

**DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO THE CONDITIONS OF ENVIRONMENTAL CLEARANCE AND ENVIRONMENTAL MANAGEMENT**

**Subject: Compliance report of Environmental Clearance for Plant 2**

**Reference: J-11011/17/94-IA II(I), dated 14.09.1994**

**Duration – June 2015 to November 2015**

<b>Sl. No.</b>	<b>Condition</b>	<b>Present Status</b>
i.	No expansion or modification in the plant should be carried out on the basis of this clearance without bringing the matter to the notice of the Hon'ble supreme court and taking appropriate directions of the Hon'ble court	<i>No expansion or modification has been carried out in the plan without approval of the concerned authorities.</i>
ii.	The project authorities must adhere to the stipulations made by the A.P. Pollution Control Board and the State Government.	<i>The stipulations made by the Andhra Pradesh Pollution Control Board (APPCB) are adhered to strictly.</i>
iii.	The gaseous emission (SO <sub>2</sub> , NO <sub>x</sub> , NH <sub>3</sub> , Particulate Matter, Urea Dust etc.) from various processes/units should conform to the standards prescribed by the concerned authorities from time to time. At no time the emission should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency.	<i>All the emissions are maintained well below the prescribed limits as specified by the concerned authorities.</i>
iv.	At least 5 Ambient Air Quality Monitoring stations should be set up in the down wind direction as well as where maximum ground level concentrations of SO <sub>2</sub> , NO <sub>x</sub> , NH <sub>3</sub> and HC are anticipated in consultation with the State Pollution Control Board. In addition, one mobile ambient air quality monitoring station with adequate facilities to monitoring the ambient air outside the plant premises should be provided. The air quality monitoring stations should be selected on the basis of mathematical modeling to represent short-term ground level concentration, human settlements, sensitive targets etc.  Port holes and sampling facilities should be provided for all the stacks as per the Central Pollution Control Board guidelines. Stack emission should be monitored by setting up an automatic continuous stack monitoring unit in consultation with the State Pollution Control Board.	<i>Five Ambient Air Monitoring stations and an additional Mobile van have been installed for continuous monitoring of SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub> and HC.</i>  <i>The locations of the ambient air monitoring stations were selected based on the mathematical modelling done by Professor B. Padmanabha Murthy of JNU- New Delhi, which was accepted and approved by APPCB.</i>  <i>Being Complied.</i>

	Data on ambient air quality and stack emissions should be submitted to this Ministry once in six months and to the state pollution control Board once in three months along with the statistical analysis and interpretation.	<i>The data is being sent in the form of monthly reports to APPCB and Quarterly reports to CPCB.</i>
v.	Ammonia should be recycled to the extent possible in the ammonia plant before passing it through stacks.	<i>In Ammonia plant, Purge Gas Recovery Unit has been incorporated for recycling of ammonia.</i>
vi.	Ammonia gas leakages from storage and loading points should be efficiently controlled or collected and scrubbed or may be sent to incinerator for flaring.  Adequate precautions for handling ammonia vapors in case of emergency situation arising due to closure of the plant should be taken	<i>Flare stack system has been incorporated to take care of any eventuality leading to leakages.  Adequate safety and handling precautions are in place to deal with emergency situations.</i>
vii.	Fugitive emissions should be controlled, regularly monitored and data recorded. Automatic monitors for ammonia should be provided at appropriate places in the plant	<i>Fugitive emissions of NH<sub>3</sub>, Urea dust and CO are monitored in the work zone environment, product and raw material storage area and these are well below the stipulated standards.</i>
viii.	Low NO <sub>x</sub> burners should be used to limit NO <sub>x</sub> emissions to ensure compliance with the standards for ground level values prescribed by the Central Pollution Control Board.	<i>Low NO<sub>x</sub> burners were installed in primary reformer to limit the NO<sub>x</sub> emissions at the inception stage itself.</i>
ix.	Industry should provide separate outlets for storm water, waste waters and process effluents. Waste waters from the raw water treatment plant, DM plant and the boiler blow down should not be allowed to mix up with the ammonia and urea plants effluents. Proper segregation of different effluents should be done.	<i>Being Complied.</i>
x.	Oil – bearing waste water should be treated for removal of oil matter before discharge and oil traps should be properly maintained so that the effluent conforms to the prescribed standards.	<i>Disc Oil Separators are incorporated in both Ammonia plants for separating the oil from the oily waste water.</i>
xi	The waste water should be recycled to the extent possible and efforts should be made to practice zero discharge from the fertilizer complex. Final treated effluent should conform to the prescribed regulatory standards	<i>Various schemes have been implemented for recycling of water to the maximum extent. The treated liquid effluent is utilized for irrigation of green belt and its sustenance. NFCL is a Zero Effluent discharge plant as no effluent is discharged outside the boundary limits of the complex. Final treated effluent discharged to green belt conforms to the prescribed regulatory standards</i>

