

Archean Chemical Industries Private Limited



Ref.: ARC/ENV-06/2017

Date: 10/05/2017

To,
The Director (S),
Regional Office, Western Region,
"Kendriya Paryavaran Bhawan"
Ministry of Environment & Forest,
Government of India, Link Road No.3,
Ravi Shankar Nagar, Bhopal-462 016.

Sub. : Regarding submission of the EC compliance report.

Kind Attn. : Dr. A. Mehrotra, Director (S)

Dear Sir,

This has reference to the submission of EC compliance report. In that context we hereby submit the same for your kind reference and compliance.

We would also like to state you that we are very much concern with the environment compliance and we are doing our sincere efforts in this regards.

Thanking You,

With best regards,

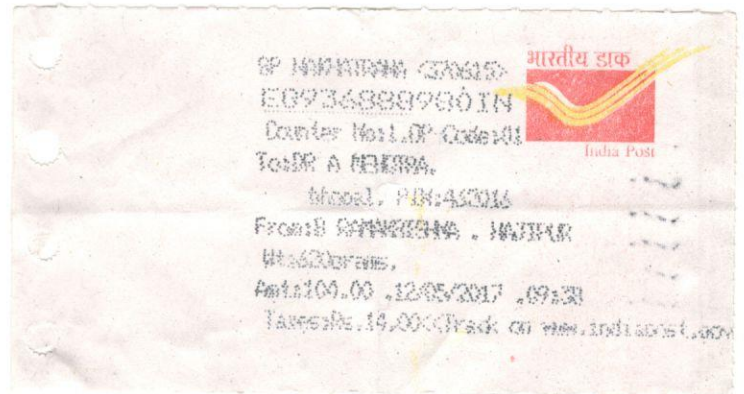
For Archean Chemical Private Limited


[Authorized Signatory]



C.C. : RO office, GPCB.

Encl.: 1. Compliance Report with enclosures.



Compliance Report of EC :

S. No.	Specific Conditions	Compliance Status	Remarks
i.	Permission/recommendation shall be obtained from State Forest Department regarding Banni area, which is declared as a protected forest land	Complied.	We have the permission from state forest department mentioning that area allotted to us is not fall in the forest land governed under the state forest department. Copy of the letter of permission from forest office is enclosed.
ii.	GPCB vide letter no. GPCB/Unit-I/FT-191/9672 vide dated 4thApril, 2005 accorded NOC for manufacturing of Potassium Chloride, Magnesium Chloride and Magnesium Sulphate (25000 MTPM) which is valid up to 5 years. Company shall renew the validity. No construction/operation shall be carried out without valid consent to establish / operate under Air & Water Acts respectively.	Complied.	We have given the Undertaking to GPCB for not to manufacture the same. Copy of the undertaking, copy of the amended CCA and CTE is enclosed.
iii	As proposed, packed tower primary scrubber (1 no.) followed by secondary packed tower scrubber with caustic soda as scrubbing medium along with stack shall be provided to control bromine gas emissions from bromine bottling section within prescribed standards.	Complied.	We have packed tower primary scrubber (1 no.) followed by secondary packed tower scrubber with caustic soda as scrubbing medium along with stack to control bromine gas emissions within prescribed standards. Copy of the drawing and specification of scrubbers along with the photo and stack report is enclosed.
iv	As proposed, ESP along with stack of adequate height will be provided to the boiler to control particulate emissions within 100 mg/Nm ³ .	Complied.	We have ESP along with stack of adequate height to the boiler to control particulate emissions within 100 mg/Nm ³ . Copy of the drawing and specifications of ESP and stack report is enclosed.
v	At no time, the emission levels shall go beyond the 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. Stack emissions shall be monitored and efficiency of air pollution control device shall be checked regularly.	Complied.	Our results of sampling and monitoring of stack and ambient air are within the prescribed standard. We have submitted the stack monitoring report to MOEF and CPCB. Copy of the submitted letter and stack report is enclosed.

