ADITYA BIRLA
HINDALCO

30th May 2019

To

The Director (S)
Eastern Regional Office,
Ministry of Environment and Forests & CC,
Government of India,
A/3, Chandrasekharpur,
Bhubaneswar - 751023

Sub: **Compliance of Environment Clearance (EC) conditions for the period October'18 to March'19**

Ref.: EC No.: J-11011/400/2006-IA II (I), dated 6th February 2008 &
J-11011/144/2006-IA II (I), dated 19 October 2009

Dear Sir,

With referene to the above stated Environment Clearance (EC), accorded for expansion of our Smelter Plant from 100 KTPA to 360 KTPA and Captive Power Plant from 267.5 MW to 967.5 MW at Hirakud, please find enclosed herewith the six monthly compliances of the conditions laid down in the EC for the period of October'18 to March'19, along with data on environment quality of both the plants.

The same has been sent through mail id: mef@ori.nic.in. The soft copy in CD is enclosed herewith for reference.

Thanking you.

Yours truly

R.K.Gupta
Head - Sambalpur Cluster

Encl: As above

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COMPLIANCE TO EC CONDITIONS

MINISTRY OF ENVIRONMENT & FORESTS ENVIRONMENTAL CLEARANCE FOR EXPANSION OF SMELTER PLANT FROM 100 KTPA TO 360 KTPA AND CAPTIVE POWER PLANT FROM 267.5 MW TO 967.5 MW AT HIRAKUD BY M/s HINDALCO INDUSTRIES LIMITED

EC No. - J 11011/400/2006-IA II (I), dated: 6 February 2008 &
Amendment Letter: J - 11011/144/2006-IA II (I), dated 19 October 2009.

Sl. No	CONDITIONS		STATUS AS ON 31st March 2019
2	The Ministry of Environment and Forests has examined the proposal. It is noted that the proposal is for expansion of smelting capacity of Aluminium metal from the existing 1, 00,000 MTA (including 35,000 TPA capacity under trial) to 3, 60,000 TPA and Captive Power Plant capacity from 267.5 MW (including 100 MW under trial) to 967.5 MW at the Smelter Plant at Hirakud, Sambalpur, Orissa.The project cost is Rs.5195 Crores, out of which Rs.369 Crores has been earmarked for pollution control measures. This expansion will be undertaken in two phases.In Phase I, 46,000 MTA capacity will be added and in Phase II,the addition shall be of 2,14,000 MTA.Presently, HIL has 468 pots of Soderberge Technology and 164 of Pre-baked Anode Technology (632 pots of 1,00,000 MTA).During Phase-I,the capacity shall be increased to 1,46,000 MTA by changing all (468) Soderberg pots to Pre-Baked ones.Additional 14 pots will be shifted from Belgaum unit and shall also be converted into Pre- Baked.This will result in total of 646 pots of Pre-Baked technology having a capacity of 1,46,000 MTA.During phaseII,232 new Pre-Baked pots with 2,14,000 TPA capacity will be added.The unit has Captive Power Plant of 267.5 MW.100 MW will be added in phase-I and 600 MW in phase-II, thereby making the final capacity as 967.5 MW.The power plant will be based on CFBC/PFC Boiler.Coal for CPP shall be procured from coal fields 20 km away and transported in covered Volvo trucks which will be later shifted to railway.Most of the other materials will also be transported by railways.	:	Being Complied Till date the capacity of Smelter Plant has been enhanced for production of Aluminium up to 216000 MTA and the CPP up to 467.5 MW under different phases of expansion. All the pots in Smelter are of Prebaked one and the boilers of the CPP are CFBC in nature. Alumina for the Smelter Plant is transported through railways in BTAP wagons. Coal for CPP is procured from captive mine at Gare Palma in the district of Chhatishgarh and other coal mines inside the state of Odisha. A railway siding has been established and operating in the premise of Power Plant for transporting of coal through railway in 2018. Some coal is also transported through tarpaulin covered trucks.

3	The Phase-I units will be accommodated within the existing 163.95 ha of land. For Phase-II units, additional 91 ha of land will be acquired. No R&R is involved in the project and no forest land is involved in the project. The site is about 8.5 km away from Sambalpur town. Hirakud reservoir on Mahanadi river is located 1.2 km away from the plant. Small size reserve forests (Laxmi dungri, Ram dungri and Jamraha) are located within 10 km radius of the plant.No ecologically sensitive zone exists within 10 km periphery of the project. The proposed Sambalpur Elephant Reserve falls outside 10 km radius of the plant site and the site does not fall in the elephant movement corridor.	:	In Phase-I expansion, Smelter has increased its capacity from 1, 00,000 TPA to 1, 46,000 TPA) and CPP from 267.5 MW to 367.5 MW. In Phase – II of Smelter Plant has added 80 pots having capacity 70 KTPA, taking total capacity of the unit to 216 KTPA and CPP added 100 MW(Unit - V) taking total capacity to 467.5MW. Both phases of expansions have been accommodated within the existing 163.95 ha of land. No R&R and forest land is involved in the project.
4	The raw water requirement shall increase from 31,955 to 1, 01,555 KLD, thereby increase for the expansion project will be 69,600 KLD which will be sourced from the Hirakud reservoir. 14,250 KLD of wastewater will be generated from the expansion project. Wastewater generation shall increase from 8278 KLD to 22,528 KLD thereby increase in waste water generation for the expansion project will be 14,250 KLD .This will be treated in Rotating Biological Contactor and reused with in the plant.Cooling water blow down from the power plant will be treated to meet the discharge standards and discharged into Kharjhor nalla. 7650 TPA of solid waste generated from smelter will be disposed off as per CPCB guidelines, in secured landfill site inside the premises. 2.55 million TPA of coal ash generated from power plant will be disposed as dry ash mounds. Coal ash disposal as backfill material in abandoned coal mines has been explored.	:	The raw water requirement is sourced from the Hirakud Reservoir. During the period, a total of 4340935 KL @ 23851.3 KLD of water has been drawn from the reservoir. For treatment of Smelter Plant effluent, three RO based ETPs (two of 250 KLD capacity and one of 50 KLD capacity) have been installed. Four STPs (500 KLD, 400 KLD, 300 KLD, 100 KLD capacity) have been provided for treatment of sewage water from canteen, toilets & colony. Solid waste generated from the Smelter Plant is disposed off in the Secured Landfill site as per the CPCB guideline. Cooling tower blowdown from the power plant is treated in RO plant of capacity 120 m^3/hr for reuse in process and cooling. Other effluents from the plant is treated to meet the standards for discharge, stored in the common monitoring basin and entirely reused in cooling towers and other in-house activities with no discharge to outside. Coal ash generated from the Power Plant is utilized in cement plants, brick manufacturing units, road making, low lying area filling etc. Balance ash, if any, is disposed dry at ash mound. During the period 520158 MT of ash was generated with utilization of 512934 MT.

A. SPECIFIC CONDITIONS :

(i)	As stated in the Public Hearing, the new expansion site shall be on the opposite side of the village.	: The expansion site is on the opposite side of the village.
(ii)	The expansion shall be based only on Pre-baked Anode Technology and all Soderberge Technology based pots shall be converted to Pre-baked Anode Technology, as per the schedule submitted to the Ministry. The Captive Power Plant shall be based on CFBC/PFC Boiler.	: Only prebake anode technology is being adopted. All the soderberg pots have already been converted to prebake one. All the boilers of 467.5 MW Power Plant (including Unit # 4 (100 MW) under Phase-I expansion and Unit # 5 (100 MW) under Phase - II expansion) are CFBC in nature.
(iii)	The gaseous emissions (SO_2, NOx, CO, HC and Fluoride) and Particulate matter along with RSPM levels from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view of the nature of the industry and its size and location. At no time the emission level shall go beyond the prescribed standards. On-line continuous monitoring system for particulate emissions, SO_2 and NO_x shall be provided and shall make necessary arrangements for submission of on-line real time emission data to CPCB website. Interlocking facility shall be provided between pollution control equipment and the process operation so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically. 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. Low NOx burners shall be installed to control the NOx emissions.	: The emission/discharge confirm to the standards prescribed from time to time. In Power Plant, environment friendly CFBC boilers have been provided to each unit, which are low SO_2 & NO_x producing in nature. ESPs, of efficiency 99.9% and attached with High Frequency Rectifier Transformers (HFTRs) in the first fields (except Unit # I), have been provided to each boiler of the CPP to maintain the Particulate Matter standard. Particulate Matter and Fluoride from the smelter at FTP (Dry scrubbers) out let and fugitive fluoride from smelter pot rooms is being monitored regularly. Online real-time fluoride and dust monitoring analyzers installed at all FTP Stack of Smelter and the real time monitoring data connected to OSPCB Server. Online Forbes Marshall-Codel make Opacity Monitor (Model No: DCEM-2100) has already been installed and commissioned in stacks of Unit # 4 & 5 along with similar online monitoring facilities in all other units of CPP. Further, online Continuous Flue gas Analyzers of SO_2, NOx (Model No: GCEM 4000 of Codel make) have also been installed in all the Stacks. Real time stack data from the online monitors of Smelter and Power plant are connected to SPCB/CPCB server and data transmitted continuously.

