

**Compliance status of conditions imposed in Environmental Clearance for 1.0 MTPA Refinery & 50 MW co-generation Power Plant Vide letter No. J-11011/76/94-IA.II (I), dated 27.09.1995**

**Project Name : UTKAL ALUMINA INTERNATIONAL LTD.**  
**Period of Compliance : October 2016 to March 2017.**

Sl. No.	Imposed Condition	Compliance Status
I	The project authorities must strictly adhere to the stipulations laid down by the State Pollution Control Board and the State Govt.	Agreed.
II	Any expansion of the plant, either with the existing product mix or new products can be taken up only with the prior approval of this Ministry.	Noted & Agreed
III	The gaseous and particulate emissions from various process units should conform to MINAS or standards prescribed by the concerned authorities, from time to time. At no time the emissions level should go beyond the stipulated standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency.	Noted & Agreed
IV	At least four ambient air quality monitoring stations should be set up in the down wind direction as well as where maximum ground level concentration is anticipated in consultation with the State Pollution Control Board. Monitoring network should be designed taking into account land use pattern, location of stacks, meteorological and topographic features including the results of existing monitored data. Stacks of the plant must be provided with automatic stack emission monitoring equipment. Stack emissions and ambient air quality data should be submitted to the State Pollution Control Board once in three months and to this Ministry once in six months, along with statistical analysis and interpretation.	Ambient air quality is being monitored by establishing six stations considering predominant wind direction and maximum ground level concentration in consultation with OSPCB. The monitored data is being submitted to Ministry including its Regional Office at Bhubaneswar and OSPCB once in six months. The monitored results during the period October 2016 to March 2017 are enclosed as <b>ANNEXURE- I</b> .  Continuous emission monitoring system in all the stacks of CPP and Calciners of Refinery have been installed. The monitored data is being submitted to the State Pollution Control Board monthly and to the Ministry's Regional Office at Bhubaneswar and CPCB once in six months. The monitored results during the period October 2016 to March 2017 is enclosed as <b>ANNEXURE- II</b> . Further, the online monitoring systems have been



		connected with the server of SPCB & CPCB for continuous transmissions of the data through the RTDAS.
V	There should not be any change in the stack design without the prior approval of the State Pollution Control Board.	Noted & Agreed.
VI	Liquid effluent should be properly treated and the treated effluent conforming to the prescribed standards should be utilized for green belt development to the maximum extent possible.	The plant operates on a Zero Discharge philosophy. All the process effluents are alkaline in nature and collected in caustic pond through a dedicated RCC drainage system. All this process water is fully recycled and used in the process there by reducing fresh water consumption. Domestic waste water of plant is being treated in STP and the treated water is being used for green belt development.
VII	Adequate number of influent and effluent monitoring stations should be setup in consultation with the State Pollution Control Board. If the effluent quality at any time, exceeds the standards prescribed, the corresponding units of the plant which are contributing to the excessive pollution load shall be immediately stopped from the operation till the quality of pollutants discharged from the units are brought down to the required levels.	Monitoring of influent and effluent is being carried by installing stations at various locations. As the plant operates on Zero Discharge philosophy, all the process effluents are collected and recycled back to the process. Hence, monitoring is done only for storm water in consultation with OSPCB at the discharge location.
VIII	Effluents from fly ash and red mud ponds should be treated and recycled to the maximum possible extent. Adequate number of wells around these ponds should be dug for ground water quality monitoring.	Provision is made to collect the supernatant water of red mud pond through decant ponds and recycled in process and provision is made to reuse the waste water of ash pond in the same process. Ground water quality around the said ponds are being monitored and the results of the same during the period October 2016 to March 2017 is attached herewith as <b>ANNEXURE- III</b> .
IX	The project authorities should ensure that villages located around the plant within 10km radius should have no pollution problem due to operation of the plant and other related activities.	Provisions are made to control all pollution sources by installing modern pollution control devices and management systems. Moreover, strict monitoring and precautionary measures are being taken to avoid such situations.
X	Solid waste disposal sites (red mud, ETP sludge, fly ash etc.) should be made impervious to avoid ground water contamination. These sites should have the approval of the State Pollution Control Board.	Solid waste disposal sites like red mud pond and fly ash pond are made impervious by providing clay & 1.5 mm HDPE lining to avoid ground water contamination. The construction of red mud pond and ash pond were made as per the design prescribed by CPCB. The design and drawing of red mud pond has been approved by State Pollution



		Control Board vide their Letter No. 19306/IND-IV-HW-931 dated 30.08.2012.
XI	Hazardous substances and wastes should be handled as per the Hazardous wastes (Management and Handling) Rules, 1989 of the EPA, 1986.	Hazardous wastes such as used oil, cotton wastes of workshop etc. are being collected and handled as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
XII	Fugitive emissions of dust / mists, vapours, fumes etc. should be controlled and in-plant monitoring of contaminants should be done regularly.	Bag filters, wet scrubbers, dry fog system and water sprinkling systems are installed at suitable locations to control fugitive emissions of dust / mists, vapours, fumes etc. and monitoring of fugitive emission is being carried out regularly.
XIII	A workable plan for fly ash and red mud utilization should be prepared and submitted to this Ministry for approval. At least 25% of solid wastes should be utilized in the first year of the commissioning of the plant and thereby increasing by 10% every year so that by the end of the 9 <sup>th</sup> year full utilization may take place.	Fly Ash utilization plan has been prepared and submitted to OSPCB. Red mud utilization is remaining a challenge for industries across the globe. As a responsible corporate, we have aligned with institutes of repute like IIT Mumbai, IMMT Bhubaneswar to work in this field. As a way forward we are in the process of installation of state of the art Red Mud Filtration unit to filter the wet red mud & dispose it to the pond. This will reduce the land usage by 20-30% over the next few years. This dry red mud usability in the cement industry is in the process of finalisation.
XIV	Lay out map (refinery complex, township and hill slopes) indicating : (a) area where plantation has already been done, rate of survival, total number of trees existing and measurement in hectare: (b) area to be covered under plantation: and (c) additional area under the control of industry which is not being used for any activity should be submitted to this Ministry by August, 1995 along with details on year -wise future green belt development plan, amount earmarked for the same and nurseries developed to be developed to cater the needs of such activities.	The lay out map showing plantation already taken up and to be taken up in future in different project area has been submitted vide our letter No. UAIL/EN V2012-13/43 dt17.11.2012. An area of 320 hectares have been covered by massive plantation around plant premises, railway corridor, red mud pond, ash pond, infrastructural areas up to the year 2016. The same will be continued in coming years also.
XV	A study should be carried out to assess whether the local environment can assimilate satisfactorily the gaseous emissions and the liquid and solid discharges from the plant. The scope of study should be finalised in consultation with the state Pollution Control Board, Central Pollution Board, and this Ministry and the report be made available by June, 1996.	EIL was engaged to carry out this work on 3 <sup>rd</sup> May 2000. The scope of study was finalized in consultation with the state Pollution Control Board, Central Pollution Board, and MoEF. The study was carried out by engaging three renowned agencies: 1. Indira Gandhi Institute of Development, Research for Socio-economic study, (IGIDR), Mumbai,



