

STATUS OF IMPLEMENTATION OF CONDITIONS STIPULATED IN ENVIRONMENTAL CLEARANCE FOR 7, 20,000 TPA ALUMINIUM SMELTER & 1650 MW CAPTIVE POWER PLANT FOR ADITYA ALUMINIUM BY M/S HINDALCO INDUSTRIES AT LAPANGA, SAMBALPUR, ORISSA.

REF: Environmental Clearance Letter No: J-11011/136/2009-IA.I (1), Dated 29TH November 2012 From MOEF, GOI.

Sr. No.	Specific Conditions	Compliance
i)	The streams passing through the project site shall not be disturbed w.r.t their quantity and quality of flow	There are two nallahas, one in plant & one in water reservoir area passing through the Project site. However, We have noted the same and will not disturb any stream.
ii)	Alumina shall be obtained from those refineries, which have been accorded environmental clearance by the Ministry of Environment and Forests.	The Alumina is obtained from Utkal Alumina International Limited (UAIL), Rayagada Distt and it has been accorded environmental clearance from MoEF.
iii)	The gaseous emissions (PM, SO ₂ , NO _x , PAH, HC, VOCs and Fluoride) from various process units shall confirm to the standards prescribed by the concerned authorities from time to time. The SPCB 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 emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should 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 ³ .	The gaseous emissions from various process units will confirm to the standards prescribed by MoEF/SPCB. The particulate emission from the bake oven plant will not exceed 50 mg/Nm ³ . The unit is under trial commissioning.
iv)	Particulate fluoride emissions should not be more than 0.65 mg/Nm ³ and fugitive particulate fluoride emissions from pot room should not be more than 1.85 mg/Nm ³ .	Particulate fluoride emissions and fugitive particulate fluoride emissions from pot room will be within the prescribed limit.
v)	The poly aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) should not exceed 2 mg/Nm ³ . The data on PAH should be monitored quarterly and report submitted regularly to the Ministry/Regional Office at Bhubaneswar and SPCB.	We have noted the limit prescribed for PAH, will monitor quarterly and submit the report to the Ministry's Regional Office at Bhubaneswar and OSPCB regularly after commissioning of the plant.
vi)	In plant, control measures like fume extraction and dust extraction system for controlling fugitive emissions from all the materials handling/transfer points shall be provided to control dust emissions.	Fume Extraction Centre (FTC) in Anode Baking Plant and Gas Treatment Plant (GTC) in pot lines and bag filters in raw material handling, GAP, Anode Baking, Roding areas, bath recycling, carbon recycling area, butts recycling area, cathode sealing shop etc in smelter area and coal handing, ash handling in captive

	<p>Fugitive Fluoride emissions from the pot room and in the forage around the smelter complex and the data submitted regularly to the Ministry Regional Office at Bhubaneswar and SPCB.</p> <p>Further dry scrubbing system to control the emissions from the pot lines should be provided.</p>	<p>power plant is installed to control fugitive dust.</p> <p>Fugitive fluoride in pot room and forage around the smelter will be monitored; the plant is under trial commissioning and online HF analyzer installation under progress.</p> <p>Advanced Dry scrubbing system is installed in smelter to control fugitive emission.</p>
vii)	<p>Electrostatic Precipitators (ESP) will be provided to Captive Power Plant (CPP) to control particulate emissions below 50 mg/Nm³.</p> <p>The company shall provide bag filters, dry scrubbing system and dust suppression system to control 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.</p> <p>The emissions shall conform to the standards prescribed by the Ministry CPCB/SPCB whichever is more stringent.</p>	<p>Electrostatic Precipitators (ESP) are installed in Captive Power Plant (CPP) to restrict particulate emissions below 50 mg/Nm³.</p> <p>Advanced Dry scrubbing system is installed in the Gas Treatment Centre and bag filters are provided in all material handling & transfer points. Fume treatment plant (FTP) installed in Anode Baking Furnace to treat the dust & gaseous and particulate fluoride.</p> <p>The standards prescribed by the Ministry / CPCB/ SPCB will be adhered to.</p>
viii)	<p>Provision for installation of FGD shall be provided for future use.</p>	<p>Provision has been kept for installation of FGD, if required.</p>
ix)	<p>Three tri flue and one bi-flue stack of 275 m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipments for SO₂, NO_x, and PM₁₀.</p>	<p>Two (02) numbers of tri-flue stacks of 275 m height is being installed in phase-I, and exit velocity will be maintained above 22 m/s.</p> <p>Online continuous monitoring equipment installed for monitoring of SO₂, NO_x, and PM.</p>
x)	<p>Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.</p>	<p>Adequate dust extraction system such as bag filters, dust suppression system, Dry fog system etc is being installed in coal handling and ash handling areas of CPP.</p>
xi)	<p>Utilization of 100% fly ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.</p>	<p>Utilization of 100% fly ash generated shall be ensured from 4th year of operation.</p> <p>Status of implementation will be reported to the Regional Office of the Ministry from time to time after commercial production of the power plant.</p>
xii)	<p>Fly ash shall be collected in dry form and</p>	<p>Fly ash & bottom ash is being collected in</p>

