## COMPLIANCE REPORT OF

## ENVIRONMENTAL CLEARANCE

(E. C. LETTER NO. F. NO. J-11011/164/2012-IA II (I) Dated 14-10-2014)

(For the Period 1st October 2020 to 31st March 2021)

## **FOR**

**Chemical Manufacturing Plant of** 

M/s. Shiva Performance Material Private Limited

(Previously known as M/s. Shiva Pharmachem Limited)

Located at:

Plot No. 447-460 & 502,

ECP Canal Road,

Village - Karakhadi, Taluka - Padra,

Dist. - Vadodara (Gujarat)



## **Compliance to Conditions of Environmental Clearance:**

Sr. No.	Conditions	Compliance status as on
i)	National Emissions standards for organic chemicals manufacturing industry issued by the ministry vide G.S.R. 608(E) dated 21 <sup>st</sup> July, 2010 and amended time to time shall be followed by the unit.	National Emissions Standard for Organic Chemicals is being followed & no violation is done.
ii)	Bag filter shall be provided to biomass/coal fired boiler (1.5 TPH) and Thermic Fluid heater to control particulate emissions within permissible limit. Dust collector followed by bag filter shall be provided to dryer and mills. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guidelines.	Dust Collector Cyclome Separator followed by Bag Filters are provided in Boiler & also in Thermic Fluid Heater. Gaseous Emission is dispersed through stack of adequate height in accordance with CPCB/GPCB guidelines.
iii)	Scrubber shall be provided to process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emissions level shall go beyond the prescribed standards.	Company has installed Solvent recovery system with Brine Condensers to ensure total recovery of unconverted monomers & solvent from the system. Process Emissions are taken to Knock-Out Tanks having process solvent to scrub process vapors. This solvent is recycled back to process.
iv)	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 chemical/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.	In plant control measure for checking fugitive emission from all vulnerable sources are implemented. Total 5 storage tanks are installed to store chemicals & to handle through pipeline only to minimize direct contact/emission.  The emission monitoring program is made & is followed.  Shiva Performance Materials Private Limited (Previously known as M/s. Shiva Pharmachem Limited) assures to confirm the emission limits stipulated by GPCB.
v)	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.	Chimney Height of 11 meters are provided for existing DG which is more than required as per CPCB Standards [Stack Height = height of DG Set Shed roof + (0.2 x Square Root of DG KVA)]. DG Set is having acoustic enclosure to achieve noise level less than 75 dba.
vi)	The company shall upload the status of compliance of the stipulated environmental clearance conditions, including 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 the GPCB. The levels of PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , VOCs and CO in the ambient air and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public	Company will update periodically to MoEF & Regional Office of GPCB regarding status of compliance.  Periodic measurement of level of PM10, SO2, NOx, VOCs & CO in the ambient air & emission from stacks are done through Third Party. Same is
vii)	places.  Total fresh water requirement from ground water source shall not exceed 153.23m³/day and prior permission shall be obtained from the CGWA/SGWA	displayed on board near main gate.  Fresh Water requirement is being kept lower than 153.25 m3/day.

	and submitted to the regional office of MOEF at Bhopal.	We have valid water extraction permission from CGWA: Noc No. CGWA/NOC/IND/ORIG/2021/12049 valid up to 25/03/2024
		Copy of existing NOC is enclosed herewith as Annexure I.  Note: We have also applied for change of name in NOC due to organization demerge, Conversation of mail with CGWA and CGWB is attached as Annexure I(A)
viii)	Industrial effluent generation shall not exceed 56.5m <sup>3</sup> /day. Industrial effluent shall be treated in ETP followed by RO. RO rejects will be concentrated in multiple effect evaporators (MEE). Treated effluent will be recycled / reused within plant premises.	Presently Industrial Effluent is restricted to 10 m3/day. All Effluent is treated in ETP & Treated Water is recycled for Domestic use & for Gardening purpose.
ix)	No effluent shall be discharged outside the factory premises and 'zero' discharge concept shall be adopted.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited ensures herewith to adhere to the condition of 'ZERO LIQUID DISCHARGE'
x)	Process effluent/any wastewater shall not be allowed to mix storm water. Storm water drain shall be passed through guard-pond.	Planning is done to keep Storm Water Drain separate than Process Area Drain.
xi)	Hazardous chemicals shall be stored in tanks in tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.	Total 5 Storage Tanks are installed to store Hazardous Chemicals from where all liquids will be transferred to Process Plant through Pumps & through Pipes to ensure no direct exposure.  Also, provision is made to store drums of such chemicals in Drum Storage Room approved by Chief controller of explosive, Nagpur.
xii)	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. Measures shall be taken for fire facilities in case of emergency. Membership of TSDF for hazardous waste disposal shall be obtained.	Company has already obtained Membership of TSDF Site NECL (Nandesari Enviro Chemicals Limited) having membership No. 859 dated 20/03/2012. And BEIL membership from 17 <sup>th</sup> May-2021  The copy of TSDF membership letter is attached herewith as Annexure II.  Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) will inform GPCB through XGN for all such hazardous waste disposal to TSDF @ NECL, Nandesari.
xiii)	The company shall strictly comply with rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules, 11989 as amended in October, 1994 and January, 2000. All transportation of hazardous chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited will comply with rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules, 1989 as amended in Oct., 1994 & Jan., 2000.
		Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited will ensure all transportation of
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		hazardous chemicals as per the Motor Vehicle Act (MVA), 1989.
xiv)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	The company has made arrangement for protection of possible fire hazards during manufacturing process in material handling.  Firefighting system including Fire Hydrant Line & various Fire Extinguishers are provided as per the norms.
xv)	Occupational health surveillance of the workers shall be done on the regular basis and records maintained as per the Factories Act.	Annual checking of Occupational Health of all employees are done & records are being maintained as per Factories Act.
xvi)	As proposed, green belt over 33% of the total project area shall be developed within plant premises with at least 10-meter-wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	Company has provided Green Belt more than 33% right now.  Plantation is already done on all sides along periphery in downward direction & along road sides with selecting plant spices as per CPCB guidelines.
xvii)	The company shall make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.	The company has made arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling by providing various safety measures & process interlocks.
xviii)	An on-site and off-site emergency plan including mock drills along with awareness campaigns for villagers/local communities in the impact zone shall be prepared and implemented.	An On-Site & Off-Site Emergency Plan are already made.  Mock Drill is being conducted annually.
xix)	All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 30 <sup>th</sup> August, 2013 shall be satisfactorily implemented.	Company shall do needful to fulfil all the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 30 <sup>th</sup> August, 2013.
xx)	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on the public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.	Company shall spend at least 5% of the total cost of Project towards Enterprise Social Commitment.  Also, company shall submit the plan about the same to MoEF Bhopal.