(iv)	Only 10 new stacks shall be installed for the expansion project - 4 in smelter plant, 4 in anode plant and 2 in casting unit. The scrubbed alumina from Alumina based dry scrubbing system shall be reused in process. Minimum stack height shall be 50 m. The minimum height of other stacks of anode plant and casting plant shall be 35 m, which shall base on Sulphur content of fuel. 3 new stacks in power plant shall be provided with ESP.	:	Stacks of height 50m have been provided to all FTPs & height 35 m and above have been provided to casting unit. Fume Treatment Plants (FTPs) have been installed and the alumina from the FTPs is being reused in the process. Stacks of height 130 m have been provided to each unit of CPP, including Unit # 4 & 5 (both 100 MW), which are under Phase – I & II expansion respectively. ESPs of efficiency 99.9% has been provided to individual boilers of each unit including Unit # 4 & 5. ESPs of the CPP are designed and attached with HFTRs (except in Unit # I) to meet SPM emission level less than those prescribed limit of 50 mg/$Nm^{3.}$ ESPs of Unit # I are designed for PM emission of less than 100 mg/Nm^3, which is the prescribed standard for the unit. The results of monitoring at the outlets of ESPs are enclosed as Annexure-II.
(v)	Total Fluoride emissions and pitch fumes from smelter and anode-baking unit shall be controlled using alumina based dry scrubbing system to limit Fluorides emissions within 0.8 kg/ton Aluminium produced and SPM within 50 mg/Nm^3. SPM emissions from Captive Power Plant shall be less than 100 mg/NM^3.Forage Fluoride levels of less than 80 ppm for one month, less than 60 ppm for two months and less than 40 ppm for 12 months shall be complied with. Further the pot emissions through fume treatment plant shall not exceed 0.30 kg/ton of Aluminium produced.	:	Alumina based dry scrubbers are existing for the phase-I expansion and the same is already in operation for phase-II expansion for control of fluoride. The particulate matter, fluoride emissions and forage fluoride in grass samples are being regularly monitored for the existing line and reported to Board and Ministry in half yearly report. The analysis report of the emission is enclosed in Annexure-I.
(vi)	Regualr monitoring of fluoride content in ambient air, forage fluoride and in ground water shall be carried out and data shall be submitted to State pollution Control Board.	:	We are regularly monitoring forage fluoride as an indicator of ambient air fluoride and also fluoride in surface and ground water and the data is submitted to State Pollution Control Board through monthly progress reports. The data of forage fluride for the period have been enclosed in Annexure-I.
(vii)	Raw material shall be stored in covered yards. Water sprinkling arrangement shall be made in the raw material stock yard to control fugitive emissions. Coal and other raw material shall be transported in covered trucks, containers etc., which shall later be shifted to covered rail	:	The coal for Power Plant is transported from various sources through railways, covered trucks and stored under sheds in the coal yard of Power Plant where sprinkling is done through fixed sprinklers to prevent the fugitive emission. Fugitive

	wagons.		dust in the area is also suppressed by water sprinkling through mobile water tankers.Transportation of coal through railways have been started from Feb 2018.
(viii)	In plant control measures for checking fugitive emissions from all the vulnerable sources like spillage/raw materials/coal handlings etc. shall be provided. Further, specific measures like provision of dust extraction and suppression system consisting of water sprinkling, suction hoods, fans, cyclones, bag filters, ventury scrubber etc. shall be installed at material transfer points and other enclosed raw material handling areas. Centralized de-dusting system i.e. collection of fugitive emissions through suction hood shall be provided and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed height, as prescribed above.	:	Fume Treatment Plant (FTPs), dust collector and bag filters have been provided in Smelter. For control of fugitive emission in CPP, central dedusting system with suction hoods has been provided to the crusher houses of CHP. Dust suppression systems have also been provided in the railway siding, coal yard, ash silo area, ash transporting road and all other vulnerable areas of fugitive dust emission. Bag filter houses have been provided to crusher houses of CHP & ash silos. Ash is undloaded from the silos after moisturisation and frequent sprinkling is carried out on the coal and ash transportation road.
(ix)	Fugitive Fluoride emissions from the Pot room shall not exceed 0.4 Kg/Ton of Aluminium produced. Fugitive emissions, especially in the work zone area, product and raw materials storage area etc. shall be regularly monitored and records be maintained. The emissions shall conform to the limits imposed by the State Pollution Control Boards / Central Pollution Control Board.	:	The fugitive fluoride emission is within 0.4 Kg/Mt. Al. Regular monitoring of fugitive emission through smelter roofs is being carried out and reporting these to State Pollution Control Board. The same will continued. Annexure-I
(x)	Windbreakers shall be installed to restrict fugitive dust	:	Boundary wall of sufficient height provided to Smelter, Power to restrict the fugitive dust. Extensive sprinkling, at potential source of generation, is being carried out through fixed and mobile sprinklers to contain the fugitive dust.
(xi)	The water requirement for the expansion project shall not exceed 69,600 KLD and shall be sourced from the Hirakud reservoir	:	The raw water for the all the three plants, i.e Smelter, Power and Flat Rolled Plant is being sourced from Hirakud reservoir.Total raw water withdrawl from the reservoir for the period is 4340935 KL @ 23851.3 KLD.
(xii)	Waste water generation shall not exceed 14,250 KLD for the expansion project. Waste water generated from smelter shall be treated in Rotating Biological Contactor and shall be	:	The present waste water generated from Smelter is being treated in three effluent treatment plants (ETP) of capacity 250KLD, 250KLD and 50KLD capacity. The domestic

	reused in the plant. Cooling water blowdown from the power plant shall be treated up to discharge standards and discharged into Kharjhor nalla.		waste water is treated in STPs of capacities 500KLD, 400KLD, 300KLD &100KLD.The treated water is reused. The cooling tower blow-down water is being treated through RO Plant for reuse in process. Other effluents are being treated to meet the standards after reuse in various in-house activities and cooling towers. No waste water is discharged to outside. Monitoring of water quality is being carried out and the same is enclosed for the period Oct'18 to Mar'19. (Annexure-IV)
(xiii)	7650 TPA of solid waste generated, mainly the spent pot lining from smelter shall be disposed off in a secured landfill site inside the premises. The SLF shall be as per CPCB guidelines. 2.55 million TPA of coal ash generated from power plant shall be disposed as dry ash mounds. However, it shall be ultimately disposed off as backfill material in abandoned coal mines or shall be utilized as per the Fly Ash Notification 5.0.763 (E) dated 14.9.1999 of this Ministry. The proposed Amendment / revision to this Notification shall be applicable for compliance from the Project Authority	:	In addition to disposal of solid waste from Smelter Plant in our own Secured Landfill site, which is used for emergency purpose, some waste is also disposed off at TSDF center developed by Ramky Enviro Engineers Ltd. Coal ash, the solid waste generated from the process of CPP, after utilization in different applications (supply to manufacturers of Cement, ash bricks and low lying area filling, road making etc), is disposed off dry in ash mound. During the period October 2018 to March 2019, about 520158 MT of ash (from all the units of Power Plant) have been generated and about 512934 MT of ash utilized with an average utilization figure of 86.6%. The ash generation and utilization is enclosed.(Annexure-VII) After de-allocation of captive mine at Talabira of Sambalpur district in Odisha, disposal in the other coal mines is being explored.
(xiv)	Minimum Cycle of Concentration (COC) for the CPP shall be 5.0	:	To minimize the fresh water use, COC is being maintained more than 5.0 in all the operating units of CPP.For the period October-2018 to March-2019 the average COC, for all units, was 5.3.(Annexure-V)
(xv)	Minimum of 33 % of total land area shall be developed as green belt with local species in consultation and as per the CPCB's guidelines	:	33% of total land area, including solid waste disposal site, has been green covered. The detail of plantation are enclosed.(Annexure-VIII)

(xvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium Sector shall be strictly implemented.	:	All the recommendations of Charter of Corporate Responsibilty for Environment for aluminium sector are being strictly implemented.
(xvii)	The project authorities shall earmark Rs.369 crores to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	:	Being complied.

B. GENERAL CONDITIONS :

(i)	The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board.	:	We are adhering to the directions of State Pollution Control Board.
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	:	No further expansion or modifications in the plant shall be carried out without prior approval of the ministry.
(iii)	Regular monitoring of ambient air for SPM, RSPM, $S0_2$, NO_x, CO, HC and Fluoride shall be carried out as per CPCB guidelines. The locations of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required, in the downwind direction as well as where maximum ground level concentrations are anticipated	:	Presently, the ambient air quality is being monitored at seven locations for Smelter and eight locations in core & buffer zones of Power Plant regularly. (Annexure I & VI). Ambient air quality is also being monitored through online monitoring systems and the real time data is being sent to SPCB & CPCB continuously.
(iv)	Data on ambient air quality, fugitive emissions and stack emissions should be regularly submitted to the concerned Regional Office of this Ministry and SPCB/CPCB every six months and posted on the Website of the Project Authority	:	Data on ambient air quality, fugitive emissions, stack emissions and water effluent quality is being regularly submitted to Eastern Regional Office through six monthly compliance reports. The data for the period October 2018 to March 2019 are enclosed. (Annexure I, II & VI).
(v)	Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under GSR422 (E) dated 19th May	:	Waste water is properly collected, treated to confirm to the standards and entirely reused in various processes.

	1993 and 3rd December, 1993 or as amended from time to time		Data on water effluent quality is being submitted to the office regularly.
(vi)	The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000 and Hazardous Waste (Management and Handling) Rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes. All Transportation of Hazardous Chemicals shall be as per the MVA, 1989	:	Authorization for Management and Handling of Hazardous Waste has been obtained from State Pollution Control Board for both Smelter and CPP. Conditions stipulated in the authorizations are being strictly followed as per Hazardous Waste (Management, Handling and Transboundary Movement) Rule 2016 and its amendments time to time.
(vii)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)	:	Noise quality in and around the plants is being monitored regularly. These are confirming to the standards prescribed under Environment (Protection) Act, 1986. The noise level data for the period October-2018 to March-2019 is enclosed Annexure-I & XI.
(viii)	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.	:	Occupational health surveillance of all the employees is being carried out on a regular basis and records are maintained. For the period the health surveillance statistics are as follows: Pre-employment health surveillance against new recruitment- 15 Periodic medical health surveillance for permanent employees- 1598 Periodic medical health surveillance for contractual employees- 5972 (Annexure-XII)
(ix)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis	:	Regular training is being imparted to all the employees on various safety, health and environmental issues. Pre-employment and routine periodical medical examinations for all employees are being undertaken on regular basis, as provided in (viii) above.
(x)	Usage of PPEs by all employees/ workers shall be ensured	:	Use of PPEs by all the employees and workers are being strictly ensured in unit.

