



ADM/ENV/2024-25/ 10

27.05.2024

To,  
The Secretary  
State Level Impact Assessment Authority  
Dept. Of Forest Ecology & Environment  
7<sup>th</sup> Floor, 4<sup>th</sup> Gate MS Building  
Bengaluru-560001

Dear Sir,

**Sub:** Six Monthly Compliance report of Environment Clearance issued Ref No. SEIAA 10 IND 2015 dated 10.11.2016 for the period October 2023 to March-2024.

At the outset we thank you very much for granting Environment Clearance to our unit for the expansion of membrane cell based Caustic Soda Plant (Brown Field Chlor-Alkali Plant) from 59400 MTPA to 100000 MTPA at Binaga, Karwar Taluk Uttar Kannada.

As per the EC condition, kindly find attached our EC compliance for the period from October 2023 to March-2024.

❖ EC Amendment obtained from MoEF & CC on dated 15.03.2024.

Hope we have complied /clarified all the points referred in Environmental Clearance.

Thanking You,

Yours faithfully,

For Grasim Industries Ltd,  
Chemical Division, Karwar

(Kush Sharma)

Unit Head

Encl : Annexure-1 to Annexure-8

**Grasim Industries Limited**

Chemical Division, Karwar  
P.O. Binaga 581 307  
Dist. Uttar Kannada, Karnataka, India

Telephone +91 8382 230514,230174,178  
Fax +91-8382-230468

Website www.grasim.com  
CIN L17124MP1947PLC000410  
Email grasimchem@grasim.com


Regd Office : P.O. Birlagram, Nagda - 456 331 (M.P.)

Name of the Project	:	Expansion of Membrane Cell Based Caustic Soda Plant (Brown Field Chlor-Alkali Plant) from 59,400 MTPA to 1,00,000 MTPA at Binaga, Karwar Taluk, Ultra Kannada District of M/s Grasim Industries Limited - Issue of Environment Clearance - Reg.
Environment Clearance Letter No.	:	SEIAA 10 IND 2015
Period of Compliance Report	:	Oct-23 to March -2024


S.N.	Details of Conditions			Compliance Status
1.	The proposal is for the manufacturing the following Chlor-Alkali chemical products			
	S. N.	Products	Installed capacity MT/ Annum	Production in MT (for the Half Year)
	1	Caustic Soda	100000	36954
	2	Chlorine Generation	88750	32797
	3	Hydrochloric Acid (100%)	50400	23664
	4	Liquid Chlorine	39011	9248
	5	Sodium Hypo Chlorite	720	524
	6	Compressed Hydrogen	7956000 NM3	376476.74 NM3
	7	Dilute Sulphuric Acid (78 %)	1029	198

#### Part A – SPECIFIC CONDITION

1.	Fresh Water 3326 KLD after the proposed expansion shall be met through the Karnataka urban water supply and drainage board only. No ground water shall be tapped in any case for the project requirement.	Noted & Complied. Fresh Water consumption for the period of Oct-23 to March -2024 is 2242 KLD.
2.	Waste water generated from DM plant, Boiler blow down, HCl preparation, recovery from Caustic Soda evaporation plant of total 570 KLD shall be reused in process plant.	Total 594 KLD Waste water reused in process plant for the Period from Oct-23 to March -2024.
3.	1410 KLD of treated effluent from ETP confirming to CPCB/ KSPCB norms shall be discharged into the sea through existing pipeline.	Being Complied. Treated effluent from ETP is discharged into the sea. Treated effluent is monthly monitored for required parameters & meets with KSPCB stipulated norms. Details of the same is attached in <b>Annexure-1</b> . (NABL/MoEF approved Laboratory Analysis report)
4.	ETP shall be operated regularly and efficiently so as to achieve the prescribed norms at the final outlet.	Noted & Being complied. ETP is operated regularly and efficiently in order to meet norms at the final outlet. Analysis results of treated effluent is given in <b>Annexure- 1</b> (NABL/MoEF approved Laboratory Analysis report)
5.	The unit shall provide metering facility at the inlet and outlet of the ETPs and maintain the records of the same. The unit shall also provide online pH and	Noted & Being complied. Flow meter has been provided at ETP.