xxi)	Provision shall be made for the housing for the construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc.	For construction workers all necessary infrastructure & facility including fuel for cooking, mobile toilets, safe drinking water, medical health care crèche etc. were provided.
	The housing may be in the form of temporary structure to be removed after the completion of the project.	The housing in form of temporary structure were provided which were removed on completion of work.
	All the construction wastes shall be managed so that there is no impact on the surrounding environment.	The construction waste was managed properly to avoid any impact on surrounding environment.
B.	GENERAL CONDITIONS:	
i.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited assures to comply with this condition.
ji.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited assures to comply with this condition.
III.	The locations of ambient air quality monitoring stations shall be decided in consultation with the Gujarat Pollution Control Board (GPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	The locations of ambient air quality monitoring stations are decided in consultation with GPCB with one station in the upwind and one station in downwind direction.  Regular Monitoring is being done.
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, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noise control measures including acoustic hoods, silencers, enclosures etc. has been considered in engineering design of relevant section & are provided to all possible sources of noise generation to meet the standards prescribed under Environment (Protection) Act, 1989.
V.	The company shall harvest rainwater from the rooftops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Planning is already done for Rain Water Harvesting.
vi.	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic wastewater and storm water drains.	Proper designing for material handling will ensure no or minimum spillage of chemicals.  Separate Process Drain circuit will be laid independent to Storm Water Drain & Domestic Water Drain.

vii.	Usage of Personnel Protection Equipment by all employees/workers shall be ensured.	Company is arranging for necessary PPE for all employees on joining. Damaged PPEs are replaced immediately on requirement basis.
		Also frequent training is given to all employees & workmen for proper usage of PPEs.
viii.	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Preemployment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	HR department has developed Training Need Assessment in coordination with EHS for Safety & Health Aspects and on Handling of Chemicals.  Tie up is already done by company with local corporate Hospital for Pre-Employment Medical Check-up & with Factory Inspector approved doctor for annual medical check-up of all employees.
ix.	The company shall also comply with all the environmental protection measures and safeguards proposed in the project report submitted to the Ministry. All the recommendations made in the EIP/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.	Shiva Performance Material Private Limited (Previously Known As M/s. Shiva Pharmachem Limited) Limited assures to comply with all the condition.  Shiva Performance Material Private Limited (Previously Known As M/s. Shiva Pharmachem Limited) Limited has already started implementation of recommendations made in the EIP/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project.
x.	The company shall undertake CSR activities and all relevant measures for improving the socio-economic conditions of the surrounding area.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited assures to take up CSR activities as confirmed earlier.  Details of CSR Expenditure is attached herewith as Annexure III.
xi.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited has undertaken ecodevelopmental measures including community welfare measures in the project area for the overall improvement of the environment.
xii.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Separate Environment Management Cell as guided is already set.
xiv.	The company shall earmark sufficient funds for recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Funds under a separate budget head have been earmarked for environmental protection. These funds are exclusively for environment management / pollution control measures and are not utilized for any other purpose.

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xv.	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 who suggestions/representations, if any, were received while processing the proposal.	Company has already sent copy of clearance letter to Karakhadi Gram Panchayat.
xvi.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF, the respective Zonal office of CPCB and the Gujarat Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the Bhopal Regional Offices of MoEF by e-mail.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited assures to submit Six Monthly reports to the bodies as advised.
xvii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/ Committee and may also be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local 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 shall be forwarded to the concerned Regional Office of the Ministry.	Shiva Performance Material Private Limited (Previously Known As M/s.Shiva Pharmachem Limited) Limited has compiled with this condition & a copy of Public Notice for obtained EC in two local newspapers is enclosed herewith in Annexure VI.
xviii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	The Date of Financial Closure – March 2016.  Final approval of the Project by the concerned authorities – Consolidated Consent & Authorization (CC&A) was granted by GPCB vide consent order No. AWH-7 dated 17/03/2016.
		The date of commencing land development work – 01/06/2012.
		Plot No. 20 Plot N