S. No.	Specific Conditions	Compliance Status	Remarks
	The stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and Gujarat Pollution Control Board (GPCB).		
vi	Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide O.S.R. No. 826(E) dated 16th September, 2009. The levels of PM ₁₀ , SO ₂ , NO _x , CO, Chlorine and bromine shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and GPCB.	Complied.	We have regularly monitored the levels of PM ₁₀ , SO ₂ , NO _x , CO, Chlorine and bromine in the ambient air Display board for the ambient air monitoring is displayed on the main gate of the company and periodical report is uploaded on the websites of the Archean websites, we have also submitted the monitoring report to MOEF and CPCB. Copy of the monitoring report, copy of the photo of display board, copy of screen shot of the uploading of periodical monitoring report on Archean website and copy of the monitoring report submitted letter to MOEF and CPCB is enclosed.
vii	Continuous monitoring instrument for bromine shall be installed as stack as well as work zone area. Automatic chlorine detection instrument shall be installed at work zone. Automatic chlorine detection instrument shall be installed at work zone.	Complied.	We have the bromine/chlorine gas detection system in our Bromine plant. Copy of the details of the gas detector is enclosed.
viii	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals / materials, multi cyclone separator and water sprinkling system. Dust suppression system including water-sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the GPCB. Bromine concentration at work zone area shall always be less than 0.1 PPM.	Complied.	To control the fugitive emissions we have dust suppression system, water sprinkling system in our COGEN plant. We are regularly conducting the monitoring of the area as specified in the point. Results of all the parameters are within the prescribed limit of the GPCB norms. Copy of the dust suppression system, copy of the photo of water sprinkler system and ambient monitoring report is enclosed.

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Ix	<p>For further control of fugitive emissions, following steps shall be followed:</p> <p>a. Closed handling system shall be provided for chemicals.</p> <p>b. Reflux condenser shall be provided over reactor.</p> <p>c. System of leak detection and repair of pump/pipeline based on preventive maintenance</p> <p>d. The acids shall be taken from storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.</p> <p>e. Cathodic protection shall be provided to the underground solvent storage tanks.</p>	Complied	<p>We have Closed handling system for the chemicals.</p> <p>b. Reflux condenser is provided Over reactors. We have Leak detection system and preventive maintenance schedule for the repairing of the pump/pipelines etc. We have taken the acid from storage tank to reactor through closed pipeline. We don't have any underground solvent storage tanks.</p>
X	<p>The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution</p>	Complied	<p>We have adequate stack height attached with the DG set as per the CPCB standards. We have in built acoustic enclosure in all our DG set.</p>
xi	<p>Total fresh water from seawater source shall not exceed 14,467 m³/day. Total process wastewater generation shall be 11,345.9 m³/day and neutralized by the lime slurry. The treated wastewater shall be sent to solar evaporation tank. Domestic sewage shall be treated in the STP and treated water will be reused for gardening purpose.</p>	Complied	<p>Total fresh water is not exceeding from 14,467 m³/day. Waste water generation is also not exceeding from 11,345.9 m³/day. After neutralization with lime our treated effluent is sent to solar evaporation tank. Treated Domestic sewage is reused for the garden purposes. Copy of the water consumption and waste water generation is enclosed.</p>
xii	<p>Rejects from the plant which is mainly high TDS effluent shall be discharged at a point where least impact on sea flora and fauna is observed and location identified by the National Institute of Oceanography</p>	Complied	<p>We are reusing our rejects water in our salt Washery and in our ETP.</p>
xiii	<p>The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. A copy of the same shall be submitted to the Ministry and Ministry's Regional Office at</p>	Complied.	<p>We have obtained authorization for collection, storage and disposal of hazardous waste. Copy of the form-4 and form -13 submitted is enclosed.</p>