(xi)	The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the expansion project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water	:	Studies by the Dept. of Civil Engineering, A.U College of Engineering, Andhra University, Visakhapatnam in 2007 and M/s Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar in 2012, recommend not to adopt Rain Water Harvesting in Hirakud area for: i) Presence of shallow water table, ii) Hard rock at shallow depth, iii) Water logging in the area, and iv) Rising trend of the water table in the area
(xii)	The project proponent shall also comply with all the environmental protection measures and safeguards proposed in the EIA/EMP report. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	:	Being Complied.
(xiii)	The company will undertake all relevant measures, as indicated during the Public Hearing for improving the Socio-economic conditions of the surrounding area. CSR activities will be undertaken by involving local villages and administration	:	The company is undertaking various socio-economic development projects in the surrounding areas involving local SHGs.The CSR activities for the period April-2018 to March-2019 is enclosed. (Annexure-XIII)
(xiv)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval	:	The company is undertaking various community development programmes in and around Hirakud involving local SHGs. During April-2018 to March-2019 about Rs. 269.94 lakh has been spent towards community development projects including rural periphery development at Hirakud Comlpex. (Annexure-XIII)
(xv)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	:	A separate Environmental Management Cell with adequate laboratory facility has been set up at Hirakud Complex, to carry out environmental management and monitoring functions.
(xvi)	The implementation of the project vis-a-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/ SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies	:	Strictly followed.

	and shall be posted on the Website of the Company.		
(xvii)	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/ Committeeand mayalso be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapersthat are widely circulated in the region of which one shall be in the vernacular languageof the locality concerned and a copy of the same shall be forwarded to the concerned RegionalOffice of the Ministry.	:	Public was informed through advertisements in three widely circulated regional newspapers namely : (1) The Dharitri, Dated 12th February, 2008 (2) The Agnisikha, Dated 12th February, 2008 & (3) The Sambad, Dated 14th February, 2008, This was also communicated to the Regional Office of MOEF, Bhubaneswar vide our letter of 14th February, 2008 along with copies of the news letters.
(xviii)	The project 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 start of the project.	:	Will be complied.
(xix)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	:	Agreed
(xx)	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	:	Agreed

Amendment Letter: J - 11011/144/2006-IA II (I), dated 19 October, 2009

Sl. No	CONDITIONS		STATUS AS ON 31st March- 2019
3.0.1	All the specific and general conditions shall remain unchanged and have to be complied in toto and pari passu.	:	Being complied
2	There shall be no change or modification in the ultimate capacity of the Smelter Plant (1,00,000 to 3,60,000 TPA) and Captive Power Plant (267.5 MW to 967.5 MW).	:	There will be no change or modification of the ultimate capacity of Smelter Plant as well as Captive Power Plant.
3	All the emissions (ambient air, stack, fugitive and fluoride emissions) shall be within the permissible limit as prescribed in the Environmental Clearance dated 6th February, 2008.	:	All the emissions are within the prescribed limit.Monitoring reports are enclosed.
4	No additional land shall be acquired.	:	No additional land will be acquired for expansion.
5	No additional water shall be used.	:	No additional water, other than the quantity mentioned in the EC, will be used.
6	A copy of clearance letter shall be sent by the proponent to concerned Panchayat Zilla Parished / Municipal Cooperation, Urban local body and the local NGO, if any, from whom suggestions / representations if any were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	:	Copy of the clearance letter was submitted to local Urban Local Body after receiving the same.
7	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their web site 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 the OPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_X (ambient levels as well as Stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	:	The six monthly report of compliance of conditions of the Environment Clearance is submitted to Regional Office of Ministry of Environment & Forests (MoEF), Bhubaneswar regularly in form of both soft and hard copies.The same is also uploaded in the website of the company.Critical sectoral environmental parameters are displayed in the main gates of both Smelter and Power Plant.

8	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated environment clearance conditions, including results of monitored data (both in hard copies as well as by e-mail) to the regional office of MOEF at Bhubaneswar, the respective Zonal office of CPCBand the OPCB. The Regional Office of this Ministry at Bhubaneswar / CPCB/ OPCB shall monitor the stipulated conditions.	:	Six monthly compliance of Environment Clearance is submitted to the Regional Office of Ministry of Environment Forests & climate change (MoEF&CC), Bhubaneswar regularly in form of both soft and hard copies.
9	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 of the MOEF by e-mail.	:	Being complied.
4.0	This letter is issued with prior approval from the Competent Authority.	:	-
5.0	This letter shall be kept with the environment clearance issued by the Ministry vide letter No.:J-11011/100/2006-IA.II(I), dated 6th February, 2008.	:	Complied.

ENVIRONMENTAL QUALITY PARAMETERS OF SMELTER

(October-2018 TO March-2019)

Annexure-I

STACK EMISSION FUME TREATMENT PLANT (DRY SCRUBBERS)

Particulate Matter: Standard: 100 mg/Nm^3 Total Fluoride: Standard: 0.3 Kg/MT. Al.

Location of sampling	Unit	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
FTP I – Stack I							
Particulate Matter	mg/Nm3	7.47	10.03	10.61	8.02	10.87	8.77
Total Fluoride	Kg/t. Al.	0.12	0.14	0.13	0.10	0.11	0.16
FTP – I – Stack II							
Particulate Matter	mg/Nm3	10.08	9.80	8.31	10.23	8.76	7.63
Total Fluoride	Kg/t. Al.	0.11	0.12	0.11	0.12	0.13	0.14
FTP – II – Stack – III							
Particulate Matter	mg/Nm3	11.29	9.53	9.06	11.10	10.33	10.53
Total Fluoride	Kg/t. Al.	0.15	0.16	0.14	0.17	0.15	0.18
FTP – III- Stack – IV							
Particulate Matter	mg/Nm3	9.76	8.21	9.03	10.19	8.54	9.66
Total Fluoride	Kg/t. Al.	0.13	0.11	0.12	0.14	0.12	0.15
FTP – IV- Stack – V							
Particulate Matter	mg/Nm3	10.23	10.10	11.15	8.56	8.84	8.13
Total Fluoride	Kg/t. Al.	0.16	0.15	0.16	0.18	0.19	0.17

STACK EMISSION Particulate Matter: Unit: mg/Nm^3 Standard: 100 mg/Nm^3

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
CAST HOUSE – I :						
Stack-6 (Furnace –A)	52.4	52.2	54.2	55.4	55.8	53.4
Stack-7 (Furnace –B)	52.2	51.6	52.5	53.2	54.5	54.2
CAST HOUSE – II, III, IV & Caster						
Stack – 9 (Furnace-1&2)	51.8	51.2	53.6	55.2	55.8	51.6
Stack –10 (Furnace-A&B)	52.1	52.4	51.6	51.8	52.6	53.5
Stack –11 (Furnace-A&B)	56.8	56.2	56.1	56.8	57.2	52.7
Stack –12 (Furnace-A&B)	48.4	46.4	45.9	45.4	46.5	44.9

*Stack–8 (Furnace –C) Shut Down.

FUGITIVE EMISSION Total Fluoride: Unit: Kg/MT. Al. Standard: 0.4 kg/MT.Al.

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
PR-I, Section XII	0.29	0.31	0.32	0.28	0.30	0.27
PR-II, Section IV	0.30	0.28	0.29	0.29	0.31	0.33
PR-III, Section V	0.31	0.30	0.31	0.30	0.28	0.29
PR-IV, Section VIII	0.33	0.32	0.30	0.32	0.32	0.30
PR-V, Section IX&X	Shut down	Shut down	Shut down	Shut down	Shut down	Shut down
PR-VI,RS End	0.30	0.33	0.31	0.30	0.31	0.32
PR-VII,RS End	0.34	0.32	0.30	0.31	0.33	0.31
PR –VIII,RS End	0.32	0.30	0.33	0.33	0.32	0.34
PR- IX ,RS End	0.34	0.33	0.34	0.32	0.35	0.35
PR –X , RS End	0.35	0.34	0.35	0.34	0.33	0.34
PR –XI, RS End	Shut down	Shut down	Shut down	Shut down	0.31	0.33
80-POT Area (Middle)	0.33	0.31	0.32	0.33	0.34	0.30

AMBIENT AIR SAMPLING

PARTICULATE MATTER (PM_{10}): Unit: µg/Nm^3

Standard: 100 µg/Nm^3 (24 hours)

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Pump House Near Adm. Building	56.92	57.37	56.67	57.42	57.72	53.34
R/S Cooling Tower MCC Room	53.97	54.73	55.28	55.4	56.77	53.76
R&D Building	42.74	45.6	45.84	45.51	46.37	46.38
Near caster Security Kiosk	58.57	57.56	56.31	56.15	59.62	53.17
Near New Security watch tower	49.48	50.10	48.98	46.93	48.15	49.84
Project office near Old Rectifier	52.63	55.14	54.93	57.16	60.97	52.77
Hindalco club	47.28	44.64	43.73	42.08	43.75	44.24

PARTICULATE MATTER ($PM_{2.5}$): Unit: µg/Nm^3

Standard: 60 µg/Nm^3 (24 hours)

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Pump House Near Adm. Building	32.52	34.67	35.18	35.96	37.32	35.81
R/S Cooling Tower MCC Room	34.88	39.15	37.85	35.66	36.91	34.16
R&D Building	30.43	31.46	34.32	33.64	34.48	34.49
Near caster Security Kiosk	36.7	36.16	35.36	35.85	37.44	36.29
Near New Security watch tower	31.35	32.5	32.23	32.73	37.13	36.96
Project office near Old Rectifier	33.48	34.98	34.32	37.51	39.4	34.62
Hindalco club	28.05	28.64	28.81	30.2	31.35	31.56