		<p>2. Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, for Biological environment study and</p> <p>3. Engineers India Limited (EIL) Delhi, for the balance study and for coordinating and compilation of the study.</p> <p>The final report was received on 24<sup>th</sup> May 2002 and submitted to MoEF in Aug 2002.</p>
XVI	Investorisation of pollution sources and loads in terms of liquid, gases and solid wastes should be carried out and report submitted to State Pollution Control Board/ Ministry of Environment and Forests once in six months regularly.	Complied.
XVII	Biological monitoring of flora must be started within and in the vicinity of the plant. A study on impact on vegetation due to emissions of pollutants should be carried and report submitted to this Ministry.	The result of biological monitoring of flora within and in the vicinity of the plant area has been submitted vide our letter No. UAIL/ENV/2012-13/43 dated 17.11.2012.
XVIII	The proposed acquisition of land for the entire facilities is very much on the higher side and has to be reduced based on actual requirement of land for plant, township, and other facilities including green belt. A revised lay out and land estimate should be submitted to this Ministry by October, 1995.	The expansion of the project accorded vide letter no J-11011/753/2007-IA II (I), dated 29.01.2008 does not require any additional land.
XIX	A copy of Rehabilitation plan for the families to be shifted from the nearby villages should be provided by Oct'1995.	The same has been submitted vide our letter No. UAIL/ENV/2012-13/43 dated 17.11.2012.
XX	Feasibility of using low sulphur fuel other than oil in the Calciner be explored and report submitted to this Ministry by October, 1995.	The low sulphur fuel oil as provided by HPCL/IOCL is being used in the Calciners.
XXI	The project authorities must ensure regular medical examination for occupational diseases.	<p>1. Pre-employment Health check-up is being carried out for all the employees at the time of joining.</p> <p>2. As per The Factories Act – 1948 periodical Health check-up is being carried out on annual basis for all the employees and records are maintained and submitted to the Director of Factories &amp; Boilers.</p>
XXII	The project authority should set up laboratory facilities for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the Chief Executive.	Presently monitoring of all required environmental parameters is being carried out by engaging MoEF recognized laboratory under the supervision of competent technical personnel. The competent personnel report to the Unit.



		Head.
XXIII	A separate Environment Management Cell with suitably qualified people to carry out various functions should be set up under the control of Sr. Executive, who will report directly to the Head of organization.	An independent environment management cell with qualified personnel has been established for monitoring of environmental parameters and implementation of effective control measures and is controlled by a senior executive who reports to the Unit Head directly.
XXIV	The funds earmarked for the environmental protection measures should not be diverted for other purposes and year-wise expenditure should be reported to this Ministry.	The funds earmarked has been utilized in implementation of conditions laid down for protection of environment without diverting for any other purpose. The expenditure incurred during the financial year 2016-17 is enclosed in ANNEXURE-V.
XXV	The project authorities must obtain forestry clearance as required under the Forest (Conservation) Act, 1980.	Forest clearances have been obtained under F.C.Act for 102.0 ha of forest land vide letter (No.8-43/96-FC) dated 19 April 1999 and 2.335 ha has been obtained vide letter No. 8-43/1996-FC (pt) dated 26.09.2014.
XXVI	A plan should be prepared for implementation in consultation with the state Department of Environment to reduce siltation of Indravati river.	A study on controlling siltation of Indravati River on account of the Project activities has already been carried out by CWPRS, Pune, and M/s GMS Power packs, Bhubaneswar. All the measures identified therein implemented.
XXVII	A green belt all around the plant and ash dump / red mud disposal area should be raised by selecting local species. At least 1500 plants per hectare should be planted.	Greenbelt around plant premises, railway corridor, red mud pond, ash pond, infrastructural areas have been developed by planting in 320 hectares of land up to the year 2016. The same will be continued in coming years also.





**STATUS OF CONDITIONS IMPOSED IN ENVIRONMENTAL CLEARANCE FOR 3 MTPA REFINERY & 3X30 MW CO-GENERATION POWER PLANT VIDE LETTER NO. J-11011/753/2007-IA II (I), DATED 29.01.2008.**