	TDS meter for the online monitoring of the treated effluent.	Online pH, TSS and Flow monitoring system has been provided and is connected to CPCB server. As per CPCB Guidelines for Real-time Effluent Quality Monitoring System dated 07.11.2017 & its first revision in July, 2018. For Online Monitoring of treated effluent, parameters applicable for Chlor alkali Plant are pH, TSS & Flow only & the same is monitored. TDS Meter has been provided.
6.	A Proper logbook of STP/ETP operation and also showing quantity of effluent generated utilised Plantation /Gardening etc. shall be maintained and timely furnish to the KSPCB from time to time.	Being Complied. Logbook of ETP/STP is maintained on daily basis and treated effluent use for gardening.
7.	The gaseous emission from the boiler /DG set shall be dispersed to stack of adequate height as per CPCB/KSPCB standard shall be provided. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.	Being Complied. Boiler stack height is as per CPCB norms and DG Sets have been provided with acoustic enclosure to prevent noise pollution. Noise levels are measured and are well within the limit.
8.	Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R No.826 ( E) dated 16 <sup>th</sup> September 2009. The level of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, NH <sub>3</sub> , BaP, Cl <sub>2</sub> , VOC, and HCl shall be monitored in the ambient air and emission from the stack shall be displayed at convenient location at 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-Bangalore, SEIAA - Karnataka, the respective zonal office of CPCB and KSPCB.	Being complied. Ambient Air Quality monitoring is being carried out at three identified locations as per NAAQS for the mentioned parameters. Report of Ambient Air quality and Stack emission monitoring report from NABL/MoEF approved Laboratory is attached as Annexure 2 & 3. A display board has been set up on the factory's main gate at National Highway gate for display and the display board is updated on monthly basis as per format provided by board. Photograph of the display board is given below  Monitoring data is uploaded at Grasim Website on regular basis. Also



		monitoring reports are being sent to the mentioned authorities regularly.
9.	Online Monitoring system shall be installed on the flue gas and process stacks to monitor the pollutant concentrations. An arrangement shall also be made for reflecting the online Monitoring results on the company's server, which can be accessed by the CPCB/KSPCB on real time basis.	<p>Being complied.</p> <p>Online CEMS has been already installed at process vent like HCL-A, B, C, D, E &amp; F Furnaces, Sodium Hypochlorite vents, 10 TPH Coal Fired Boiler &amp; 18 TPH Coal Fired Boiler stacks. Online CEMS was commissioned at HCL E &amp; F Furnace on 31.07.2019.</p> <p>For Monitoring of flue gas (SO<sub>2</sub>/NO<sub>x</sub>) &amp; PM Online CEMS has been also installed at 10 &amp; 18 TPH boilers (Coal Fired). All online CEMS are connected to CPCB server on real time basis.</p> <p>Photographs of OCEMS Analyser is given below:</p> 
10.	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 –Bengaluru, SEIAA- Karnataka, the respective zonal office of CPCB and The KSPCB. The levels of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, Cl <sub>2</sub> and VOC (ambient levels) and emissions from the stack shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.	<p>Being complied.</p> <p>Environment Clearance conditions compliances, Monitoring data is regularly updated on the company's website. Also monitoring reports are being sent to the mentioned authorities regularly.</p> <p>A display board has been set up on the factory's main gate at National Highway gate for public domain and the display board is updated on monthly basis as per format provided by board.</p>
11.	The project proponent shall obtain authorisation for collection, storage and disposal of Hazardous waste under the hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 for management of hazardous wastes and prior permission from KSPCB shall be obtained for collection / treatment / storage /disposal of hazardous wastes. The concerned company shall undertake measures for firefighting facilities in case of emergency.	<p>Noted &amp; being complied.</p> <p>We have obtained authorisation for collection, storage and disposal of Hazardous waste under the hazardous and other wastes (Management and Transboundary Movement) Rules, 2016</p> <p>Number of authorization 331384 dated 20/05/2022 Valid up to: 30/06/2026</p>