SULPHUR DI-OXIDE (SO_2): Unit: µg/Nm^3

Standard: 80 µg/Nm^3 (24 hours)

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Pump House Near Adm. Building	11.13	11.73	12.03	12.66	13.76	13.12
R/S Cooling Tower MCC Room	9.3	10.03	10.28	10.45	13.6	13.23
R&D Building	7.87	8.54	8.95	8.87	9.24	9.24
Near caster Security Kiosk	10.02	10.74	11.75	11.93	11.68	13.21
Near New Security watch tower	9.3	10.0	10.15	10.51	11.46	10.78
Project office near Old Rectifier	9.07	9.53	9.84	10.22	10.8	10.63
Hindalco club	8.73	8.93	9.23	9.16	9.53	10.2

NITROGEN OXIDE (NO_X): Unit: µg/Nm^3

Standard: 80 µg/Nm^3 (24 hours)

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Pump House Near Adm. Building	8.54	8.91	9.2	9.38	10.27	10.02
R/S Cooling Tower MCC Room	10.22	10.1	9.92	10.08	10.08	10.04
R&D Building	8.4	8.67	8.81	9.0	9.2	9.2
Near caster Security Kiosk	10.87	11.0	11.1	11.5	12.66	12.66
Near New Security watch tower	8.78	9.11	9.45	9.88	12.6	10.81
Project office near Old Rectifier	10.06	10.31	10.71	11.93	11.93	9.94
Hindalco club	8.03	8.35	9.42	9.91	10.22	9.68

CARBON MONOXIDE (CO): Unit: µg/Nm^3 Standard: 2000 µg/Nm^3 (8 hours)

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Pump House Near Adm. Building	123.87	128.64	132.91	134.6	137.42	134.73
R/S Cooling Tower MCC Room	138.97	140.33	140.48	140.63	141.93	139.11
R&D Building	106.9	111.08	113.4	116.5	117.0	113.3
Near caster Security Kiosk	142.65	144.97	143.58	143.42	145.86	133.08
Near New Security watch tower	132.94	134.66	135.27	139.0	141.06	132.96
Project office near Old Rectifier	135.0	137.14	137.2	136.9	139.0	139.9
Hindalco club	91.82	93.11	95.7	96.46	98.2	97.1

Note: Hydro-Carbon (HC) and Lead in all seven locations are Not Detectable (ND).

FORAGE FLUORIDE: Unit: ppm **Monthly Average Standard: 80 ppm**

Sl. No.	Location	Data					
		Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
1	0.5 km NE	31.98	34.30	35.20	35.50	35.30	32.75
2	1.0 km NE	24.53	26.10	25.95	26.25	26.80	25.95
3	2.0 km NE	18.98	19.10	19.20	19.50	18.35	18.45
4	3.0 km NE	14.48	14.65	14.20	14.50	14.70	14.40
5	0.5 km SE	34.88	31.10	31.70	32.00	33.40	34.25
6	1.0 km SE	31.43	28.80	28.20	28.50	28.05	28.15
7	2.0 km SE	22.63	20.20	20.70	21.00	21.55	21.95
8	3.0 km SE	18.03	18.30	18.20	18.50	18.10	18.40
9	5.0 km SE	8.08	7.90	7.20	7.50	8.10	8.35
10	0.5 km NW	19.78	18.10	20.70	21.00	20.75	19.00
11	1.0 km NW	16.33	15.50	15.70	16.00	16.70	15.15
12	0.5 km SW	28.83	27.25	25.20	25.50	26.05	28.40
	Average Month	**22.50**	**21.78**	**21.85**	**22.15**	**22.32**	**22.10**

GROUND WATER ANALYSIS: Parameter: F- Unit: mg/l

Location of sampling	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19
Sludge pit test well (E)	0.44	0.43	0.41	0.42	0.41	0.45
Sludge pit test well(W)	0.54	0.50	0.52	0.54	0.56	0.62
Sludge pit test well (N)	0.35	0.36	0.37	0.39	0.37	0.40
Sludge pit test well (S)	0.45	0.44	0.42	0.44	0.43	0.46
Open well near sludge pit	0.40	0.39	0.38	0.37	0.39	0.38
Tube well near sludge pit	0.28	0.27	0.28	0.27	0.28	0.28

AMBIENT NOISE QUALITY DATA: **Unit: dB (A) Leq**

Sl.	Location	Category	Standard* Day / Night	Distance / Direction wrt Plant	Day Time; dB(A) Leq	Night Time; dB(A) Leq
1.	Plant Gate	Industrial	75/70	Plant Site	45.0	35.9
2.	Hindalco Colony	Residential	55/45	0.6 km / SW	35.9	24.6
3.	Tarasingpara	Residential	55/45	0.5 km / S	41.7	31.5
4.	Christianpara	Residential	55/45	0.7 km / S	42.2	29.6
5.	Alind Colony	Residential	55/45	1.3 km / NE	30.9	26.4

***** Day Time : 0600 to 2200 Hrs ***** Night Time : 2200 to 0600 Hrs

HIRAKUD POWER

ANNEXURE – II (A)

STACK EMISSION

(October' 2018 to March' 2019)

Unit # I

Process attached to the unit : Boiler # 1 & 2

Sl. No.	Month / Year	Unit	PM	SO_2	NO_x	Hg
01.	October	mg / NM^3	SD	SD	SD	SD
02.	November	mg / NM^3	64.55	377.60	160.95	0.004
03.	December	mg / NM^3	SD	SD	SD	SD
04.	January	mg / NM^3	SD	SD	SD	0.004
05.	February	mg / NM^3	SD	SD	SD	0.02
06.	March	mg / NM^3	61.85	377.45	163.65	0.005
	Average	mg / NM^3	**63.2**	**377.5**	**162.3**	**0.007**
	Standard	mg / NM^3	100	600	300	0.03

HIRAKUD POWER

ANNEXURE – II (B)

STACK EMISSION
(October' 2018 to March' 2019)

Unit # II

Process attached to the unit : Boiler # 3, 4 & 5

Sl. No.	Month / Year	Unit	PM	SO_2	NO_x	Hg
01.	October	mg / NM^3	65	448	199.25	0.0128
02.	November	mg / NM^3	51.13	364.05	159.20	0.005
03.	December	mg / NM^3	83.25	467.75	194.25	0.012
04.	January	mg / NM^3	50.63	364.18	158.78	0.005
05.	February	mg / NM^3	48.83	448.17	184.17	0.011
06.	March	mg / NM^3	48.95	359.60	158.17	0.005
Average		mg / NM^3	**57.97**	**408.63**	**175.64**	**0.01**
Standard		mg / NM^3	100	600	300	0.03

HIRAKUD POWER

ANNEXURE – II(C)

STACK EMISSION
(October' 2018 to March' 2019)

Unit # III

Process attached to the unit : Boiler # 6, 7 & 8

Sl. No.	Month / Year	Unit	PM	SO_2	NO_x	Hg
01.	October	mg / NM^3	58	336.25	139.75	0.0153
02.	November	mg / NM^3	50.65	375.77	162.68	0.0053
03.	December	mg / NM^3	59	329.50	183.33	0.0078
04.	January	mg / NM^3	49.63	375.17	162.18	0.0052
05.	February	mg / NM^3	47.17	498.67	190	0.0117
06.	March	mg / NM^3	47.73	374.05	159.43	0.0051
Average		mg / NM^3	**52.03**	**381.57**	**166.23**	**0.01**
Standard		mg / NM^3	100	600	300	0.03

HIRAKUD POWER

ANNEXURE – II(D)

STACK EMISSION
(October' 2018 to March' 2019)

Unit # IV

Process attached to the unit : Boiler # 9, 10 & 11

Sl. No.	Month / Year	Unit	PM	SO_2	NO_x	Hg
01.	October	mg / NM^3	45.83	477.33	165.33	0.0153
02.	November	mg / NM^3	SD	SD	SD	SD
03.	December	mg / NM^3	86	497.50	262.50	0.0068
04.	January	mg / NM^3	52.95	449.30	172.90	0.0053
05.	February	mg / NM^3	45.33	354	229.33	0.0117
06.	March	mg / NM^3	49.30	439.87	171.33	0.0048
	Average	mg / NM^3	**46.57**	**369.67**	**166.9**	**0.01**
	Standard	mg / NM^3	100	600	300	0.03

HIRAKUD POWER

ANNEXURE – II(E)

STACK EMISSION
(October' 2018 to March' 2019)

Unit # V

Process attached to the unit : Boiler # 12 & 13

Sl. No.	Month / Year	Unit	PM	SO_2	NO_x	Hg
01.	October	mg / NM^3	38	285	141.50	0.0145
02.	November	mg / NM^3	41.45	381.73	165.28	0.0047
03.	December	mg / NM^3	18	221.25	78	0.0100
04.	January	mg / NM^3	39.03	382.75	168.05	0.0050
05.	February	mg / NM^3	45	167	76	0.0130
06.	March	mg / NM^3	SD	SD	SD	SD
Average		mg / NM^3	**36.3**	**287.5**	**125.8**	**0.01**
Standard		mg / NM^3	50	600	300	0.03

HIRAKUD POWER

ANNEXURE - III

FUGITIVE EMISSIONS AT COAL HANDLING PLANT (CHP) AREA

(October' 2018 to March' 2019)

Parameters Measured : Suspended Particulate Matter (SPM)

Limit : 500.00

Sl. No.	Month / Year	Unit	Results
01.	October	µg / m^3	196.2
02.	November	µg / m^3	188.3
03.	December	µg / m^3	193.8
04.	January	µg / m^3	197.2
05.	February	µg / m^3	198.3
06.	March	µg / m^3	191.8
Average		µg / m^3	**194.3**