**Project Name : UTKAL ALUMINA INTERNATIONAL LTD.**  
**Period of Compliance : October 2016 to March 2017.**

Sl. No.	Imposed Conditions	Compliance Status									
<b>A.SPECIFIC CONDITIONS:</b>											
1	<p>Adequate air pollution control measures shall be provided to control particulate matter Emissions within 50 mg/Nm<sup>3</sup>. On-line monitoring of particulate matter shall be carried out and reports submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OSPCB. The height of the stacks shall be as per the CPCB guidelines.</p>	<p>The following air pollution control devices have been installed at suitable locations.</p> <table border="1" data-bbox="863 667 1485 1014"> <thead> <tr> <th>Sl No.</th> <th>Location</th> <th>Control Device Details</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Power plant (Boilers- 1,2,3)</td> <td>ESP attached to each boiler &amp; connected to the 150 meter height multi-flue-stack.</td> </tr> <tr> <td>2</td> <td>Calcination plant(A &amp; B)</td> <td>ESP attached to each Calciner &amp; connected to 136 meter height stack.</td> </tr> </tbody> </table> <p>Continuous emission monitoring systems in all the stacks of CPP and Calciners of Refinery have been installed. The monitored data is being submitted to the State Pollution Control Board and to the Ministry's Regional Office at Bhubaneswar and CPCB once in six months. The monitored results during the period October 2016 to March 2017 is enclosed as <b>ANNEXURE- II</b>. Further, the continuous emission monitoring systems have been connected with the servers of SPCB &amp; CPCB for continuous data transmissions through RTDAS.</p>	Sl No.	Location	Control Device Details	1	Power plant (Boilers- 1,2,3)	ESP attached to each boiler & connected to the 150 meter height multi-flue-stack.	2	Calcination plant(A & B)	ESP attached to each Calciner & connected to 136 meter height stack.
Sl No.	Location	Control Device Details									
1	Power plant (Boilers- 1,2,3)	ESP attached to each boiler & connected to the 150 meter height multi-flue-stack.									
2	Calcination plant(A & B)	ESP attached to each Calciner & connected to 136 meter height stack.									
2	<p>The company shall install electrostatic precipitator (ESP) to power boilers to control emissions within 50 mg/Nm<sup>3</sup>.The emissions shall conform to the standards prescribed by the Ministry/CPCB/OSPCB whichever is more stringent. Fugitive emission from red mud disposal area shall be controlled by mud stacking and water sprinkling. Bag filters with dust collectors shall be provided to Alumina loading area, bauxite crushing area, coal &amp; ash handling areas and lime handling area to control the particulate emissions. Dust suppression and dry fog system shall be provided in Bauxite and coal handling areas. Garland drain shall be created at red mud and fly ash disposal areas.</p>	<p>Electrostatic precipitator (ESPs) designed to control particulate matter emissions within 50 mg/Nm<sup>3</sup> and connected to the three boilers of the Power Plant with online monitoring system. The following provisions have been made to control fugitive emission:</p> <p>a) Mud slurry (60:40 ratio of solid: water) is being disposed following the HCSD technology, the discharge points are changed regularly to various locations of the red mud disposal area to keep the mud wet. Further, pressure filtration of mud has been installed and will be commissioned shortly which will help in compacting mud, reducing caustic level and moisture content up to 20 percent</p> <p>b) Bag filters at alumina loading area, coal crusher, bauxite crusher, ash handling area have been provided. Water spraying at Bauxite/coal handling area and wagon tippler with dry fog system at coal unloading area have</p>									

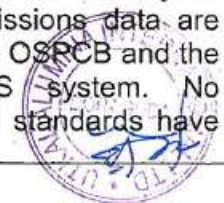
		<p>been provided.</p> <p>c) Wet scrubber at lime handling area has been provided along with bag filters.</p> <p>Garland drains around red mud pond and fly ash disposal area have been provided.</p>
3	The poly-aromatic hydrocarbons (PAH) shall be monitored quarterly & report is to be submitted regularly to the Ministry and its Regional Office at Bhubaneswar/CPCB/ OSPCB.	Complied. The monitored results during the period October 2016 to March 2017 of PAH is enclosed herewith as <b>ANNEXURE-I</b> .
4	Total water requirement from San River (Upstream of Indravati Reservoir) shall not exceed 22,330 m <sup>3</sup> /day as per the permission accorded by the Department of Water Resources, Govt. of Orissa. The wastewater shall be treated in ETP and reused in the process. 'Zero' discharge shall be adopted. Multi-effect evaporators shall be installed to recover water and recycle for process consumption to reduce the fresh consumption. The domestic wastewater shall be treated in the Sewage Treatment Plant (STP) and treated wastewater conforming to the standards for land application shall be reused for green belt development.	Till now, the water requirement has never exceeded 10,000 m <sup>3</sup> /day. The supernatant water of red mud pond, wash out of caustic handling area is being collected and reused in the process. As all the effluent of the plant is alkaline, the same is collected in a caustic pond through a dedicated RCC Darin. The scrubbed liquor of lime handling plant is being completely re- utilized in the same process. All provisions have been made to reuse the supernatant water of ash pond in the same ash slurry making process. Multi-effect evaporators are put into operation to recover and reuse the water. STP is in operation to treat domestic wastewater and the treated water is being reused for green belt development and horticulture. The plant operates in an Zero discharge philosophy.
5	Red mud, sand scales and lime grit shall be disposed-off in red mud disposal area. Red mud disposal shall be done as per the CPCB guidelines. HDPE lining shall be provided to avoid any leakage to the ground. Leachate collection facilities shall be provided to the secured landfill facility (SLF). Proper care shall be taken to ensure no run off or seepage from the red mud disposal site to natural drainage. The location and design of the landfill site shall be approved by the OSPCB as per Hazardous Wastes (Management and Handling) Rules, 2003. Efforts shall also be made to find out productive uses of red mud in brick and ceramic products etc. STP sludge shall be utilized as manure for green belt development. All the used oil and batteries shall be sold to the authorized recyclers/reprocessors.	<p>Red mud, sand scales are being disposed-off to red mud pond. Lime grit is being sold to the fly-ash brick manufacturers. Red mud is being disposed-off using High Concentration Slurry Disposal (HCSD) technology. HDPE lining has been provided in red mud pond. Leachate of the red mud pond is collected in a HDPE lined pond facility and the same is recycled to the process.</p> <p>Red mud pond has been constructed as per the design and drawing approved by State Pollution Control Board vide their Letter No. 19306/IND-IV-HW-931 dated 30.08.2012. The red mud pond is lined with clay &amp; 1.5 mm HDPE liner with sub-soil drainage collection &amp; reuse system, run-off drainage network and leachate collection facility. Red mud samples have been sent to various research laboratories like IMMT, ACC for its productive utilization. We are also working with IIT, Mumbai.</p> <p>STP sludge is being used as manure for plantation. Used oil and batteries are being sold to authorized recyclers/reprocessors.</p>
6	Regular ground water monitoring shall be carried out all around the fly ash and red mud disposal area by installing Piezometers in consultation with the OSPCB /SGWB /CGWB and data submitted to the Ministry' Regional Office	Monitoring of ground water in existing bore wells/ Piezometers around ash pond & red mud area is being carried out in each season and the monitored data during the period October 2016 to March 2017 is enclosed as <b>ANNEXURE- III</b> .