S. No.	Specific Conditions	Compliance Status	Remarks
	Bhopal.		
xiv	ETP sludge gypsum shall be used for preparation and maintenance of bunds. Sludge from STP shall be used as manure. Fly ash shall be sold to brick manufacturers. Waste oil shall be sent to authorized re-processors.	Complied.	Our ETP sludge is reused for making the bunds. We are reusing our STP sludge as an manure for our garden area. Copy of the form-4 and form -13 submitted is enclosed.
xv	Fugitive emissions due to coal handling and coal transportation shall be controlled by installing air pollution control device. Fly ash shall be managed as per Fly ash Notification. Storage of fly ash shall be such that it shall not be again air borne.	Complied.	By using water sprinkling system we are continuously sprayed the water to control the fugitive emission.
xvi	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989	Complied	We are complying MSIHC Rules 1989. Copy of the schedule 8-A of On Site Emergency Plan and TREM Card is enclosed.
xvii	The company shall undertake following waste minimization measures: a. Metering and control of quantities of active ingredients to minimize waste. b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. c. Use of automated filling to minimize spillage. d. Use of Close Feed system into batch reactors. e. Venting equipment through vapor recovery system. f. Use of high-pressure hoses for equipment clearing to reduce wastewater generation.	Complied	a) We have Metering and control of quantities of active ingredients to minimize waste. b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. c. Use of automated filling machines to minimize spillage. d. Use of Close Feed system into batch reactors. e. Venting equipment through vapor recovery system. f) We have high pressure pumps for cleaning specialized parts and minimization of waste water generation.
xviii	Chlorine consumption is reported ~ 8395 TPA. Risk assessment and consequence analysis for storage and transportation of chlorine shall be prepared, and a copy of such report shall be submitted to the Ministry's Regional Office at Bhopal.	Complied.	We have prepared and submitted the Risk assessment and conseq. Analysis for storage and transportation of chlorine report. Copy of the Submitted letter to MOEF is enclosed.

S. No.	Specific Conditions	Compliance Status	Remarks
xix	All necessary precaution shall be taken for transportation of bromine, Which is reported, to be 12500 TP.A. Bromine shall be transported in ISO tank only. Only trained drivers, who are well versed with transportation of hazardous chemicals, shall be deployed for transportation of bromine. GPS shall be installed in all the trucks transporting bromine loaded ISO tank.	Complied.	We have taken necessary precaution for the transportation of bromine. We are transporting our bromine through ISO tank only. We have trained drivers who are well versed with transportation of hazardous chemicals. We have installed the GPS system in our vehicle. Copy of the photo of GPS system installed in the vehicle is enclosed.
xx	Risk analysis and consequence analysis with mitigation measures especially for earthquake scenario shall be conducted for bromine storage, handling and transportation.	Complied.	We have prepared the Risk analysis and consequence analysis with mitigation measures especially for earthquake scenario. Copy of the report is enclosed.
xxi	Risk assessment plan for chlorine and bromine storage and handling submitted by project proponent vide letter dated 7th May 2011 shall be fully implemented.	Complied.	We have the risk assessment plan for bromine and chlorine storage and handling. We have also submitted the copy to MOEF also. Copy of the letter submitted to MOEF is enclosed.
xxii	Adequate automatic safety measures for disaster including major earthquake along with automatic interlocking system shall be adopted.	Complied.	In case major earthquakes, power stoppage would result in stoppage of all plants.
xiii	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the OISD 117 norms.	Complied.	We have all the necessary arrangement for protection of possible fire hazards during process and material handling .Copy of the details of fire fighting system is enclosed.
xxiv	Occupational health surveillance of the workers shall be done on regular basis and records maintained as per the Factories Act.	Partially complied.	Checkup of all the workers of hazardous area (bromine plant) is done on annual basis. The same shall be extended to the other plant within the next two years.
xxv	Approach road to the plant site shall be made pucca (black top)	Complied.	There is good all weather road and exclusively for the plant. However it is not a black top road.

S. No.	Specific Conditions	Compliance Status	Remarks
xxvi	Company shall avoid Chinkara Wildlife Sanctuary, while laying water pipelines from sea and prior statutory permission shall be obtained as per required in this case.	NA	We have not laid the water pipelines from sea, so this point is not applicable to us.
xxvii	Corrosion rate due to sea salt shall be monitored and measures shall be taken to prevent corrosion. At later stage, use of gypsum shall be explored to dispose in cement plant.	Complied.	We are regularly monitoring the rate of corrosion in our respective departments. Disposal of gypsum is used for the manufacturing and maintenance of bunds Copy of the Corrosion monitoring report is enclosed.
xxviii	As proposed, green belt shall be developed in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions. Around the main production unit, green belt of local species shall be planted.	Compliance under proceeding.	The site is located in the Greater Rann of Kutch. In such a area considering the soil condition plantation growth is slow. However sincere efforts are being made to plant. 2000 nos. of saplings of different species. Considering the harsh condition we have managed to develop 500 nos. of plants/trees.
xxix	All the commitments made to the public during the public hearing/ public consultation meeting held on 19 th October, 2010 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	Complied	We have already answered all the queries raised during public hearing and copy of all reply is enclosed in the EIA report.
xxx	Provision shall be made for the housing for the construction labor within site, with all the necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plants, safe drinking water, medical health care, crèche etc. The housing maybe in the form of temporary structures to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	Complied	We have provided all the facilities mentioned in the point during our project time. Construction waste was reused for building the road with in the site.