HIRAKUD POWER

ANNEXURE - IV

FINAL EFFLUENT ANALYSIS

(October' 2018 to March' 2019)

INDUSTRIAL EFFLUENT (CPP):

Sl. No	PARAMETERS	Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
1	pH	7.35	7.2	7.35	7.3	7.57	7.5
2	Total Suspended Solids, mg/L	32	48.2	32	49.2	23	42.1
3	Total Dissolved Solids, mg/L	637	689.7	637	467.6	490	709.9
4	Oils & Grease, mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
5	Total Residual Chlorine as Cl, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6	Ammonical Nitrogen as N, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7	Total Kjeldahl Nitrogen as NH_3, mg/L	0.21	2.3	<0.3	2.7	<0.3	2.9
8	Free Ammonia as NH_3, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Biological Oxygen Demand (BOD) (3 days at 30°C), mg/L	6	7.2	6	12.3	<2	7.3
10	Chemical Oxygen Demand (COD), mg/L	20	18.5	20	23.5	17.6	18.6
11	Arsenic as As, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12	Mercury as Hg, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
13	Lead as Pb, mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
14	Cadmium as Cd, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
15	Hexavalent Chromium as Cr^{6+}, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
16	Total Chromium as Cr, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
17	Copper as Cu, mg/L	<0.1	<0.15	<0.15	<0.15	<0.02	<0.15
18	Zinc as Zn, mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
19	Selenium as Se, mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
20	Nickel as Ni, mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
21	Cyanide as CN, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
22	Fluoride as F, mg/L	1.1	0.8	1.1	0.7	1.2	0.4
23	Dissolved Phosphate as P, mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
24	Sulphide as S, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
25	Phennolic Compounds as C_6H_5OH, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
26	Manganese as Mn, mg/L	<0.02	<0.02	<0.02	<0.02	0.07	<0.02
27	Iron as Fe, mg/L	0.38	0.42	0.38	0.9	2	0.44
28	Vanadium as V, mg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

HIRAKUD POWER

ANNEXURE - V

AVERAGE CYCLE OF CONCENTRATION (COC)

(October' 2018 to March' 2019)

Sl. No.	Month	Unit	Results
01.	October	-	5.2
02.	November	-	5.2
03.	December	-	5.2
04.	January	-	5.3
05.	February	-	5.5
06.	March	-	5.6
	Average	-	**5.3**

HIRAKUD POWER

ANNEXURE - VI

AMBIENT AIR MONITORING, (CPP)

(October' 2018 to March' 2019)

PARTICULATE MATTER 10 (PM_{10}) : **Limit : 100.00 µg / m^3**

Location	Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
FHP Control Room Top	73.50	67.90	71.20	74.60	71.50	71.30
120^0 NNE (Near Hindalco Admn. Building)	48.30	48.20	50.20	53.10	56.30	56.70
240^0 SSE (Rajapada village)	52.90	53.70	45.40	43	47.20	48.10
360^0 W (Hindalco Club)	42	40.50	41.60	45.70	51.60	49.60
Jyoti Vihar, Burla	34.60	35	42.10	43.90	53	40.80
Ash Mound Road	63.50	62.30	68	74	66.90	75.50
Ash Mound area	72.30	72	70.50	76.30	69.40	78

SULPHUR DI-OXIDE (SO_2) : **Limit : 80.00 µg / m^3**

Location	Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
FHP Control Room Top	9.70	10.10	11.40	10.9	12.40	11.50
120^0 NNE (Near Hindalco Admn. Building)	9.30	9	10.10	11.20	9.80	10.90
240^0 SSE (Rajapada village)	7.20	8.20	8.90	9.50	7.50	9.20
360^0 W (Hindalco Club)	6.50	7.40	7.70	8	8.30	8.80
Jyoti Vihar, Burla	5.90	6.10	6.90	6.60	8.80	6.90
Ash Mound Road	8	7.50	8.20	9.10	9.70	9.70
Ash Mound area	9.20	8.80	9.40	8.80	11.50	9.30

HIRAKUD POWER

NITROGEN OXIDE (NO_X) : Limit : 80.00 µg / m^3

Location	Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
FHP Control Room Top	15.10	13.60	14.10	13.70	16	14
120^0 NNE (Near Hindalco Admn. Building)	13.50	12.40	12.90	13.50	12.50	12.50
240^0 SSE (Rajapada village)	10.90	11	10.40	11.30	10.20	12.70
360^0 W (Hindalco Club)	7.70	8.70	8.20	10.20	11.60	11.10
Jyoti Vihar, Burla	8.40	8.40	8	8.90	11.30	9
Ash Mound Road	11.80	10.70	10.50	11	12.90	12.20
Ash Mound area	11.50	11	11.60	10.60	13.70	11.70

PARTICULATE MATTER 2.5 ($PM_{2.5}$) : Limit : 60.00 µg / m^3

Location	Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
FHP Control Room Top	42.80	41.50	45.60	48	42.90	43.50
120^0 NNE (Near Hindalco Admn. Building)	32.50	34.80	36.40	40.40	35.40	39.20
240^0 SSE (Rajapada village)	31.70	36.20	31.10	29.90	24.90	32.70
360^0 W (Hindalco Club)	28.80	27.60	29	32.20	30.30	35.10
Jyoti Vihar, Burla	21.30	23.80	30.60	31.50	32.70	29.40
Ash Mound Road	44.10	44.70	42.70	44.30	40.20	56.20
Ash Mound area	48	46.10	44.30	46.10	42.10	49.50

HIRAKUD POWER

ANNEXURE - VII

STATUS OF UTILISATION OF FLY ASH AND BOTTOM ASH

(October' 2018 to March' 2019)

Sl. No	Description	Quantity
1	Quantity of fly ash generated (MT)	468142
2	Quantity of bottom ash generated (MT)	52016
	Total ash generated (MT)	520158
3	Supply to Brick Manufacturing Units (MT)	232126
4	Supply to Cement Plants (MT)	135853
5	Land Filling (MT)	44328
6	Utilization in Embankment / Dyke Raising (MT)	0
7	Utilization in other purposes (MT) (road making etc)	100627
	Total Ash Utilized (MT)	512934
8	% of total ash utilization	98.6

HIRAKUD POWER

ANNEXURE – VIII

PLANTATION DETAILS

YEAR	NO. OF SAPLINGS PLANTED	AREA COVERED (ACRE)	SPECIES PLANTED
Up to 2006 – 07	419865	250.12	
2007 – 08	33,000	12.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2008 – 09	25,200	16.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2009 – 10	31,000	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2010 – 11	30,000	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2011 – 12	25,200	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2012 – 13	25000	10.0	Neam, Karanja, Sisam, Krushna Chuda, Radha Chuda, Cassia Fistula, Alstonia & Kadamba
2013 – 14	30000	13.0	Neem, Karanja, Sisam, Cassia Fistula, Alstonia, Kadamba, Mango, Jamun etc
2014 – 15	12000	6.0	Neem, Karanja, Sisam, Cassia Fistula, Alstonia, Kadamba, Mango, Jamun etc
2015 – 16	10000	5.0	Bamboo, Sisoo, Karanja, Alstonia, Chhatiana, Mango, Jamun etc
2016 – 17	21175	10.6	Bamboo, Ficus, Alstonia, Champa, Plumeria Alva etc
2017 – 18	13500	6.75	Krushnachuda, Radhachuda, Acassia, Ficus, Jamun, Arjun, Ashok etc
2018 - 19	10500	5.25	Bamboo, Sisam, Cassia Fistula, Alstonia, Kadamba, Mango, Jamun
Total	**686440**	**364.72***	

* Including replenished area

HIRAKUD POWER

ANNEXURE - IX

ENVIRONMENTAL EXPENDITURE

(October' 2018 to March' 2019)

01.	Ash Disposal	:	Rs.	902.02	Lakh
02.	Operating & Maintenance cost of ESP, Ash Handling Plant including Ash Silo, CHP DES & other Pollution control measures	:	Rs.	142.33	Lakh
03.	Envt. Monitoring / Envt. Charges including Environment Management System	:	Rs.	36.97	Lakh
04.	Plantation Activities	:	Rs.	15.39	Lakh
05.	Aesthetics	:	Rs.	99.87	Lakh
06.	Community Development	:	Rs.	3.21	Lakh
	TOTAL	:	Rs.	**1199.79**	Lakh

HIRAKUD POWER

ANNEXURE - X

SULPHUR CONTENT IN FED COAL

(October' 2018 to March' 2019)

Sl. No.	Month	Unit	Results
01.	October	%	0.42
02.	November	%	0.39
03.	December	%	0.44
04.	January	%	0.38
05.	February	%	0.43
06.	March	%	0.44
	Average	%	**0.42**

HIRAKUD POWER

HIRAKUD POWER

ANNEXURE – XI

AMBIENT NOISE QUALITY DATA (CPP)

(October' 2018 to March' 2019)

Sl. No.	Location	Category	Standard* Day / Night	Distance / Direction w.r.t Plant	Noise Level (Day/Night) in dB(A)					
					Oct - 2018	NOV - 2018	DEC - 2018	JAN-2019	FEB - 2019	MAR - 2019
1.	Riverside Colony	Residential	55/45	0.8 km / SW	48/41.2	47/39.9	47/38.4	48/39.5	48/39.7	47/37.4
2.	Tarasinghpada	Residential	55/45	0.2 km / S	50/42.9	51/41.6	50/40.2	50/41.1	50/40.9	51/40.9
3.	Christianpada	Residential	55/45	0.1 km / S	51/42	53/42.1	53/43.8	52/42.3	51/42.4	51/41.5
4.	Power Plant Security Gate	Industrial	75/70	Plant Site	62/49.2	62/47.5	66/48.3	69/50.6	68/50.2	68/52.2
5.	Power Colony	Residential	55/45	0.4 km / NW	50/40.1	51/40.2	51/41.7	50/40.8	50/42.5	51/44.5

* Day Time : 0600 to 2200 Hrs * Night Time : 2200 to 0600 Hrs.