	and OSPCB.	
7	Fly ash shall be utilized as per Fly Ash Notification, 1999 and as amended in 2003. The industry shall also take steps to utilize ash to maximum extent by itself and shall provide all facilities to others potential users viz. cement and brick manufacturers.	Presently fly ash is being used to fill low lying areas within the plant premises, dyke height increase, road making and supply to brick manufacturing units. Current utilization is around 70% of total generation. The plant is situated at a remote place. There are only four fly ash brick manufacturing units around 20 km radius the plant and no cement industry exists within 150 km radius of the plant. However, we are exploring various other avenues for utilization of fly ash in the coming years.
8	Green belt of adequate width and density around the project site shall be developed in 338 ha out of total 1015.3 ha. (33 %) in consultation with the DFO as per the CPCB guidelines.	As on date, green belt have been developed over an area of 320 ha out of the targeted 338 ha, within plant premises, outside the plant, red mud pond area, ash pond area, railway corridor etc. The same program will be continued to achieve the target of 338 ha.
9	Prior permission and recommendations of the State Forest Department regarding impact of the proposed expansion of the Alumina Refinery on the Sirigurha R.F. (8.8 km. N), Balia Kharha R.F. (6.4 Km., ENE), Masimandi PF (2.5 km, S), Leliguma R.F. (9 km. ENE), Titigurha RF (10 Km, ESE) shall be obtained and recommendations suggested, if any, shall be implemented.	As per the EIA/EMP no major impact of the expansion was envisaged on the said R.Fs. However, funds have been deposited to CAMPA fund under FC Act for taking care of the impacts on Flora and Fauna.
10	All the environmental conditions stipulated for the existing Alumina Refinery Plant (1.0 MTPA) mentioned in the environment clearance letter accorded by the Ministry vide letter no. J-11011/76/94-IA-II (I) dated 27th September, 1995 shall be implemented satisfactorily in a time bound manner.	Agreed. Separate six monthly compliance report for the same has been submitted to the Regional Office of the Ministry.
11	This environmental clearance is subject to the outcome of the Court Case in W.P. No. 5697 of 2007 (Prfulla Samantray vs. Union of India and Others) pending in the Hon'ble High Court of Orissa.	Agreed. The matter is pending before the Hon'ble High Court of Orissa. The details of the case have already been submitted vide our letter No. UAIL/ENV/2014-15/56 dated 17.02.2015.

**B. GENERAL CONDITIONS**

1	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution Control Board (OSPCB) and the State Government	All the conditions stipulated by the State Pollution Control Board, Orissa are being effectively implemented and adhered to.
2	No expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Noted & Agreed
3	The gaseous emissions from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The OSPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emissions level shall go beyond the	Agreed. Gaseous emissions are being monitored online on continuous basis and the reports are being submitted to Regional office of the Ministry. In addition, continuously the emissions data are being sent to the servers of the OSPCB and the CPCB through the RTDAS system. No deviations from the prescribed standards have



	prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	been observed so far.
4	Adequate 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 <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the OSPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and OSPCB once in six months.	Ambient air quality is being monitored by establishing six nos. of AAQ stations considering pre-dominant wind direction and maximum ground level concentration in consultation with SPCB. In addition, four numbers of CAAQMS have also been installed to monitor the ambient air quality on continuous basis. Also, the CAAQMS data is being transmitted to OSPCB server through RTDAS. The monitored data is being submitted to Ministry including its Regional Office at Bhubaneswar and OSPCB once in six months. The monitored results for the period October 16 to March 2017 are enclosed as <b>ANNEXURE- I</b> .
5	In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. shall be provided and particulate matter from Bauxite transport and crushing shall be provided with highly efficient bag filters and covered conveyers and adequate water sprinkling shall be done.	Provision is made to control fugitive emission at Bauxite crushing, handling area by bag filters, dry fog system, covered conveyors and spillage collection/water spraying on roads and sprinkling on stockpiles.
6	Industrial wastewater should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended form time to time. The treated wastewater shall be recycled in the plant as well as utilization for plantation purposes.	<ol style="list-style-type: none"> <li>1. The supernatant water of red mud pond is being collected through decant wells and reused in process as it is.</li> <li>2. The spills and other caustic bearing process liquids are routed to the respective area sumps and recycled back to process.</li> <li>3. The storm water drainage network is connected to guard pond and reused in the process.</li> <li>4. The scrubbed liquor of lime handling plant is being completely re- utilized in the same process.</li> <li>5. Provision is made to collect and reuse the discharge water of ash pond in the same process and reuse of the domestic waste water in gardening and afforestation purposes after treatment.</li> </ol>
7	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the OSPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.	Hazardous wastes such as used oil, cotton wastes of workshop etc. is being collected and handled as per the Hazardous wastes (Management and Handling) Rules, 1989 & amendments thereof of the EPA, 1986. Authorization from the OSPCB, Odisha has been obtained vide letter No. IND-IV-HW-931/12762 dated 17.08.2016 for collection, storage, treatment and disposal of hazardous wastes & is valid up to 31.03.2021.
8	The overall noise levels in and around the plant area shall be kept well within the standards (85 dB A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient	The design of installed equipment includes the noise control devices like acoustic hoods, silencers, enclosures etc. The overall noise level is well within (85 dB A) and the ambient noise levels within 75 dB A (daytime) and 70 dB A (nighttime). The monitored results of

	noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB A (daytime) and 70 dB A (nighttime).	noise levels during the period October 2016 to March 2017 is enclosed as <b>ANNEXURE- IV</b> .
9	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	1. Pre-employment Health check-up is being carried out for all the employees at the time of joining. 2. As per The Factories Act –1948 periodical Health check-up is being carried on annual basis for all the employees and records are maintained.
10	The company shall develop rainwater structures to harvest the run-off water for recharge of ground water in consultation with the Central Ground Water Authority/Board.	A network of drainage system having a length of 17 km of size 1m Depth × 1m Width has been provided to collect rain water and diverted to 3 nos. of pond of capacity 13,243 m <sup>3</sup> (Dimension: Ø 71.5m X depth 3.3m), 25, 905 m <sup>3</sup> (Dimension: Ø 100 m X 3.3m depth) and 10,000 M <sup>3</sup> constructed at different levels for collection of rain water & complete recirculation in process avoiding the usage of fresh water. Ground water recharge is not possible inside the plant due to alkaline process. Hence, six recharge pits have been constructed to harvest roof top rain water for ground water recharge at the township.
11	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminum sector shall be strictly implemented.	As per CREP for aluminium industry, red mud is being disposed to red mud pond through HCSD technology (60% Solids). Adhering to new scientific technology, Installation of red mud filtration unit is at completion stage by which red mud can be disposed in dry condition. We are exploring various avenues for utilization of the red mud.
12	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP /risk analysis and DMP report.	Implementation of environmental protection measures and safe guards are being complied as per the recommendation in EIA/EMP.
13	As proposed in EIA/EMP, Rs. 2.00 Crores and Rs. 43.00 Crores earmarked toward the capital cost and recurring expenditure/annum for environmental protection measures shall be used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purposes.	The funds earmarked have been utilized in implementation of conditions laid down for protection of environment without diverting for any other purpose. The expenditure incurred during the financial year 2016-17 is enclosed in <b>ANNEXURE- V</b> .
14	The Regional Office of this Ministry at Bhubaneswar / Central Pollution Control Board / OSPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Six monthly reports are being submitted regularly to Regional Office of the Ministry at Bhubaneswar / Central Pollution Control Board / SPCB, Odisha.



15	<p>The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Orissa State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a>. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.</p>	Complied
16	<p>The Project Authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.</p>	Complied



**COMPLIANCE STATUS OF CONDITIONS IMPOSED IN ENVIRONMENTAL CLEARANCE FOR  
8.5 MTPA BAUXITE MINING VIDE LETTER NO J-11015/650/2007-IA.II (M), DTD.19.02.09.**

**PROJECT NAME: UTKAL ALUMINA INTERNATIONAL LIMITED.**

**Period: From 1<sup>st</sup> October, 2016 to 31<sup>st</sup> March, 2017.**

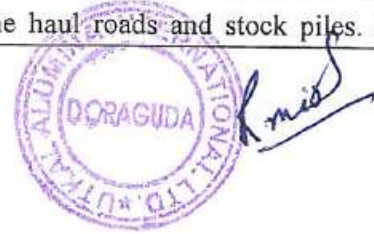
Sl. No.	Imposed Condition	Compliance Status
<b>A. Specific Condition</b>		
i	All the conditions stipulated by the State Pollution Control Board, Orissa in their consent to establish shall be effectively implemented.	All the conditions stipulated in NOC have been effectively implemented.
ii	The project proponent shall effectively address the concerns raised by the locals in the public hearing as well as during consideration of the project while implementing the project.	All the concerns raised in the public hearing are being implemented such as:- a) Health care by appointing doctors, paramedical staff with Medical Health Unit. b) Supply of drinking water by repairing and constructing tube wells, Promoting education by constructing new school building and renovation of old school building. c) Improving the livelihood by employing local people directly/ indirectly. d) Improvement in infrastructures like Development & repair of village roads, irrigation channels, bridges/culverts, avenue plantations etc.
iii	The project proponent shall develop fodder plots in the non-mineralized area in lieu of use of grazing land.	The entire plateau of the ML area consisting of Mineralized (M) & Non-Mineralized (NM) are capped with hard Khondalite which normally prevents the tree growth. So the NM area will be suitably dealt by removing hard surface to develop as grazing lands likely at the later period during implementation of Progressive Mine Closure Plan.
iv	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	Our Mining operation is restricted above the ground water table. Now the lowest working depth of our existing mine pit is around 1004 m RL, whereas the presence of ground water table has been estimated to be around 100-150 m RL. Therefore, there is no probability of any GW Intersection or exploitation of GW thereby.
v	The project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken while diverting seasonal channels emanating from the mine lease, during the course of mining operation.	No natural watercourse or water resources are obstructed due to our mining operations. Necessary care is being taken during monsoon to divert /channelize run off rain water so that it does not carry any sediment to obstruct / affect the water bodies at the foot hill.
vi	The project proponent shall take adequate environmental safeguard measures for control of rolling down of silt and sediments and protection of the catchment area of upper Indrāvati Reservoir during the course of mining operation.	In addition to as stated in Sl. No. 5, numbers of check dams/siltation ponds is being constructed and the same will be continue as per the need during the course of running of the mines. 1. Details of Check Dams and garland drains. Refer <b>Annexure-I</b> 2. All the protective structures are made up of hard Khondalite/laterite & cement punned over its surface & walls.



