

**Compliance status of conditions imposed in Environmental Clearance for 1 MTPA Refinery & 50 MW co-generation Power Plant Vide letter No. J-11011/76/94-IA.II(I), dated 27.09.95**

**PROJECT NAME: UTKAL ALUMINA INTERNATIONAL LTD.**  
**PERIOD OF COMPLIANCE: OCTOBER 2014 TO MARCH 2015.**

<b>Sl. No.</b>	<b>Imposed Condition</b>	<b>Compliance Status</b>
I	The project authorities must strictly adhere the stipulations laid down by the State Pollution Control Board and the State Govt.	All the conditions stipulated by the State Pollution Control Board and Odisha State Govt. are being effectively implemented.
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.	Approval has been obtained from the Ministry vide letter no F.NO. J-11011/753/2007IA II(I),dated.29.01.2008 for the capacity expansion from 1 MTPA to 3 MTPA Refinery & from 50 MW to 90 MW co-generation Power Plant.
III	<p>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.</p> <p>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.</p>	<p>Pollution control devices such as ESPs, bag filters, wet scrubbers, dry fog systems and water spraying systems are installed at different process units to keep the emission level under control as per the norms of MoEF / CPCB/ SPCB. Further, scope of any emission beyond prescribed limit is ensured by designing the emission control devices as per the prescribed standards.</p> <p>However, in the event of failure of any pollution control system of any unit, the respective unit will not be restarted until the control measures are rectified to achieve the desired efficiency.</p> <p>Ambient air quality is being monitored by establishing seven nos. of stations considering pre-dominant wind direction and maximum ground level concentration in consultation with SPCB. 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 2014 to March 2015 is enclosed in <b>ANNEXURE- I</b>.</p>
IV	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	Provision of on-line monitoring system in all electrostatic precipitators (ESPs) at CPP and Calciners of Refinery has been installed. The monitored data is being submitted to the State Pollution Control Board every month and to the Ministry's

	Ministry once in six months, along with statistical analysis and interpretation.	Regional Office at Bhubaneswar and CPCB once in six months. The monitored results during the period October 2014 to March 2015 is enclosed in <b>ANNEXURE-II.</b>
V	There should not be any change in the stack design without the prior approval of the State Pollution Control Board.	Stacks attached to Boilers of CPP and Calciners of Refinery were designed and installed conforming to MoEF / CPCB guidelines and no change in the design will be done without prior approval of the State Pollution Control Board.
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.	Effluent treatment facility provision is made to achieve "Zero" effluent discharge concept and recycling/reuse in process. The domestic waste water is presently being treated in soak pit via septic tank. STP is under commissioning and the treated water will be reused 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 establishing adequate number of stations in consultation with the State Pollution Control Board. If any deviation is observed in effluent quality, the same will be treated to bring down to the required level.
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 wells and recycled in process and provision is made to reuse the waste water of ash pond in the same process.
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.	Provision is made to control all pollution sources by installing modern pollution control devices and management systems. However, strict monitoring and precautionary measures are being taken to abate such situation.
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.	Provision is made to dispose red mud in red mud pond 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 and ash pond are lined with clay & 1.5 mm HDPE liner with sub-soil drainage

		system, run-off drainage network and leachate testing facility.
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 wastes (Management and Handling) Rules, 1989 of the EPA, 1986.
XII	Fugitive emissions of dust / mists, vapours, fumes etc. should be controlled and in-plant monitoring of contaminants should be done regularly.	ESPs, bag filters, wet scrubbers, dry fog systems 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. The monitored results of fugitive emission during the period October 2014 to March 2015 is enclosed in <b>ANNEXURE- III</b> .
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.	Presently fly ash is being used to fill low lying areas with in plant premises, supply to brick manufacturing units which is around 21% of total generation. The plant is situated at a remote place. There is only one fly ash brick manufacturing unit 20 km away from the plant and no cement industry with in 150 km radius of the plant. However, we are exploring the scope of more utilisation of fly ash in the coming years .
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/ENV2012-13/43 dt17.11.2012 and we are enclosing herewith the up to datedmap in FIGURE- I.
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 Devp. Research for Socio-economic study, (IGIDR), Mumbai, 2. Salim Ali Centre for Ornithology and

		<p>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.	The same will be carried out after full-fledged operation of the plant.
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 plant has been commissioned with a capacity of 1.5 MTPA Alumina Refinery and 90 MW power plant without 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 per the availability with HPCL/IOCL is being used in the Calciners.
XXI	The project authorities must ensure regular medical examination for occupational diseases.	<ol style="list-style-type: none"> <li>1. Pre-employment Health check-up is being carried out for all the employees at the time of joining (Approx – 550 employees were covered so far) .</li> <li>2. As per The Factories Act – 1948 periodical Health check-up is being carried on regular intervals for all the employees.</li> <li>3. Till date no case of occupational health impact is detected.</li> </ol> <p>We have tied up with Utkal Poly Clinic,</p>

		Bhubaneswar (Dr. B N Mohapatra – Occupational health consultant) for detection of any occupational health hazard.
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 SPCB recognized Consultants under the supervision of competent technical personnel.
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.
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 fund earmarked is being utilized in implementation of conditions laid down for protection of environment without diverting for any other purpose. The details of expenditure incurred for the same during the year 2014-15 is enclosed herewith in <b>ANNEXURE-IV</b> .
XXV	The project authorities must obtain forestry clearance as required under the Forest (Conservation) Act, 1980.	Earlier forest clearance under F.C.Act 102.0 ha of forest land has already been obtained vide letter (No.8-43/96-FC) dated 19 April 1999 and for additional forest land 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 will be implemented.  Siltation level measurements of the tributaries of Indravati river was been carried out from December 1997 for 3 years.
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 287 hectares of land up to the year 2014. The same will be continued in coming years also.