ANNEXURE - XII

OCCUPATIONAL HEALTH SURVEILLANCE

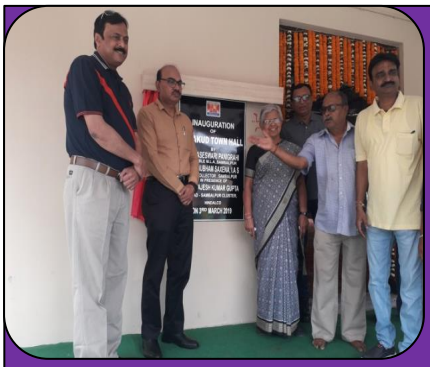
PRE EMPLOYMENT		
MONTH	SMELTER	POWER
Apr-18	NIL	NIL
May-18	04	03
Jun-18	03	NIL
Jul-18	01	NIL
Aug-18	01	NIL
Sep-18	01	NIL
Oct-18	NIL	NIL
Nov-18	NIL	NIL
Dec-18	NIL	NIL
Jan-19	01	NIL
Feb-19	NIL	NIL
Mar-19	01	NIL
TOTAL	**12**	**03**

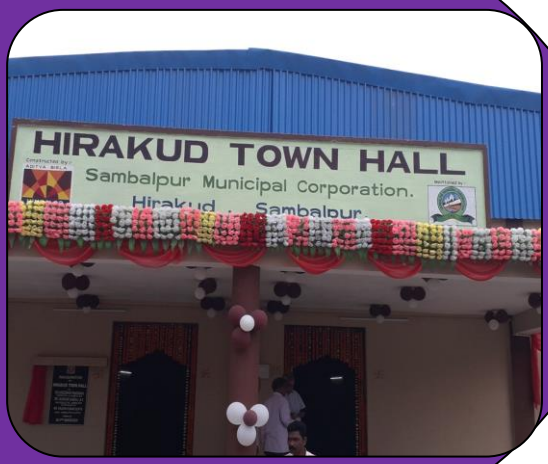
PERIODICAL MEDICAL CHECKUP OF PERMANANT EMPLOYEE		
MONTH	SMELTER	POWER
Apr-18	199	45
May-18	138	66
Jun-18	100	46
Jul-18	134	66
Aug-18	77	25
Sep-18	61	16
Oct-18	162	19
Nov-18	86	47
Dec-18	140	62
Jan-19	15	07
Feb-19	37	13
Mar-19	44	07
TOTAL	**1193**	**405**

PERIODICAL MEDICAL CHECKUP OF CONTRACTOR EMPLOYEE		
MONTH	SMELTER	POWER
Apr-18	194	108
May-18	164	325
Jun-18	150	177
Jul-18	206	187
Aug-18	366	127
Sep-18	200	77
Oct-18	268	147
Nov-18	670	129
Dec-18	864	09
Jan-19	340	223
Feb-19	290	254
Mar-19	355	151
TOTAL	**4067**	**1905**

Annual CSR Report

2018-19





Hindalco Industries Limited

Hirakud

CSR At a Glance : 2018-19

Hindalco,Hirakud works in 23 villages, which are under Dhankauda block of Sambalpur Districts in the state of Odisha. We have reached out to a rural Population of about of 119944 till March2019 (2018-19). During the financial year 2018-19 a total of Rs.272.87lakhs has been expensed for CSR activities where our contribution is Rs. 181.08 lakhs and Rs 88.86lakhs has been mobilized from Govt. & other sources. Our focused interventions are in the fields of education, health care, sustainable livelihood, infrastructure support and social causes.

EDUCATION:

1. Scholarship to Meritorious Students:

Under our educational support programme we have been providing Hindalco Community Scholarship to financially backward meritorious students for perusing higher education, who have passed High School Certificate Exam. Under this scholarship scheme the selected students are given a scholarship of Rs.500/- per month for a period of 2 years. This year 10 students were found eligible for receiving scholarship under our scheme. The selected students were invited along with their family members to receive their scholarship during the celebration of Independence Day 2018. Certificates were handed over to them during the award giving ceremony.

2. Desk Bench Support for School Students:

We have provided desk bench support to 4 schools near our periphery villages. The school committee and the Dist. Administration requested us to provide support for the school where grown up students of high school were sitting on the floor in class room. We have provided necessary number of desk- bench for all the students of the school, which were handed over to the school in a function. We have coordinated the entire programme.

3. Children's Day at Kalpataru Sevashram:

"Children's Day", a day dedicated to the children is observed as an event across the country to celebrate childhood and promote awareness about children's welfare. Children's Day is a day for children to be engaged in fun and frolic. As a part of our CSR initiatives we have oragnised a Childrens Day celebration programme for the childrens of Kalapataru Sevashram, Larpank, where students as well as staff from Aditya Birla Skill Foundation,Sambalpur also participated. Gifts, chocolates, study materials were distributed to all the inhabitants of the Ashram, during the programme.

4. We have provided support for Block level Science Exhibition for education development.
5. Mo School Abhiyan awareness was organised at Govt High School Hirakud.

Our investment in Education: Till 31st March 2019 the company has spent 15.53 lakhs in Educational activities and Rs. 4.80 lakhs mobilized from Govt& other sources to reach 5196 numbers of beneficiaries in the area.

HEALTH CARE:

6. Free Specialist OPD Clinic at Govt Hospital Hirakud:

As part of our Specialized Medical service programme for the community people, we are running an OPD clinic at Govt Hospital Hirakud. A total of 1630 patients availed the services of the Specialist Doctors of Medicine and Cardiology from Burla.

7. Immunisation Programmes:

We have been providing logistic support to the Govt. Hospital, Hirakud for extending the immunization programme to the nearby rural areas. A total 2561 babies were covered under the programme.

8. Family Planning camp at Hirakud:

Under our family planning support programme we extend our logistic supports to Govt. Hospital Hirakud for organising sterilization camps from time to time. This year 5camps were organised at Govt. Hospital, Hirakud in which all necessary supports including nutritional food kit to operatees were provided by us to make the programme successful. In Total 96 cases were operated during this year.

9. Training Programme on Adolescent Health Care :

To create awareness among adolescent girls, we have organised awareness programmes for adolescent girls along with their mothers at nearby villages. The awareness sessions were conducted by the resource persons from DSWO office, Sambalpur.

10.Eye Screening & Cataract Operation Camp:

We have organized cataract screening / operation camps for the rural poor people of nearby areas. The screening tests were organised at Mohamadpur ,Saplahara&Hirakud. During the camps a total of 138 patients have registered for screening and out of them 44 patients have undergone with cataract operation. The operations were done at VIMSAR Hospital, Burla by a team of Specialist Eye surgeons. We have extended all necessary supports for the programme.

11.Jalchhatra facility for Community people:

During summers, temperature in our area remains very high including heat wave blowing most of the time in the day. Availability of drinking water during the peak hours to the commuters is a great respite to them. we have arranged two stalls to distribute curd-water at strategic locations for the benefit of the commuters. These stalls served the commuters every day till the monsoon breaks in our area and temperature comes down. Many people have availed the facility and have appreciated our initiatives.

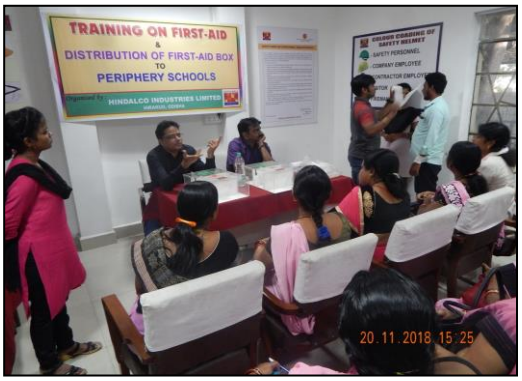
12.Pulse Polio immunization programme:

Two rounds of Pulse Polio immunization programme were conducted at 24 booths under Hirakud Govt. Hospital. All necessary supports were provided by HINDALCO to make the programme successful. On the subsequent two days door-to-door campaign was organized with the help of women SHG members, to identify the left out children and administer oral dose. Through the 24 booths a total of 6860 babies were given oral polio dose.

13.Skill orientation and Certification programme for Street Food Vendors:

To develop the awareness level among Street Food Vendors on “Food Safety & Hygiene”, we have organised a six days training programme at Hirakud . The training programme was organised in association with the “State Institute of Hotel Management” Bolangir. Govt. of India. The programme was a stipendiary training programme sponsored by Government. A total of 25 street food vendors participated in the six day long training programme. On successful completion of the training, Certificates are provided to the participants by the institute.

14.First Aid Training cum Distribution of First Aid Boxes to Schools



We have distributed First-Aid boxes to near by 14 schools of Hirakud periphery areas. Before distribution of First-Aid boxes a training programme was organised for the teachers on proper use & maintainance of First-Aid boxes. Our company doctor conducted the training session. This first aid box will help school students for First-Aid treatment.

15.Detection Camp for Differently Able:

In association with Dist Administration, Sambalpur we have organised a detection camp of Differently Able persons at Hirakud. A total of 64 patients have registered and out of them 57 patients have been shortlisted under different types of disable category. All the Govt facilities under the law will be provided to them by Government of Odisha. These facilities along with other materials required for them will be distributed in another camp. The programme was supported by specialist doctors of VIMSAR and District Head Quarter Hospital, Sambalpur.