	<p>storage facility (silos) shall be provided. Unutilized ash shall be disposed-off in the ash pond in the form of slurry. Mercury and other heavy metals (Ag, Hg, Cr, Pb etc) will be monitored in the bottom ash as also in the effluent emanating from the existing ash pond. No ash shall be disposed-off in low laying area.</p>	<p>dry form, fly ash silo & bottom ash storage has been installed.</p> <p>Monitoring of Mercury and other heavy metals (Ag, Hg, Cr, Pb etc) will be carried out in the bottom ash.</p> <p>Presently, the ash is being disposed off in low laying areas inside the plant area which has been permitted by OSPCB.</p>
xiii)	<p>Fluoride (as F) consumption shall be less than 10 kg/ton of Aluminium produced as specified by the CREP.</p>	<p>Fluoride (as F) consumption will be restricted to 10 kg/ton of Aluminium produced as specified by the CREP.</p>
xiv)	<p>Anode butts generated from the pots shall be cleaned and recycled to the Anode Plant.</p> <p>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.</p> <p>The location and design of the land fill site shall be approved by the SPCB as per the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. Leachate collection facilities shall be provided to the secured land fill facilities (SLF).</p> <p>The dross shall be recycled in the cast house.</p> <p>STP sludge shall be utilized as manure for greenbelt development.</p> <p>All the used oil and batteries shall be sold to the authorized recyclers/ re-processors.</p>	<p>Anode butts generated from the pots is being cleaned and recycled.</p> <p>The spent pot lining generated from the smelter shall be properly treated before disposal in the secured landfill.</p> <p>The location and design of the land fill site has been prepared as per the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and approved from SPCB.</p> <p>Dross will be sold to the authorized recyclers/reprocessors.</p> <p>STP sludge will be utilized as manure for greenbelt development.</p> <p>The used oil and batteries will be sold to the authorized recyclers/ reprocessors.</p>
xv)	<p>As proposed, spent pot lining waste shall also be provided to cement and steel industries for further utilization.</p>	<p>All possible efforts will be made for the utilization of SPL in Cement and Steel Industries.</p>
xvi)	<p>Ash pond shall be lined with HDP/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. Ash pond water shall be recirculated and reused.</p>	<p>All precautionary measures will be taken so that no leachate from the ash pond takes place. Adequate safety measures will be implemented.</p>
xvii)	<p>Cycle of concentration (CoC) of 5.0 shall be adopted.</p>	<p>Cycle of concentration (CoC) of 5.0 will be maintained.</p>
xviii)	<p>Regular monitoring of ground water shall be carried out by establishing a network of existing wells and constructing new piezometers.</p> <p>Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr,</p>	<p>Regular monitoring of ground water will be done by establishing a network of existing wells and constructing new piezometers.</p> <p>Monitoring of heavy metals (Hg, Cr, As, Pb) will be carried out and records will be</p>