		<p>3. Encompassed drainage area controlled by these structures.</p> <p>The garland drains &amp; Check dams of above dimensions are adequate to catch the run-offs &amp; hold the siltation within the stipulated norms of surface water run-off discharge. The test reports at the outlet of the check dams are being carried out &amp; the TSS levels are always within 100 mg/l. After this the water confluence with the nearby seasonal nallah &amp; ultimately to River Indrāvati after moving a distance of 7 to 8 Kms &amp; will have hardly any bearing on the water quality of Indrāvati.</p>
vii	A 3 km stretch on the upstream and 3 Km in the downstream of the river passing through the project area should be taken up by the project authorities for plantation to arrest river bank erosion and sediment flow into the river.	To arrest bank erosion and sediment flow into the nallah/river, plantation is being carried out since 2005 over the hill slopes and will be continued in the future also. In the year 2016-17 we have planted around 14000 nos. of saplings in an area of 7 Ha.
viii	The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	Top soil generation in the mine is very less. Till Mar-17 around 2, 16,985 Mt of top soil has been generated, out of which 2000 Mt (approx.) has been utilized for plantation. Remaining top soil is being stored at earmarked site which will be utilized for afforestation at the mined out pit during mine reclamation period.
ix	The over burden (OB) generated during the initial years of the mining operation shall be temporarily stacked at the earmarked dump site(s) only for backfilling. Backfilling shall start from the 4 <sup>th</sup> year onwards of the mining operation and the entire quantity of the waste to be generated shall be backfilled. There shall be no external over burden dumps after the 8 <sup>th</sup> year of the mining operation. The entire backfilled area shall be afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.	<ul style="list-style-type: none"> <li>▪ The Over Burden is being dumped as per plan and within the earmarked area.</li> <li>▪ From 1.04.2016 onwards backfilling has been started to fill the Overburden as the backfilling material in the voids of the mined out area as per the proposal given in the Scheme of Mining</li> <li>▪ Monitoring and management of rehabilitated areas will be continued until the vegetation become self-sustaining and its compliance status will be submitted to the Ministry of Environment &amp; Forests and its Regional Office located at Bhubaneswar on six monthly basis.</li> </ul>
x	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and temporary OB dumps to prevent run off of water and flow of sediments directly into the Kandabindhā Nallah, the San River, the Indravati River and other water bodies. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted, particularly after the monsoon, and maintained properly.</p> <p>Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed around the mine pit, topsoil dump, temporary over burden dumps and mineral dumps to</p>	<p>Garland drains, settling tanks and check dams of appropriate size, gradient and length has been constructed both around the mine pit and the over burden dump to prevent run off of water and flow of sediments directly into the Natural Nallah and other water bodies.</p> <p>The sump capacity has been designed keeping 50% safety margin over and above peak sudden rainfall. Sump capacity is having adequate retention period to allow proper settling of silt material. . The drains had been de-silted before the onset of monsoon &amp; have been maintained properly.</p> <p>Further, the rain water collected in the mine pits during</p>



	<p>prevent run off of water and flow of sediments directly into the KandabindhanaNallah, the San River, the Indravati River and other water bodies and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<p>monsoon is not pumped out. Rather, it is allowed to be collected in the lowest level to augment the ground water resources gradually.</p> <p>In addition to above, we have deputed NIT, Rourkela to conduct a scientific study on surface runoff management and the final report is awaited. The recommendation, if any for the improvement of surface runoff management will be implemented in future.</p>
xi	<p>Dimension of the retaining wall at the toe of temporary OB dump(s) and the over burden benches within the mine to check run-off and siltation shall be based on the rain fall data</p>	<p>Retaining walls of dimension 1meter (height) x 0.8 meter (width) and running meterage of 1260 meter have been provided at the toe of over burden dumps to check run-off &amp; siltation. This is being effective to meet the purpose even during peak rain fall.</p> <p>All the retaining walls are made up of hard Khondalite/laterite &amp; cement punned over its surface &amp; walls.</p>
xii	<p>Plantation shall be raised in an area of 680ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around void, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.</p>	<p>The mining was commenced during 2013-14 and as per the approved Scheme of Mining, backfilling has been started on 1.04.2016 to fill the Overburden as the backfilling material in the voids of the mined out area.</p> <p>However plantation is being taken up in the Mine slope including a 7.5 meter safety zone since 2005-06. Till 2016-17, we have planted around 5, 07,500 saplings in an area of approx.202.53 Ha with a survival rate of 30%. The remaining area will be covered progressively in phase wise manner as per the Scheme of Mining.</p> <p>Nursery has been developed with shed net arrangement to develop, preserve and cater the saplings during the course of plantation period.</p>
xiii	<p>The void left unfilled in an area of 250ha shall be converted into the water body. The higher benches of the excavated void/mine pit shall be terraced and plantation done to stabilize the slopes. The slopes of higher benches shall be made gentler for easy accessibility by the local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.</p>	<p>The void to be left unfilled after exhaust of ore in an area of 250ha, which will be converted into water body. The higher benches of the excavated void pit will be terraced / planted with Trees in consultation with the local DFO/Agriculture Department to stabilize the slopes. Provision will be made for easy accessibility by the local people to use the water body. Peripheral fencing shall be carried out all along the excavated area in due course incase required.</p>
xiv	<p>Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.</p>	<p>Regular water sprinkling is done on haul roads, loading &amp; unloading areas and material transfer points by deploying four dedicated water tankers of capacity 12 KL. In addition to this for effective dust suppression we are using dust suppressants in the sprinkling water i.e. Dust bloc chemical.</p> <p>Dust bloc is a stable emulsion of bitumen in water that is sprayed on the haul roads and stock piles. As the</p>