S. No.	General Conditions	Compliance Status	Remarks
i.	The project authorities shall be strictly adhere to the stipulations made by the Gujarat Pollution Control Board.	Complied.	We strictly followed the norms stipulated by the GPCB.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for the clearance, a fresh reference shall be made to the Ministry to assess adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complied.	-
iii	The locations of ambient air quality monitoring stations shall be decided in consultation with the state pollution control board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated. One Ambient air quality monitoring station shall be carried out.	Complied.	As mentioned in the point we have ambient air monitoring station for the sampling and monitoring in upwind and downwind directions.
iv	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act,1986 Rules, 1989 viz. 75dBA (day time) and 70dBA (night time).	Complied.	We have regularly conducted the noise monitoring in the plant area and monitoring results are within the prescribed standards of GPCB. Copy of the monitoring report is enclosed.
v	The company shall store rainwater from the roof tops of the buildings and storm water drains to use the same water for the process activities of the project/horticulture purpose to conserve fresh water.	Complied.	Average rain fall of the area is less than 300 mm approx. Therefore roof top harvesting is not taken up. We initially are looking at the large area available to us. Rain water harvesting has been done for the open area by connecting storm water system to rain water harvesting structure.
vi	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be under taken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Complied.	We have regularly conducted the training programme of chemical handling. Copy of the training programme is enclosed.

S. No.	General Conditions	Compliance Status	Remarks
vii	Usage of Personnel Protection Equipments (PPEs) by all employees/workers shall be ensured.	Complied.	We have provided all the PPEs required and ensure the continuous uses of the PPES for all employees including our contract worker in plant. Copy of the photo of PPE's is enclosed.
viii	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.	Complied.	We have complied all the points of the EMP mentioned in EIA report and answered all the queries raised during public hearing.
ix	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Complied.	We have performed various CSR activities in the nearby villages like free medical services by mobile van, drinking water supply, Computer education program in primary school, constructions of 438 nos. of toilet in nearby villages.
x	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied.	Same as above. Copy of the CSR activity is enclosed.
xi	A separate environment management cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Complied.	We have environment management cell and having full fledged central laboratory in plant. Copy of the organogram of environment management cell and the MOM of the meeting is enclosed.
xii	Company shall earmark sufficient funds toward capital cost and recurring cost respectively to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Complied.	We have invested sufficient capital and recurring cost for the environment management/pollution control measures and doing continuously on regular basis. Copy of the environment cost is enclosed.

S. No.	General Conditions	Compliance Status	Remarks
xiii	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad/Municipal corporation, Urban local body and the local NGO if any, from whom suggestions/representations, if any, were received while processing the proposal.	Complied	We have submitted the copy of the EC to gram panchayat. Copy of the letter submitted to gram panchayat is enclosed.
xiv	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental clearance conditions including results of monitoring data (both in hard copies as well as by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. A copy of Environment Clearance and six monthly compliance status reports shall be posted on the website of the company.	Complied	We have submitted the six monthly reports of the periodical monitoring data. We have also posted the periodical monitoring data on the websites of the company. Copy of the letter submitted to MOEF is enclosed.
xv	The environment statement for each financial year ending 31 st March in form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment Protection Rules, 1986, as amended subsequently, shall also be put on the websites of the company along with the status of compliance of environmental clearance conditions and shall be sent to the respective Regional Offices of MOEF by e-mail.	Complied.	We have submitted the Annual environment statement to GPCB. Copy of the form-v submitted to GPCB is enclosed.
xvi	The project proponent shall inform the public that the project has been accorded environmental clearance conditions and shall also be sent to the respective Regional Offices of MOEF by e-mail.	Complied.	Copy enclosed.
xvii	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Complied.	We have informed the regional office, MOEF for the financial closure and final approval of the project and the date of the start of the project.