	As, Pb) and records maintained and submitted to the regional office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	maintained and compared with the baseline data. The data will be submitted to the Regional Office of the MoEF at Bhubaneswar.
xix)	Regular ground water monitoring shall be carried out by installing peizometers all around the secured land fill site in consultation with the SPCB, Central Ground Water Authority and State Ground Water Board and data submitted to the Ministry's Regional Office and SPCB.	Regular ground water monitoring will be carried out by installing peizometers all around the secured land fill site in consultation with the SPCB, Central Ground Water Authority and State Ground Water Board and data will be submitted to the Ministry's Regional Office and SPCB after establishment of secured land fill site.
xx)	<p>Total water requirement for the expansion from Hirakud Reservoir shall not exceed 5,200 m³/hr and prior permission for the existing and proposed expansion shall be obtained from the concerned department before commissioning of the plant.</p> <p>All the effluent including from the 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 smelter and CPP and also for fire protection, dust suppression, greenbelt development etc.</p> <p>Domestic effluent shall be treated in sewage treatment plant (STP) and treated domestic waste water will be used for greenbelt development.</p>	<p>No additional fresh water will be sourced from Hirakud Reservoir for the proposed expansion. The water requirement will not exceed 52.73 cusec as approved.</p> <p>The Effluent from the cooling towers and de-mineralization plant will be treated in the effluent treatment plant and will be recycled/reutilized in the process of smelter and CPP, fire protection, dust suppression, greenbelt development etc</p> <p>Separate Sewage Treatment Plant (STP) is under establishment for Smelter + CPP and Townships, the treated domestic waste water will be used for greenbelt development.</p>
xxi)	No effluent shall be discharged outside the premises of smelter during non-monsoon period and shall be discharged during the monsoon period only after treatment and meeting the norms of the OSPCB/CPCB.	We will operate an effluent treatment plant of 300 m ³ /hr capacity and therefore will not discharge effluents outside without treatment.
xxii)	Greenbelt 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>The scheme for development of Greenbelt around the Aluminium Smelter & CPP area at Lapanga has been recommended by the DFO, Sambalpur South Division and approved by the PCCF, Odisha.</p> <p>Aditya Aluminium has already started implementation of the Scheme inside the Core plant & Township areas. Around 92,000 saplings planted and a Central Nursery has been established inside the project area having a capacity of 1, 40,000</p>

		plants & at present more than 50,000 plants existing in the nursery & ready for plantation.
xxiii)	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers is being done as per the Factories Act.
xxiv)	The company shall develop rain water structures in the township area for recharge of ground water in consultation with the Central Ground Water Authority/Board.	Rain water harvesting structure will be developed in the township area in consultation with CGWA/CGWB.
xxv)	Rehabilitation and Resettlement Action Plan as 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.	Rehabilitation and Resettlement Action Plan is being implemented as per the R & R policy, 2006 of the State Govt. All the recommendations are being followed/complied.
xxvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.	All the condition of CREP for Aluminium sector is being strictly followed.
xxvii)	The company shall adopt well laid down corporate policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.	The company has adopted a well laid down corporate policy. The Corporate Environment Policy is approved by the Board of Directors. (Copy attached as annexure-1).
xxviii)	All the commitments made to the public during public hearing /public consultation meeting held on 2 nd march 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.	All the commitments made in the public during public hearing /public consultation meeting held on 2 nd march 2012 is under implementation and report will be submitted from time to time.
xxix)	At least 5% of the total cost of the project shall be earmarked for towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.	As the expansion will be carried out in two phases i.e. Aluminium Smelter from 0.26 MTPA to 0.36 MTPA & Captive Power Plant from 650 MW to 900 MW in phase I and later up gradation will be made for smelter to 0.72 MTPA and Captive Power Plant to 1650 MW in phase II. The details of the CSR activities undertaken for year 2013-14 is attached as annexure - 2.
xxx)	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe	All necessary infrastructure and facilities are being provided to the workers from time to time.