12.	In plant control measures for checking fugitive emission for 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 & unloading areas to control dust emission. Fugitive emission in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emission shall conform to the limits stipulated by the KSPCB.	<p>Being complied.</p> <p>For Raw material storage areas like Salt storage, Rock phosphate storage, coal storage closed shed has been provided. Also, shed has been provided for Lime Godown and sodium sulphite bags storage.</p> <p>Water spray arrangements has been made at Coal yard area to control dust emission.</p> <p>10 TPH &amp; 18 TPH Coal Fired boiler is provided with bag filter to control the stack emission. Also Silo ash conditioner is provided to minimize the fugitive dust emission while unloading of fly ash from silo.</p> <p>Fugitive emission monitoring is being carried out on regular basis and it is well within the limit. Details of the same is attached at <b>Annexure-4</b></p>
13.	Regular monitoring of ground level concentration of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , Cl <sub>2</sub> , NH <sub>3</sub> , CO, and HCl shall be carried out in the impact zone and its records shall be maintained. Ambient air quality level shall not exceed the standards stipulated by Karnataka State Pollution Control Board. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with KSPCB.	<p>Being complied.</p> <p>Regular Monitoring is being carried out by NABL/ MoEF approved laboratory and the report is attached as <b>Annexure 2</b>. Monitoring locations has been decided in consultation with KSPCB and monitoring results of all parameters are well within the prescribed norms.</p>
14.	Caustic scrubber shall be provided with Chlorine Absorption unit -Hypo Plant and Water/Caustic scrubber shall be provided with HCL plant as Air Pollution Control Equipment for control of Cl <sub>2</sub> & HCL.	<p>Being complied.</p> <p>For control measures, Caustic scrubber has been provided at hypo plant and water scrubbers at HCL plant to control Cl<sub>2</sub> &amp; HCL &amp; emissions are well within stipulated norms.</p>
15.	The air pollution control systems shall be operated efficiently & effectively to achieve the norms prescribed by the CPCB/KSPCB at vent/stack outlets.	<p>Being complied.</p> <p>Suitable APCEs has been installed at various units of the Plant &amp; are working efficiently and emissions are well within the norms. Details of APCE's are given in <b>Annexure-5</b>.</p>
16.	The air pollution control system shall be designed and bag filter shall be provided to the boilers to control particulate emissions.	<p>Being complied.</p> <p>Bag filters have been provided to boilers (Coal fired) of 10 &amp; 18 TPH to control Particulate emissions (PM)</p>
17.	Third party monitoring of the functioning of the bag filter along with its efficiency shall be carried out once in a year through a reputed institute/organization.	<p>Being complied.</p> <p>Third party monitoring of bag filter is being carried out by MoEF /NABL approved laboratory.</p>





		<p>Bag filter efficiency test for Coal fired Boilers of 18 TPH and 10 TPH is done in the month of Dec'23 &amp; March 2024.</p> <p><b>Annexure-6.</b></p>
18.	Imported Coal used in the Coal fire Boiler shall not exceeds 31,104 MT/Annum	<p>Being complied.</p> <p>Imported coal used in the coal fire Boiler for the period of Oct23 to March -2024 is 8976 MT.</p>
19.	Imported Coal to be used shall have Sulphur content and Ash content not exceeding 1% and 20% respectively.	<p>Being complied.</p> <p>GIL, Karwar is using Imported Coal with Sulphur content below 1 % &amp; Ash Content is &lt; 10% .</p>
20.	Emission of Sulphur shall not exceed the prescribed standards.	<p>Noted &amp; being complied.</p> <p>However, SO<sub>2</sub> &amp; NO<sub>x</sub> is monitor &amp; result is within Boiler norms.</p>
21.	Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.	<p>Noted &amp; being complied.</p> <p>Boiler Ash is being stored separately. Fly ash is stored in Covered flyash shed.</p>  <p>No direct exposure of fly ash &amp; dust is there with the workers. Also, All workers are provided with the required PPEs.</p>
22.	The coal to be stored in stockyard on impervious layer in a covered shed and along the boundary garland canal to be provided leading to an exit pond/tank to arrest coal dust run-off and to allow settling of coal fines. The coal fines to be removed periodically.	<p>Noted &amp; being complied.</p> <p>Coal is stored in covered shed. Covered shed is having RCC ground floor, dedicated boundary with RCC is there to covered surrounding of shed.</p>  <p>RCC open drain has been provided surrounding to ensure rain water flow and also coal fines are removed from time to time.</p>