		<p>water is absorbed into the road, the micro spheres of bitumen contained within Dust bloc are released to bind together the fine materials in the road surface. This reduces dust emission and water is no longer required to act as the binding agent.</p> <p>Regular ambient air quality monitoring is being done in the Core Zone comprising of four locations i.e. Mining Pit, Near Crusher, Near Weigh Bridge and Near Office. The result of the monitored air quality data shows that all parameters are well within the prescribed limit and varies as mentioned below:</p> <ul style="list-style-type: none"> <li>❖ Sulphur-dioxide level: 4.13 - 5.79 <math>\mu\text{g}/\text{m}^3</math>.</li> <li>❖ Nitrogen-dioxide level: 10.89 - 12.88 <math>\mu\text{g}/\text{m}^3</math>.</li> <li>❖ Particulate Matter &lt; 10 micron (PM10): 43.11- 70.11 <math>\mu\text{g}/\text{m}^3</math>.</li> <li>❖ Particulate Matter &lt; 2.5 micron: (PM 2.5) 25.38 - 40.70 <math>\mu\text{g}/\text{m}^3</math>.</li> </ul> <p>The result of monitored data for the period of OCT-16 to MAR-17 is enclosed in <b>ANNEXURE- II</b>.</p>
<p>Xv</p>	<p>Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained.</p>	<p>The flow rate of the small perennial nallah, which is flowing near the Baphlimali hill lock close to the lease boundary, is being monitored regularly and the records are maintained. The average data monitored during OCT-16 to MAR-17 are mentioned below :-</p> <ol style="list-style-type: none"> <li>1. PaikupakhalaNala : - 1042.60 <math>\text{m}^3/\text{hr}</math>.</li> <li>2. Near DandabadNala : - 3410.00 <math>\text{m}^3/\text{hr}</math>.</li> <li>3. ChandragiriNala : - 1748.00 <math>\text{m}^3/\text{hr}</math>.</li> <li>4. Mishripada : - 709.00 <math>\text{m}^3/\text{hr}</math>.</li> </ol>
<p>xvi</p>	<p>Regular monitoring of water quality upstream and downstream of the Khandabindha Nallah shall be carried out and record of monitored data should be maintained and submitted to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, the Central Groundwater Authority, the Regional Director, Central Ground Water Board, the State Pollution Control Board and the Central Pollution Control Board.</p>	<p>The same is being carried out and recorded. The results of surface water quality are enclosed in <b>Annexure-III</b>. The same is also being submitted to the Central Groundwater Authority, the Regional Director, Central Ground Water Board, the State Pollution Control Board and the Central Pollution Control Board.</p>
<p>xvii</p>	<p>The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.</p>	<p>The following Conservation measures have been taken to augment ground water resources:-</p> <ol style="list-style-type: none"> <li>i. Rainwater harvesting is being carried out by collecting the precipitated water through a network of drainage system into the exhaust mining pit for storage and ground recharge.</li> <li>ii. Movement of mine faces is being carried out systematically as per mine plan following the contour lines such that the faces have self-draining slopes. Precipitated water of the adjacent area is being collected within the mined out area.</li> </ol>





		<p>iii. Concreted Weir has been constructed to arrest rain water resulting ground water recharge. Also the Surface water flow near the pit has been diverted towards the pit and this accumulation influences to recharge ground water table.</p> <p>iv. Arrangement has been made that the mining method and the peripheral barrier all around mining area does not allow the storm water to go outside valley areas. The water thus trapped, percolates down and recharges the ground water.</p>
<p>xviii</p>	<p>Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year, pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the ground water is depleted due to mining activity, necessary corrective measures shall be carried out.</p>	<p>Regular monitoring of ground water level and quality is being carried out in each season of the open wells/ dug wells located around the nearby villages and the data is being submitted to Regional Office, MoEF and SPCB, Bhubaneswar once in every six month.</p> <p>❖ The fluctuation of ground water level varies from 4.0 to 6.8 meter (approx.) during the period October-2016 – March-2017.</p> <p>The monitoring results of Ground water quality &amp; level are enclosed as <b>Annexure – IV</b>.</p> <p>However monitoring report reveals that the parameters mostly conform to the within permissible values as per IS 10500. (Drinking water standard) and there is no significant impact on ground water table due to mining activity.</p>
<p>xix</p>	<p>Appropriate mitigative measures shall be taken to prevent pollution of the San River and the Indravati River in consultation with the State Pollution Control Board.</p>	<p>The following measures are being implemented and will be implemented in course of time also.</p> <ol style="list-style-type: none"> <li>1. Deep garland drains are under construction to check erratic flow of precipitated water.</li> <li>2. Check dams are constructed around the slopes of valley to arrest silts and sediments if any.</li> <li>3. Retaining wall of height 1.5 meter has been constructed at the edge of the valley.</li> <li>4. The naked areas of the valley slopes have been covered by mass afforestation and the same will be continued till full cover.</li> </ol> <p>San River &amp; Indrāvati are flowing at a distant location 12 Kms &amp; 9 Kms respectively. The above protection measures written SI No. 1 to 4 shall never create any untoward situation to affect the water quality of the above two rivers due to our contribution.</p>



xx	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water, if any) required for the project.	There is no proposal to with draw ground water for the project and surface water is being used for mining purpose. To this effect, an agreement was made between M/s Utkal Alumina Int. Ltd & Water Resource Dept. Govt. of Odisha for drawl of 9.0 cusec or 7776000 cft/day of water from Govt. water source/ from San River upstream of Indravati River. A copy the same agreement is being submitted vide letter no UAIL/ENV/2014-15/04 dated 7-05-2014.
xxi	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.	As a step towards rain water harvesting, the following measures have been implemented -  ❖ Rainwater harvesting is being carried out by collecting the precipitated water through a network of drainage system into the exhaust mining pit for storage, it is not used for the mining purpose. Rather, it is allowed to be collected in the lowest level to augment the ground water resources gradually.  ❖ Movement of mine faces is being carried out systematically as per mine plan following the contour lines such that the faces have self-draining slopes. Precipitated water of the adjacent area is being collected within the mined out area.  ❖ In addition to this four numbers of Concreted Weir have been constructed to arrest rain water resulting ground water recharge. Also the Surface water flow near the pit has been diverted towards the pit and this accumulation influences to recharge ground water table.
xxii	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral within the mine lease. The mineral transportation within the mine lease shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Pollution testing certificate of all machinery is being verified regularly to check vehicular emission. Further emission level is kept under control by rigorous maintenance of all engines and changing of lubricants as per the recommendation of the manufacturer. All the transporting vehicles are being covered with tarpaulin and over loading are strictly avoided.
xxiii	No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting is being carried out only during daytime. Controlled blasting is being practiced to reduce ground vibrations and to arrest fly rocks and boulders.
xxiv	Drills shall either be operated with dust extractors or equipped with water injection system.	Drilling machine with in-built vacuum cyclone dust collector & equipped with water spraying system is being used.
	Mineral handling area shall be provided with adequate number of high efficiency dust extraction	Water sprinkling is being carried by water tankers. Metal hoods are provided at transfer points in Crushing