	drinking water, medical health care, crèche etc. the housing may be in the form of temporary structures to be ensured accordingly in a time bound manner.	
xxxii)	The company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forests norms/conditions, (ii) Hierarchical system or administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance and (iii) system of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.	The Corporate Environment Policy prepared and approved by the Hindalco Board of Directors, Organizational Structure for Hindalco Corporate Environment, Deployment of Corporate Policy in manufacturing Plants & communication of Policy as regards Corporate Environment. Copy enclosed as annexure-1.
	GENERAL CONDITIONS	
i)	The project authorities must strictly adhere to the stipulations made by the OSPCB and the State Government.	We will follow the stipulations made by OSPCB and the State Government.
ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	We will not carry out expansion or modification in the plant without prior approval of MoEF.
iii)	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19 th May, 1993 and standards prescribed from time to time. The SPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	We have noted and accepted the stipulated condition.
iv)	At least four number of ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x 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.	Four numbers of ambient air quality monitoring stations have been installed inside the project area during construction stage and order placed for four numbers of continuous ambient air quality monitoring station and will be installed soon. The plant is under trial commissioning and monitoring data will be submitted after full operation. The six-monthly compliance is being submitted to the concerned authorities regularly.
v)	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures	We will implement all methodology to control noise and limit within the standard.

	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).	All necessary PPEs are provided to the workers.
vi)	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers is being done as per the Factories Act.
vii)	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The company has developed surface water harvesting structures to store water in the lean season and it will harvest the rain water during rainy season in the same reservoirs.
viii)	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA report. Further the company must undertake socio-economic development activities in the surrounding villages like community development programmes, drinking water supply and health care etc.	<p>We have noted and accepted all the conditions and will comply in a time bound manner.</p> <p>The economic development activities are going on regularly as a part of our corporate social responsibility. The detail of the CSR, R&R activities undertaken is attached as annexure-2.</p> <p>A team of personnel are working dedicatedly for peripheral development work like conducting health camps, community developed programmes, formation SHG groups, supply of drinking water and other common infrastructural development works.</p>
ix)	Requisite fund shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment & Forests as well the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose.	Separate fund has been kept towards capital cost and recurring cost/annum for environment pollution control measures and the fund will not be diverted for any other expenditure.
x)	A copy of the clearance letter shall be send by the proponent to concerned Panchayat, Zillaparishad/Municipality corporation, urban local boby and the local NGO, if any from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter also be put on the web site of the company by the proponent.	The copy of the clearance letter has already been communicated to all the concerned as mentioned in the condition. The scanned copy of the letter is also displayed in our official website.

xi)	<p>The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Bhubaneswar. The respective zonal office of CPCB and SPCB. The criteria pollutant levels namely' PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>The status of compliance is being submitted to the Regional office of the MOEF regularly on 1st June and 1st Dec respectively.</p> <p>The project is under trial commissioning; the construction phase monitoring is being carried out for ambient air quality, Noise, Soil etc regularly.</p> <p>Display of all the monitoring data in public domain will be made after operation of the plant & installation of continuous AAQM station, and CEMS in the plant. Purchase order for the same has been placed and one CAAQM station with real time display facility is under installation.</p>
xii)	<p>The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitoring data (both in hard & soft copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Offices of CPCB and the SPCB. The Regional office of this Ministry at Bhubaneswar. CPCB/SPCB shall monitor the stipulated conditions.</p>	<p>We are submitting the six monthly compliance reports of the stipulated environmental conditions (both in hard & soft copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Offices of CPCB and the SPCB.</p>
xiii)	<p>The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office at Bhubaneswar.</p>	<p>The environmental statement for each financial year ending 31st March in Form-V will be submitted to the concerned authorities after commercial production of the plant.</p>
xiv)	<p>The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment & Forest at http://www.envfor.nic.in. this shall 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</p>	<p>The public has been informed by advertisement of the environmental clearance in two widely circulated daily newspapers i.e. "The New Indian Express" on 04-12-2012 & "The Samaja" on 05-12-2012, within seven days of receiving the clearance letter.</p> <p>The copy of the advertisement was submitted to the Ministry's Regional Office at Bhubaneswar vide our office letter no. AAP/E&F/786, dated 07-12-2012.</p>

	of the same should be forwarded to the Regional office at Bhubaneswar.	
xv)	The authorities shall inform the regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<p>Financial closure of the Project is completed on 17th September 2012.</p> <p>Company has already invested around Rs 13,394 crores by 31st March 2014. The expansion will be made in two phases, the phase#1 work project construction activities partly completed and the plant is under trial commissioning.</p>

Encl: As above

(Authorized Signatory)