23.	Adequate storage facility for the fly ash in term of closed silos shall be provided at site. No ash pond shall be constructed.	Noted. Closed Silo has been provided for Fly ash in the Boiler area. Also, the fly ash generation is very less and is being supplied to brick manufacturers and care is being taken.
24.	Handling of the fly ash shall be through a closed pneumatic system and ash shall be handled only in dry state.	Noted & being complied.
25.	The fly ash shall be supplied to the manufactures of fly ash based products such as cement, bricks manufacturing, etc. The unit shall strictly comply with the Fly Ash Notification under E (P) ACT, 1986 and it shall be ensured that there is 100% utilization fly ash to be generated from the unit.	Noted & being complied. Fly ash is being supplied to the Brick manufacturer.
26.	<p>The fugitive emission in the work zone environment shall be monitored. Emission shall confirm to the standard prescribed by the concerned authorities from time to time. Following indicative guidelines shall also be followed to reduce the fugitive emission</p> <ol style="list-style-type: none"> <li>All handling and transport of imported coal shall be excessive through covered coal conveyers only.</li> <li>Enclosure shall be provided at coal loading and unloading operations.</li> <li>Water shall be sprinkled on Coal stock piles periodically to retain some moisture in top layer and also while compacting to reduce the fugitive emission.</li> <li>All the vessels used and transfer points in the manufacturing process shall be closed to reduce the fugitive emission.</li> <li>Adequate dust separation/extraction system at crusher house as well as for the Coal stock yard and other vulnerable areas shall be provided to abate dust nuisance.</li> <li>Accumulated Coal dust/fly ash on the ground and other surfaces shall be removed/swept regularly and water the area after sweeping.</li> <li>Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.</li> <li>Air born dust shall be controlled with water sprinklers at suitable location in the plant.</li> <li>Coal shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only.</li> <li>A greenbelt shall be developed all around the plant boundary and also along the roads to mitigate fugitive and transport dust emission.</li> </ol>	<p>Being complied.</p> <p>Fugitive emission monitoring is carried out on regular basis and is within the limits.</p> <ol style="list-style-type: none"> <li>Coal Handling is done under covered area &amp; is transported via covered conveyor belt.</li> <li>Coal unloading is done in covered coal storage by JCB.</li> <li>Water Spraying is done on coal at coal storage yard.</li> <li>Conveyor belt has been covered to avoid dust emissions.</li> <li>Closed crusher house has been installed due to less capacity of coal plant. Coal storage area is covered with the shed.</li> <li>Coal dust and Fly ash collecting area is maintained well at regular basis.</li> <li>RCC concrete roads are constructed inside the plant and from NH gate to Material Gate to avoid/reduce, the fugitive emission during the regular movement of vehicles.</li> <li>Water Spraying is done on coal at coal storage yard.</li> <li>Coal truck is being covered by tarpaulin. Fly ash is being transported in tippers covered by tarpaulin.</li> </ol>

