compliance ID</b>	22288216
<b>Compliance Number(For Tracking)</b>	EC/M/COMPLIANCE/22288216/2023
<b>Reporting Year</b>	2023
<b>Reporting Period</b>	01 Dec(01 Apr - 30 Sep)
<b>Submission Date</b>	01-12-2023
<b>IRO Name</b>	ARTATRANA MISHRA
<b>IRO Email</b>	jhk109@ifs.nic.in
<b>State</b>	ODISHA
<b>IRO Office Address</b>	Budgam
<b>Note:-</b> SMS and E-Mail has been sent to ARTATRANA MISHRA, ODISHA with Notification to Project Proponent.	



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## View Compliance Report at Project Proponent

## Proposal Details

Proposal No	J-13011/10/2006-IA-II (T)	Category	Industrial Projects - 1		
Proposal Name	5x135 MW Captive Power Plant at Jharsuguda, Orissa by M/s Vedanta Alumina Ltd.				
Plot / Survey/ Khasra No.		Village(s)		Sub-District(s)	
State	ODISHA	District	JHARSUGUDA		
MoEF File No	J-13011/10/2006-IA-II (T)	Name of the Entity/ Corporate Office	Vedanta Limited, Aluminium and Power	Entity's PAN	NA
Entity Name as per PAN	NA	Entity details mentioned above is correct ?	Agree		

## Covering Letter

Covering Letter [Click to View](#)

## Compliance Reporting Details

**Reporting Year** 2023**Reporting Period** 01 Dec(01 Apr - 30  
Sep)**Remark(if any)****Details of Production and Project Area****Date of  
Commencement of  
Project/Activity** 03-07-2008

	Project Area as per EC Granted(ha.)	Actual Project Area in Possession(ha.)
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	0	0

**PRODUCTION CAPACITY**

Sr.No.	Name of the Product	Units	As per EC Granted	As per CTO Granted	CTO ID	Valid Up To	Production during last financial year
1	Power Production CPP - 1215 (9x135)	MW	1215	1215 MW	4695	31-03-2024	8786887 MWh

**Conditions**

## Specific Conditions

Sr.No.	Condition Type	Condition Details	Status of Compliance,Remarks/Reason and Supporting Documents	
1	Statutory compliance	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.	PPs Submission	All the conditions stipulated by Odisha State Pollution Control Board vide their letter no. 8064/ ind-II-NOC-3633 dated 31.03.2006 has been implemented. Complied Attachment: NA
2	Statutory compliance	The total land requirement shall not be exceed 233.92 ha for all the activities/ facilities of the power project put together.	PPs Submission	The total land on which the Plant facilities of CPP has been set up within 233.92 ha. Complied Attachment: NA
3	Statutory compliance	Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.	PPs Submission	The average ash and sulphur contents in the coal during the period of April 23 to Sept 23 is 45% and 0.33% respectively. Analysis report for the period of Apr?23 to Sep?23 enclosed as Annexure 1 With respect to this point, please note that there has been a MOEF&CC notification dated 21.05.2020 & subsequent amendments that substituted Rule 3(8) of the Environment (Protection) Rules, 1986 and stated that the TPPs can use coal without any stipulations as to ash content or distance subject to fulfilment of certain conditions. Copy of the notification and Analysis report for period of Apr?23 to Sep?23 is enclosed as Annexure.1. Complied Attachment: <a href="#">Click to View</a>
4	Statutory compliance	One multi-flue stack of 275 m height shall be provided with continuous online monitoring equipments. Exit velocity	PPs Submission	One multi-flue stack of 275 m height with online monitoring system has been provided. Minimum Exit velocity of 23.6 m/sec is being maintained.

		of at least 23.6 m/sec shall be maintained.		Complied Attachment: NA
5	AIR QUALITY MONITORING AND PRESERVATION	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/NM3. 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.	PPs Submission	Electrostatic Precipitators (ESPs) with 99.98% efficiency followed by bag filters have been installed and the particulate emissions is within 50 mg/Nm3. Analysis report for period of Apr'23 to Sep'23 is enclosed as Annexure-2. Complied Attachment: <a href="#">Click to View</a>
6	AIR QUALITY MONITORING AND PRESERVATION	Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.	PPs Submission	Space has been earmarked for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency for removal of SO2. Complied Attachment: NA
7	WATER QUALITY MONITORING AND PRESERVATION	Closed Circuit Cooling system with Cooling Towers shall be provided. COC shall be optimized for ensuring water conservation.	PPs Submission	Closed circuit cooling system with cooling towers (NDCT) has been provided and an optimum level of COC is being maintained as part of water conservation measures. Complied Attachment: NA
8	Statutory compliance	Environmental clearance is subjected to obtaining clearance under the	PPs Submission	The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife

		Wildlife (Protection) Act, 1972 from the Competent Authority.		<p>conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards implementation of the above-mentioned plan over a period of 10 years. The plan is under implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd, have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. Copy of the latest communication &amp; implementation status are enclosed as Annexure-3.</p> <p>Complied</p> <p>Attachment: <a href="#">Click to View</a></p>
9	Statutory compliance	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.	PPs Submission	<p>Not Applicable at present.</p> <p>Complied</p> <p>Attachment: NA</p>
10	Statutory compliance	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	PPs Submission	<p>The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards implementation of the above-mentioned plan over a period of 10 years. The plan is under</p>

		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.		implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd, have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. Copy of the latest communication & implementation status are enclosed as Annexure-3. Complied Attachment: <a href="#">Click to View</a>
11	AIR QUALITY MONITORING AND PRESERVATION	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.	PPs Submission	Fixed water sprinkling system have been provided all along the coal storage area. Further, Mobile Water tankers/Mist cannon/sprinklers have also been deployed round the clock in CHP, ash pond area to arrest air borne emissions. Photos are enclosed as Annexure-4. Complied Attachment: <a href="#">Click to View</a>
12	WASTE MANAGEMENT	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 9th year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the	PPs Submission	Fly ash is being collected in dry form in silos of capacity-12000 m3. Ash is being utilized in cement & brick manufacturing, road and infrastructure activities, reclamation of low-lying areas and the balance is disposed off to the ash pond in the form of High Concentration Slurry disposal. As per MOEF&CC Fly ash amendment notification dated 30th December 2022, we have declared our all ash ponds & dykes are operational in nature. The communication letter sent to the OSPCB & CPCB office vide letter no VL/AU/22-23/117/OPCB dated 30th March 2023. A copy of the same is enclosed as Annexure 5. As per Fly ash notification 2021, more than 106 % ash utilized in FY 2023. From April 23 to Sep 23, we have utilized 78.48 % (lower utilization due to extended monsoon) and monthly fly ash utilization report has been uploaded in CPCB portal. Moreover, continuous efforts have been made to utilize fly ash in



		form of High Concentration Slurry.		different sustainable avenues as per enclosed plan for 100% Fly ash utilization/disposal. Copy of plan is enclosed as Annexure 5. Complied Attachment: <a href="#">Click to View</a>
13	WASTE MANAGEMENT	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.	PPs Submission	The ash ponds/dykes are constructed/ designed as per the recommendations given in design document. The ash is being transported through High concentration slurry disposal system. Water in the slurry is minimum thereby making the entire mass a rock like structure so that no water is available for leaching into ground and the ash will not get airborne. This method of disposal is such that there will be no pressure on the bunds making it vulnerable for a breach. Further, proper design of the dyke through reputed consulting firm/institution, appropriate remediation for breach management and communication process followed in case of eventuality. The ash pond has been lined with impervious clay/ HDPE lining to avoid any leaching into ground water. Moreover, piezometric wells have been installed to check the level of water. Complied Attachment: NA
14	WATER QUALITY MONITORING AND PRESERVATION	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 Ground Water Board and a copy of the same will be submitted within three months to the Ministry.	PPs Submission	As per CGWA guidelines, Sep 2020, the industries falling under hazardous category should not implement any recharge measures within the plant premises. CGWA guideline enclosed as Annexure-6 for your reference. Accordingly, we have installed 7 nos. of roof top rainwater harvesting systems facilities with a total capacity of more than 10000 m3 of rainwater for reusing the same in the Jharsuguda complex. Moreover, we have completed cleaning and restoration of more than 40 community ponds thereby augmenting the capacity for rainwater harvesting in the surrounding villages Refer enclosed photos as Annexure 6. Complied Attachment: <a href="#">Click to View</a>