xxv	system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	and Conveying System apart from provision of Covers all along the Conveyor System (18.2 km long) to restrict the dispersion of dust. In the Fixed crusher house, an efficient dry fog system is installed for suppression of dust at ROM hopper and Transfer points.
xxvi	Consent to operate shall be obtained from the State Pollution Control Board, Orissa prior to start of production from the mine.	Consent to Operate has been obtained from the State Pollution Control Board, Odisha vide letter No. 10769/IND-I-CON- 5450 dated 28.05.2012& renewed up to 31.03.2018 vide letter no. 2884 dated 1.03.2017.
xxvii	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.	No residential colony is proposed within ML Area. Provision of ETP is not envisaged as no scope of generation of mine drainage water and deployment of mine machinery on contract basis.  However, Modular STP of 75 KLD has been installed as an advance environmental measure.
xxviii	The project authorities shall undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.	Already complied.
xxix	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project are carried out regularly. Annual Schedule of PME is being made for all eligible employees as per DGMS requirement and necessary PME is carried out.
xxx	Provision shall be made for the housing of construction Labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Work shed have been provided to the workers at the mine site having all facilities such as fuel for cooking, permanent toilets followed with septic tanks & soak pits drinking water, medical health care. Since the mining operation has already been commenced, the regular employees & executives are coming from the integrated town ship adjacent to the alumina refinery.  Domestic effluent generation is very less as no residential colony exist within the ML area. The small quantity of domestic effluent is treated in soak pits via septic tank.  However, Modular STP of 75 KLD has been installed to reclaim the waste water generated within the service center facility area.
xxxi	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely; python, panther, sloth bear, wild dog etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to the project	The Action Plan for conservation of wildlife has been approved by PCCF (WL) & Chief wildlife Warden, Odisha vide letter No. 8183/1 WL(C)SSP- 398/2013 dated 11.10.2013 with financial forecast of Rs. 1,23,57,852/- and an amount of Rs.17,17,57,852/- has been deposited in CAMPA FUND for implementation of the same. Further, as per the demand of Forest & Environment Department, Govt. of Odisha vide letter No. 6096 dated. 28.03.14, an amount of Rs. 41, 24,044/- has been deposited in CAMPA FUND for implementation of Regional Wildlife Management Plan.



	site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.	Moreover, this proposal was for the Conveyor Corridor. Further, We have developed one more proposal exclusively for Mining lease, which has been forwarded from the concerned DFO's & RCCF to PCCF Office-Bhubaneswar for their examination and approval. Once approved by the PCCF (Wildlife) & Chief Wildlife Warden, plan shall be executed and fees shall be deposited upon receipt of the demand notice. By the way there are certain areas which are common for both the ML and Conveyor Corridor falling within 10 Kms radius.
xxxii	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bhubaneswar.	Digital processing of the entire lease area using the remote sensing technique by the authorized agency from Orissa Remote Space Application Center (ORSAC), Bhubaneswar has been engaged to assess the changes in land use pattern and report is awaited. The same will be submitted immediate after receipt.
xxxiii	A final mine closure plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final closure for approval.	The same will be submitted to the Ministry of Environment & Forests 5 years in advance of final closure for approval.
<b>B. General conditions</b>		
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	No change in mining technology and scope of working will be made without prior approval of the Ministry of Environment & Forests.
ii	No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.	There shall be no change in the calendar plan including excavation, quantum of mineral bauxite and waste/OB generation of work without prior approval from competent authority.
iii	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM, SPM, SO <sub>2</sub> & NO <sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Four ambient air quality monitoring stations have been established in both Core & Buffer Zone in consultation with the State Pollution Control Board, Odisha. Monitoring reports are attached in ANNEXURE -II.
iv	Data on ambient air quality (RSPM, SPM, SO <sub>2</sub> &NO <sub>x</sub> ) should be regularly submitted to the Ministry of Environment and Forests including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.	The monitored AAQ data is being submitted to the concerned authorities along with the half yearly compliance report once in six month.
v	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Water spraying on haul roads is being practiced through water tankers at an interval of two hours, for which, provision is made to deploy 4 nos. of 12 KL capacity tankers to spray water at dust generating points such as haul roads, loading & unloading areas and material transfer points. The haulage roads are being maintained to avoid rut and pot holes. In addition to this we are using dust suppressant



xii	stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	furnishing the requisite data / information/monitoring reports during their monitoring of compliance of the stipulated conditions.
xiii	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board. The proponent shall upload the status of compliance on their website and shall update the same periodically.	Six monthly compliance report is being submitted on the status of compliance of the stipulated environmental clearance conditions including results of monitored data to the Ministry of Environment and Forests, its Regional Office Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The status of compliance of the environmental clearance conditions, including results of monitored data is uploaded on company website periodically.
xiv	A copy of clearance letter shall be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	Complied No complain has been received so far.
xv	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.	Complied.
xvi	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.	Complied.



		chemical (Dust bloc) to control fugitive dust emission. (Dust bloc is a stable emulsion of bitumen in water which binds the micro dust particles.)
vi	Measures should be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	The following measures are taken to control noise levels below 85 dB (A) in the work environment. <ul style="list-style-type: none"> <li>• Maintenance of all machines including checking of silencers regularly,</li> <li>• Controlled blasting using delay detonators, installing immovable machinery on foundations and in closed rooms</li> <li>• Provision of earplugs/muffs to workers engaged in noise prone areas.</li> <li>• Regular vehicular checkup for pollution control certificates</li> <li>• The HEMM operators are provided with AC close cabinets which itself is acoustic in nature.</li> </ul>
vii	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	All the mining machineries are being deployed on contractual basis and the repair and maintenance is being done at outside workshop. However Oil & Grease Trap facility is in place and will be operationalized after the commissioning of Full fledge Mechanical workshop.
viii	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.  Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Personal protective equipments are being provided to all workers respective to the nature of the job. Initial and periodical awareness training is being imparted to all workers in the Company's Vocational Training Center located within the lease area on Safety and Health Aspects.  Pre-placement medical examination and periodical medical examination as per DGMS guideline of the workers engaged in the project is being carried out and records maintained for corrective measures.
ix	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	A separate environmental management cell with suitable qualified personnel has been set up under the control of the Agent of Mines, who reports the Head of the Organization directly.
x	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar.	Separate fund provision has been earmarked for environmental protection measures and it is not diverted for any other purpose. The expenditure incurred during the year 2016-17 is enclosed as Annexure-V.
xi	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Complied.
	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the	We are abide by the condition and shall extend full cooperation to the officer(s) of regional office by