16.Blood Grouping Camp:

We have organized Blood grouping camp for the school children of Govt. Girls High School and Sarswati Sishu Vidya Mandir and Gadmunda U.P.M.E school and High School. During the camp blood sample of 783 students were examined for grouping. Blood-grouping cards have been issued to each student after the blood grouping test

17. TubeWell For Community:

Availability of safe drinking has remained to be a problem in many of the areas in our periphery. On the request of the villagers and subsequent advice from the district administration we have provided bore wells in Jhankarpada, Hirakud, Bhutapara villages for making safe drinking water available to the community people

Our investment in Health Care: Till 31st March 2019 the company has spent Rs. 9.02 lakhs in Health care activities and Rs. 53.70 lakhs mobilized from Govt& other sources to reach 43975 numbers of beneficiaries in Health & Sanitation activities.

Sustainable Livelihood:

18.Tailoring Training Programme:

Tailoring Training Centers are completed with practical exams at Labour Colony Hirakud and Biharipada. A total of 49 members have completed the training in four batches for the six month course. It will help in capacity building of the trainees to start ventures for income generation activities.

19.Training on Capacity Building for SHGs:

To empower the local women, we extend our helping hand for promotion & self reliance of SHGs under our Sustainable Livelihood activities. For encouraging them in their group activities, we are regularly monitoring their routine meetings, bank deposits, timely loan repayment and involvement in income generation activities. This year we have organised capacity building training on Record keeping and register distribution rogramme for all the SHG groups. The resource persons from ICDS attended and interacted with SHG mebers regarding their issues. SHG members participated in the discussion and got their queries cleared.

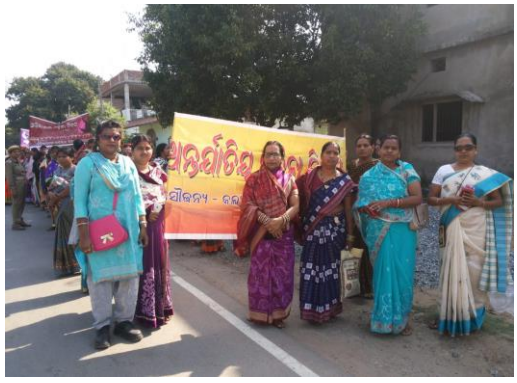
20. Plantation at Community Places:

A mass plantation programme was organised at the village temple in Nuajamada village. Many people including a large numbers of women participated and planted the saplings. A meeting was also organised where the importance of plantation and ensuring its survival was explained to them. Members present in the meeting promised to take care of the plant so that the surrounding will be developed as a green belt.

21. Seeds Distribution Programme:

Agriculture and Horticulture are one of the primary occupations of the people belonging to this locality. As a part of our sustainable livelihood programme we are organizing various agricultural & Horticultural support programmes for the rural farmers and SHG members of our periphery villages. During this month we have distributed hybrid vegetable seeds like Cowpeas, Okra, Cucumber, Bitter Gourd and Beans cluster to the women SHG members and rural farmers in our periphery villages (Nuagujatal, Nuajamada, Mahammadpur, Dengimachha and Budhakanta) to help the beneficiaries to undertake vegetable cultivation.

22. Celebration of International Women's Day:



We are working on women empowerment for helping in uplift of women folk socially and economically. On the occasion of the International women's day on 8th March, a rally was organised among the SHG members of Hirakud. More than 300 women SHG members joined the rally and subsequently a meeting was organised at Hindalco Community center in which the importance of women's day celebration was narrated by Guests.

23. Live stock Heath Care Camp:

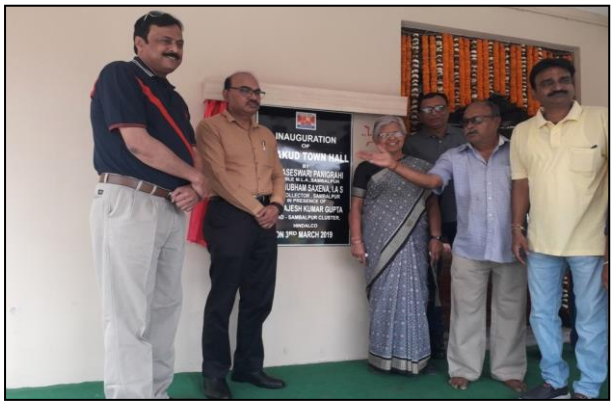


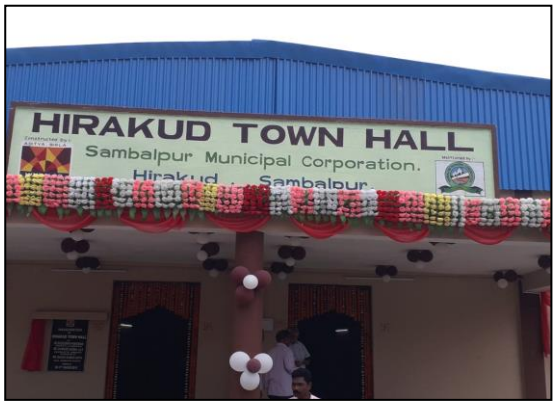
We have organized a Free Live Stock Health Care Camp at Hirakud in association with District Veterinary Dept., Sambalpur at Kalupada Hirakud. During the camp a total of 75 animals(cow) were vaccinated for the controll of Theileriosis disease which harms to the live stocks. The veterinary doctors along with their team, have attended in the camp, provided vaccines and aware the livestock owners on the cares to be taken to prevent different diseases affecting the live stocks.

Our investment in Sustainable Livelihoods: Till 31st March 2019 the company has spent Rs.3.96lakhs in Sustainable Livelihoods activities and additionally mobilized Rs. 1.56 lakhs from Govt. and other sources to reach 1598numbers of beneficiaries in the area.

Infrastructure Development:

24.Town Hall at Hirakud:





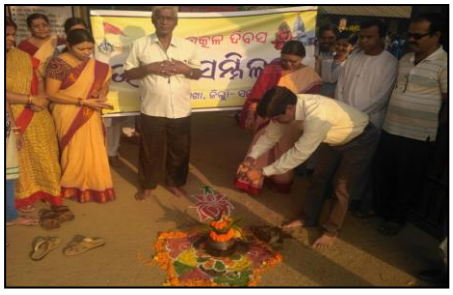
The Hirakud Townhall (500 seated) constructed by us was inaugurated and handed over to Sambalpur Municipal Corporation in this month. The hall was inaugurated by the Sambalpur MLA Dr. Raseswari Panigrahi on 3rd March 2019 in presence of our Cluster Head Mr. R.K. Gupta and SMC Commissioner Mr. Bhanja. There was not a big Hall at Hirakud for organising public meetings, function and other occasions. So by the request of MLA & Dist Administration the project was started in the August 2017 and Completed in Feb 2019. This is a project from our CSR fund and will help for the local community at a large. During the inauguration programme other senior officials of our company, Senior citizens, SHG Members and other Govt. Staffs and Local community people were present and express their happiness towards Hindalco.

25. We have newly constructed the bathing Ghats and changing rooms for the convenience of the villagers at Nuagujatal and Dengimacha village.
26. Cow shed at kalapataru ashram (colur painting & Civil work (Bricks s work & curing work,).
27. We have supported the Temple renovation work at Hirakud.
28. Construction of boundary wall
29. Repairing of school building of Hirakhanda school
30. Renovation of School Toilet at KGBV
31. SDPO office development
32. Construction of Senior Citizen Room at Hirakud.
33. Funeral Shed Tarasingh pada
34. Individual Toilet for 25 households
35. community toilets at Two villages

Our investment in Village Infrastructure development : Till 31st March 2019 the company has spent Rs. 139.1 lakhs in Village infrastructure development activities and additionally mobilised Rs. 17.90 lakhs from Govt. and beneficiaries to reach 58480 number of beneficiaries in the area.

Social Causes & Awareness:

36. Celebration of Utkal Divas:



UTKAL DIVAS was celebrated on 1st April-2018 at Hirakud in association with the UtkalSamilani, Hirakud to commemorate the sacrifices made by our eminent leaders for the formation of a separate province “ODISHA” in 1936. On that day a massive rally of school children was organized atHirakud. Community Centre where

performances were given by students of nearby educational institutions. Senior officials of Hindalco along with eminent speakers from academic field participated in the programme and deliberated on the importance of the day. A souvenir was also released on this occasion by the UtkalSamilani, Hirakud.

37. RangoliCompetetion among SHG members:

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To promote the cultural activities as well as to uphold our old traditional culture, we use to organized a rangolicompetetion among SHG members on the occasion of Diwali. This year 48 women from different SHG's participated in this programme. The rangolis were evaluated by judges and Prizes were distributed to the winners by the guests at the end of the competition. The newly joined GETs were present during the function to encourage the participants and experience the felling of working with the SHG members.

38.Sitar Donated to a Blind Girl:

To encourage a blind girl of Hirakud to peruse her carrier in the field of music, who is now studing at Utkal Sangeet Mahavidayalaya , Bhubaneswar, we have donated a sitar by organising a function at our Club. The Sitar was handed over to the Girl by the Spl. Land Acquisition Officer, Mr. Sitanshu Tripathy, along with Mr Arun Podar, Head Power Plant, Mr. Krishna Padhy, Head-HR and the executives and members of Divyanshi Mahila Mandal of Riverside Colony. During the function Manager, SBI, Hirakud , Principal, Aditya Residential School and many senior officers of our plants were also present.

39.Awareness on Pradhan Mantri Ujjwala Yojana:

The Pradhan Mantri Ujjwala Yojana (PMUY) was lunched in the year 2016.The objective of the scheme was to provide LPG connections to the women of below poverty line (BPL) households. The Yojana was formulated to ensure that no rural or below-poverty-line (BPL) family or individual would have to resort of cooking on wood, charcoal, cow dung, or other unhealthy fuel. As women's are collecting firewoods for their homely cooking purposes, they are spending lots of time. Whereas LPG saves the cooking time, which helps them to spend their time in income generation activities as well as other productive works. To appraise the prospective benificiaries of the plan, we have organised an awareness programme at Fast Gap village for 55 women members. The session was conducted by resource persons of Bharat Gas, Sambalpur.