15	WATER QUALITY MONITORING AND PRESERVATION	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.	PPs Submission	Being a responsible corporate, we are maintaining the ZLD and all treated effluent after conforming to standards is recycled and reused within the plant. Treated water analysis report of Apr'23 to Sep'23 enclosed as Annexure-2. Complied Attachment: <a href="#">Click to View</a>
16	WATER QUALITY MONITORING AND PRESERVATION	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.	PPs Submission	Ground water monitoring in the villages around the ash pond is being undertaken and the quarterly report is being submitted to the Regional Office of the Ministry, apart from piezometric bore wells around the ash ponds. The list of ground water monitoring locations in the villages along with direction in respect of the ash pond in use is as under ? Gudigaon (N), Kurebaga (N), Siriapali (NE) Katapali (NW), Katikela (SE), Bhurkhamunda (SW), R&R colony (NW),Tumbakela (W), Brundamal (NW), Sripura(S) Analysis report for the period of Apr'23 to Sep'23 enclosed as Annexure-2. Complied Attachment: <a href="#">Click to View</a>
17	GREENBELT	A 50 m wide greenbelt shall be developed all along the plant and ash pond boundary covering 1/3rd of the total area.	PPs Submission	33% Green belt has been developed all along the plant and ash pond area. Efforts have been made to cover three tier green belt all along the periphery. High potential local species has been planted to attenuate the pollutants as per the CPCB guidelines. Moreover, as a responsible corporate, we have taken up plantation activities in Jharsuguda district at various locations. More than 70,000 saplings have already been planted. Photos are enclosed as Annexure as Annexure-6c. Complied Attachment: <a href="#">Click to View</a>

18	Human Health Environment	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	PPs Submission	Complied. First aid and sanitation facilities had been provided to all the drivers and contract workers during the construction phase. Moreover, company has established dedicated First Aid center and Apollo Clinic to cater the employees and workers throughout the year. Complied Attachment: NA
19	Noise Monitoring & Prevention	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.	PPs Submission	Mitigative measures have been provided in high noise level areas like Turbine and Generator to ensure the Leq of noise level less than 75 dB(A) with regular maintenance of equipment. Please refer enclosed Noise level monitoring report as Annexure-2. Complied Attachment: <a href="#">Click to View</a>
20	AIR QUALITY MONITORING AND PRESERVATION	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.	PPs Submission	AAQ stations have been fixed in consultation with OSPCB in and around the power plant complex. Quarterly reports are being regularly submitted to the Regional Office. Please refer enclosed Consultation letter and ambient air quality monitoring report as Annexure 7 and 2. Complied Attachment: <a href="#">Click to View</a>
21	Statutory compliance	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the	PPs Submission	Necessary advertisement with information as advised by the Ministry has been released in two local newspapers one in vernacular and one in English.

		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 the Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .		Complied Attachment: NA
22	Statutory compliance	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	PPs Submission	A separate Environment Management Cell with qualified personnel has been set up to monitor compliance of the conditions stipulated. Organogram enclosed as Annexure-8. Complied Attachment: <a href="#">Click to View</a>
23	Statutory compliance	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.	PPs Submission	We are uploading half yearly compliance report along with monitoring data and supporting annexures in the MOEF&CC Parivesh Portal and uploaded on our website and link of the same is as below. Link: <a href="https://vedantaaluminium.com/sustainability/compliance-report-jharsuguda/">https://vedantaaluminium.com/sustainability/compliance-report-jharsuguda/</a> Complied Attachment: NA
24	Statutory compliance	Regional Office of the Ministry of Environment and Forests located at Bhubaneswar will monitor the implementation of	PPs Submission	All environmental protection measures and safeguards as recommended in the EIA/EMP/risk analysis and DMP are being implemented. Refer the implementation status report enclosed as Annexure -9.

		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.		Complied Attachment: <a href="#">Click to View</a>
25	Statutory compliance	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.	PPs Submission	Separate funds has been allocated for implementation of the Environmental Protection measures and will not be diverted for any other purposes. Details of expenditure enclosed as Annexure-10. Complied Attachment: <a href="#">Click to View</a>
26	Statutory compliance	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	PPs Submission	We shall extend full co-operation to the scientists/ officers from the Ministry/ Regional Office/ CPCB and OSPCB who would be monitoring the compliance of Environmental status. Complied Attachment: NA

		compliance of environmental status.	
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### General Conditions

Sr.No.	Condition Heading	Condition Details	Status of Compliance,Remarks/Reason and Supporting Documents
No Record Found			

### Document Upload

**Last Site Visit Report  
(if available)**      NA

**Last Site Visit Report  
Date (if available)**      11-09-2023

**Additional  
Attachment (if any)**      NA

**Additional Remarks  
(if any)**      IRO, Bhubaneswar Visited our plant on 11.09.2023.

- ☒ I 'Vedanta Limited, Aluminium and Power' hereby give undertaking that the data and information given in the filed compliance and enclosures are true to be best of my knowledge and belief and I am aware that if any part of the data and information found to be false or misleading at any stage, the clearance given to the project will be revoked at our risk and cost. In addition to above, I hereby give undertaking that no activity such as change in project layout, construction, expansion, etc. has been taken up without due approval.

### Cover Letter From IRO

**Cover Letter From  
IRO**      NA

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