xii	<p>Guard pond(s) of sufficient holding capacity should be provided to cope up with the effluents discharged during the process disturbances. The contributing units should be immediately shut down and should not be restarted without bringing the system back to normalcy.</p> <p>Structural stability of the guard pond with respect to leakages/cracks and other factors should be ensured. Monitoring of surrounding area ponds and ground water quality (wells) for relevant parameters should be carried out on a regular basis. Especially, nitrate levels in the ground water particularly dug wells, bore wells etc. should be monitored to check whether NO<sub>3</sub> contamination is occurring in the area or not.</p>	<p><i>Two ponds have been provided to take care of process disturbances.</i></p> <p><i>Structural stability of the guard pond (holding pond) has been assured.</i></p> <p><i>Groundwater quality in the surrounding areas is monitored on a monthly basis</i></p>
xiii.	<p>Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the State Pollution Control Board. Regular monitoring should be carried out for relevant parameters. Routine toxicity test of effluent with fish and fish-food organisms should also be regularly done at least once a month. Monitored data along with statistical analysis and interpretation in the form of a report should be submitted to this Ministry once in six months and to the State Pollution Control Board once in three months.</p>	<p><i>We are monitoring final treated effluent at Holding Pond daily and submitting the reports to statutory authorities regularly.</i></p> <p><i>Fish are bred in the Holding Pond and Bio-Assay test is performed on a six monthly basis.</i></p>
xiv.	<p>The Hazardous wastes should be handled as per the Hazardous Waste (Management &amp; Handling) Rules, 1989 of the Environment (Protection) Act, 1986.</p> <p>A plan for treatment and disposal of accumulated chromium waste should be prepared and submitted to the Ministry within three months.</p>	<p><i>Being Complied.</i></p> <p><i>“Chromium free” chemicals are used for cooling water treatment in NFCL complex.</i></p>
xv.	<p>Handling, Manufacture, Storage and transport hazardous chemicals should be in accordance with the Manufactures, Storage and Import of Hazardous Chemicals Rules, 1989.</p>	<p><i>Being Complied.</i></p>
xvi.	<p>On - site and offsite emergency plans as required under the rule 13 and 14 of Manufacture, Storage and Import and Hazardous Chemicals Rules, 1989 should be prepared and approval from the competent authorities should be obtained.</p> <p>Graphs / nomograms indicating special distribution of concentrations of toxic gas during day and night under different stability classes and wind conditions should be prepared and displayed at appropriate</p>	<p><i>The On-site and Off-site Emergency plans have been prepared in accordance to The Manufacture, Storage and Import and Hazardous Chemicals Rules, 1989.</i></p>

	locations so as to help the designated Emergency Officer / Team to organize rescue operations in case of accident release of toxic gas.	
xvii.	Adequate measures for the control of noise within the plant should be taken up as to keep the noise levels below 85 dB in the working environment.  Persons working near the noise machines in Ammonia plant, Urea Plant, PPB, IGP Compressor Room, DMP etc., should be required to use ear muffs / plugs.	<i>Noise control measures like acoustic hoods, silencers, enclosures etc. have been provided on all sources of noise generation in the plant. Monitoring of noise levels in the plant is done on regular basis and the values are below the stipulated limits.</i>  <i>It has been made mandatory for personnel working in heavy noise area to use relevant PPEs like ear muffs, plugs, etc.</i>
xviii.	For controlling micro-biological activities in the cooling water non-chromate treatment should be adopted.	<i>"Chromium free" chemicals are used for cooling water treatment.</i>
xix.	The practice of venting of CO <sub>2</sub> during upset conditions / non operation of the unit (s) attached to the urea plant should be stopped. An alternate solution to utilize CO <sub>2</sub> should be found out so as to avoid noise nuisance in the area.	<i>CO<sub>2</sub> venting is avoided and thereby ensuring minimum the noise nuisance in the area.</i>
xx.	Suitable alarm system and standard procedure for transmitting the information on the occurrence of an accident to the proper focal point should be established. Steps should also be taken to ensure access to information on weather conditions prevailing at that time and weather forecast. Wind Socks at appropriate locations should be provided.	<i>Complied.</i>  <i>The On-site Emergency plan covers the requirement adequately and system integrity is tested through regular mock drills.</i>
xxi	Efforts should be made to increase green belt all around the fertilizer complex and the town ship. Native plants spices should only be selected for this purpose in consultations with local DFO.	<i>Green belt has been developed and it is spread across 789 acres of the plant area. The green belt comprises of 70% of the total plant area.</i>
xxii	The industry should provide Purge Gas Recovery Unit for removing Ammonia, Hydrogen and Methane instead of burning in the Primary Reformer.	<i>In Ammonia plant, Purge Gas Recovery Unit has been incorporated.</i>
xxiii	Possibility of selling and recycling of used catalyst be explored.	<i>Spent catalysts are sold to authorized recyclers.</i>
xxiv	The project authorities should set up laboratory facilities for collection and analysis of samples under supervision of competent technical personnel, who will directly report to the chief executive.	<i>A separate Environment Management Dept with a full-fledged laboratory has been setup to carry out the Environmental Management and Monitoring functions.</i>

xxv.	A separate Environmental Management cell with suitable qualified people to carry out various functions should be set up under the control of a senior executive, who will report directly to the Head of the Organization.	<i>A separate Environment Management Dept with a full-fledged laboratory has been setup to carry out the Environmental Management and Monitoring functions.</i>
xxvi.	Periodic medical check up of the workers should be done and records maintained.	<i>Medical examination is conducted at Occupational Health Center for all the personnel and records are maintained.</i>
xxvii	The funds earmarked for the Environmental Protection measure should not be diverted for other purposes and year wise expenditure should be reported to this ministry and to the state pollution control board under the rules prescribed for Environmental Audit.	<i>Adequate funds are earmarked for environmental pollution control measures and it is ensured that these funds are not diverted for any other purposes.</i>