40.Relief for Flood affected People :

Heavy rain created a flood like situation in the low lying areas of Hirakud. People from the low lying areas were shifted to safer places. At the request of the District Administration we have arranged food for the flood affected people. Cooked food were distributed for tow days to more than 1000 people through the volunteers of SMC, Lion's Club, and different village youth clubs. The Collector & the local MLA also visited this distribution centers.

41.Daan Utsav at Hirakud:

In association With Divyanshi Mahila Mandal, Hindalco Riverside Colony, Hirakud, we have organised Daan Utsav at Hirakud. Umbrellas were distributed to weaker section of contract workmen, in a function organised at Hindalco Club. Senior officers in the leadership of Cluster Head Mr. R.K.Gupta and President and members of Divyanshi Mahila Manadal distributed the umbrella to the beneficiaries.

42. Swachh Bharat Abhiyan activities:

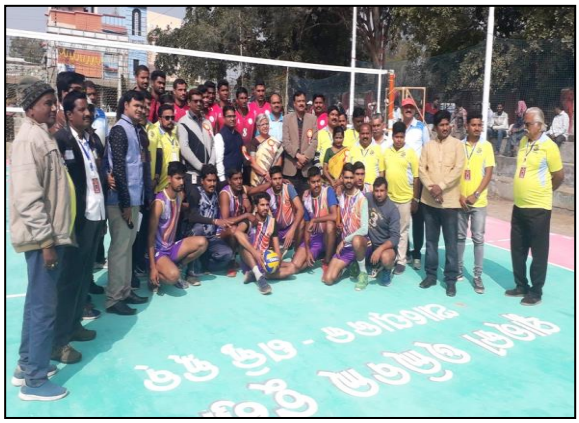
To promote cleanliness drive among the society we have organised Swachh Bharat Abhiyan in our near by villages during the month of September. Various events were organised among School children, SHG members and village youths . All the participants took a pledge on cleanliness and launched cleanliness drive in their respective areas. Swachhata rallies were conducted by school children chanting with various slogans in the street of their respective villages. Training was also given to the students on the procedure of proper hand wash during the awareness programme. Our SHG members participated in this campaign and make cleanliness drive in their respective villages. We have completed 30 nos of individual toilets and 2 Community Toilets for the community people in association with Sambalpur Municipal Corporation under our Swachhata Abhiyan programme. We have a programme to help the BPL families in our periphery to construct another 70 individual toilets.

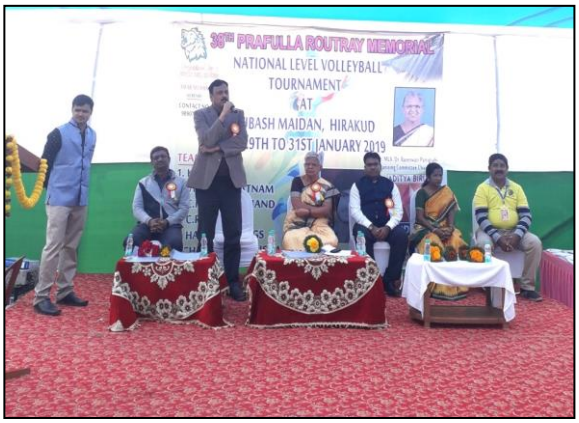
43.Visitors interaction with CSR beneficiaries:

Ms. Sheri Wagstaff and Ms. Lise Doutre visited Hirakud during Cluster Summit in Nov 2018. During their visit, accompanied by the office bearers and members of the Divyanshi Mahila Mandal have visited different CSR field

to see some of the programme undertaken in the nearby villages under our initiative. They have interacted with the beneficiaries to understand our role in making the programme successful and the impact of the progrmmes for the beneficiaries. During their visit they have seen Income generation production center and the Kalpataru Sevashram. In the Ashram they took keen interest to interact with the childerns and replied to a number of questions raised by the childrens. Our CSR team along with Divyanshi Mahila Mandal team jointly coordinated the programme to make it success.

44.Volley Ball Tournament:



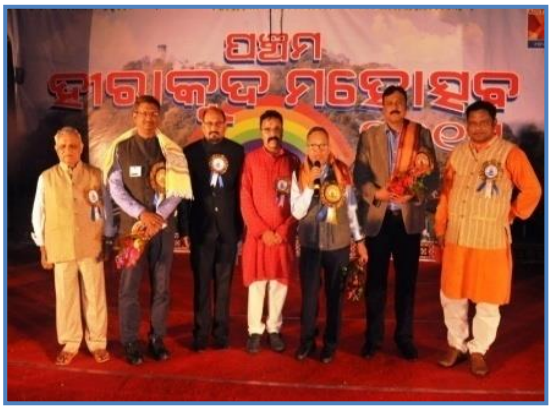


We have supported for organising 38th Prafulla Routray Memorial Three Days Volley Ball Tournament at the at Subash Maidan from 29th to 31st Januaray 2019. Teams from Visakhapatanam, Chennai, Delhi , Haryana, Jharkhand and Odisha with national level players have participated in the event. All the matches were conducted by judges of national repute from Indian Volley Ball Federation. The tournament was inaugurated by Sambalpur DFO Mr. Sanjeet Kumar, as the Chief Guest. Sambalpur M.L.A, our HR Head & Smelter Plant Head joined as Guest of Honour during the Inauguration Programme. A large audience along with many of our senior officers, officials of Hirakud Atheletic Association and Shakti Club were also present. All the matches were of high voltage with jam packed audiences. In the closing ceremony Prizes were given away to the Winners, Runners Up and best individual performers in different field, where Mr. Satyabrata Bhoi, I.G, Northern Division was the Chief Gust with Sambalpur MLA, our HR Head and Power Plant Head as the Guest of honor.

45.Gadmunda Cluster Level School Sports:

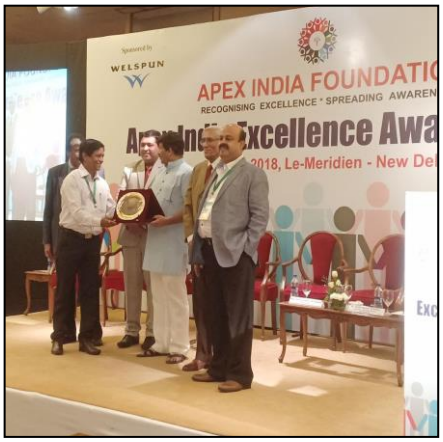
Gadmunda Cluster Level School Annual Sports meet 2018-19 , war organised with our support ,at the Dengimacha PUP School playground on 18th Jan 2019. Students from 9 schools of Gadmunda cluster have participated in the meet. This has brought students from all the school to compete among themselves with sportsman spirit. Our entire team was present during the day to coordinate each and every activities. Our Operation Head was the chief guest of the function who declared the sports open. In the closing ceremony the Block Education Officer and GM-IR were present as guest, who gave away the prizes to the winners along with other dignitaries present during the function. Teachers from all the schools along with their support staffs were also present to help in the successful completion of the programme.

46. Support To Hirakud Mahotsav :



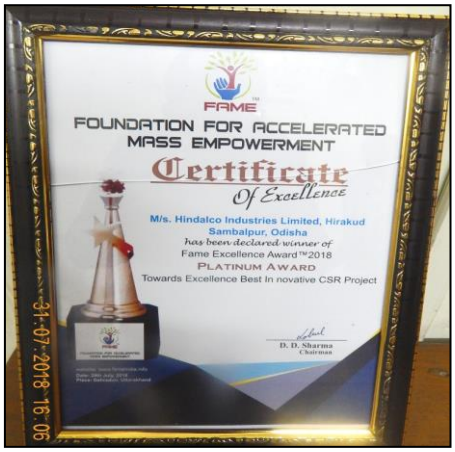
5th Hirakud Mahostav was organised in Hirakud where cultural programmes were organised to represent the art & culture of different part of Odisha. In the venue of the Mahostav stalls were opened for display/ sale of products by different agencies, where SHGs promoted by us also participated. Hindalco have extended, both financial as well as other logistic support for the success of the Mahostav.

47.Apex India CSR Excellence Gold award 2017 to Hindalco Hirakud :



Hindalco Hirakud Complex has woned the CSR Execellence Award in Gold category from APEX India Foundation for the year 2017-18 in the field of Sustainable Livelihood & Women Empowerment. The award was decided by a group of jury members on the basis of the documents submitted by us and the presentation made in front of the panel. The award was presented on 29th May 2018 at a special function organised at New Delhi.

48.FAME EXCELLENCE Platinum Award:



Hindalco Hirakud Complex has woned the “Fame CSR Execellence Award” in Platinum category from Fame India Foundation for the year 2017-18 in the field of “Best Innovative CSR Project”. The award was decided by a group of jury members on the basis of the documents submitted by us and the presentation. The award was presented in a function organised at Dehradun on 29th July 2018.

Our investment in Social Intervention: Till 31st March 2019 the company has spent Rs. 13.47 lakhs in Social activities to reach 10695 numbers of beneficiaries in the area and total 10.90 lakhs mobilized from Govt. & other Sources.

AMOUNT SPENT DURING APRIL 2018 TO MARCH 2019

Area of Intervention	Beneficiaries	Hindalco	Govt.& Others	Total
Education	5196	15.53	4.80	20.33
Health Care	43975	9.02	53.7	62.72
Sustainable Livelihood	1598	3.96	1.56	5.52
Infrastructure	58480	139.1	17.90	157.00
Social Empowerment	10695	13.47	10.90	24.37
Total	**119944**	**181.08**	**88.86**	**269.94**