		<p><b>Coal Truck covered by Tarpaulin</b></p>  <p><b>Flyash covered by tarpaulin during transportation</b></p>  <p>j) Green belt has been developed around the plant boundary and also in the plant area and colony .</p>
27	Unit shall strictly comply with the provision made in Manufacture Storage and Import of Hazardous Chemicals Rules as amended in 2000 for handling of Hazardous Chemicals. All necessary approvals from the concern Government Authorities shall be obtained before expansion of the project	<p><b>Noted &amp; Complied.</b></p> <p>Unit is being strictly complying with the provision made in Manufacture Storage and Import of Hazardous Chemicals Rules as amended in 2000 for handling of Hazardous Chemicals.</p> <p>All necessary approvals from the concern Government Authorities has been obtained for the projects as per applicability.</p>
28.	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic/hazardous chemicals , especially chlorine, hydrogen etc.	<p><b>Being Complied</b></p> <p>All necessary precautionary measures are being taken during storage and handling of toxic/hazardous chemicals, especially chlorine, hydrogen to avoid accident.</p>
29.	Chlorine sensor and Hydrogen sensor with alarm system shall be provided at various locations within plant premises.	<p><b>Being complied.</b></p> <p>31 Nos. Chlorine &amp; 09 Nos. Hydrogen sensors are provided at respective sections inside plant boundaries.</p>



		  <p>Sensor details attached as Annexure-7.</p>
30.	All the materials especially chlorine, hydrogen etc. shall be stored in optimum quantity and all necessary permissions in this regards shall be obtained before commencing the expansion activities.	<p>Noted &amp; Complied.</p> <p>Chlorine is being stored within approved quantity as per PESO approval in Chlorine bullets.</p> <p>Hydrogen is being generated from electrolysis process is utilized in production HCL manufacturing.</p>
31.	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. A well-designed fire hydrant system shall be installed as per the prevailing standards.	<p>Being complied</p> <p>Fire hydrant line has been installed at all sections and also fire tender is available in case of any emergency.</p>
32.	Storage and use of hazardous chemicals shall be minimized to the extent possible and all necessary precautions shall be taken to mitigate the risk generated out of it. Storage of hazardous chemicals shall be in multiple small capacity tanks/containers instead of one single large capacity tank for safety purpose.	<p>Noted &amp; being complied.</p> <p>Storage and use of hazardous chemicals is being done according to the prevailing rules &amp; regulation.</p>
33.	During material transfer, spillages shall be avoided and garland drain be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.	<p>Noted &amp; being complied.</p> <p>For the storage of materials, concrete floor having RCC ground floor dedicated boundary of RCC is there to covered surrounding of sheds, closed system has been provided at the unit in order to avoid spillages. RCC open drain has been provided at surrounding to ensure rain water flow to avoid mixing of accidental spillages with domestic wastewater or storm water.</p>
34.	All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Bund /dyke walls shall be provided for storage tanks for Hazardous	<p>Noted &amp; being complied.</p> <p>Bund and dyke walls have been provided for storage tank for hazardous chemical</p>

	Chemicals. Close handling system for chemicals shall be provided.	closed handling system for chemical are also provided.
35.	Personal Protective Equipment's shall be provided to workers and its usage shall be ensured and supervised.	Noted & being complied. All employees & contract workers have been provided with necessary required PPE's.
36.	Training shall be imparted to all the workers on safety and health aspects of chemicals handling.	Noted & being complied. Trainings are imparted to the employees and workers on safety and health aspects of chemicals handling.
37.	Occupational health surveillance of the workers shall be done and its record shall be maintained. Pre-employment and periodical medical examination for all the workers shall be undertaken as per the factory Act and Rules.	Noted & being complied. Occupational health surveillance of the all employees is being done on regular basis and records are maintained. Pre-employment and periodical medical examination for all the workers is being carried out as per the factory Act and Rules
38.	Handling and charging of the chemicals shall be done in such a manner that minimal human exposure occurs.	Noted & being complied. Handling and Charging of chemical is being done with minimal human exposure.
39.	Transportation of Hazardous Chemicals shall be done as per the provision of the Motor Vehicle Act and Rules.	Noted & being complied. Transportation of Hazardous Chemicals is being done as per the provision of the Motor Vehicle Act and Rules
40.	The overall noise level in and around the plant area shall be kept well within the prescribed standards by providing Noise control measures including acoustic insulation, hoods, silencers, enclosures, vibration, dampers etc. on all sources of noise generation. The Ambient noise levels shall confirm to the standards prescribed under the Environment (protection) Act and Rules. Work place noise level for workers shall be as per the Factories Act and Rules.	Noted & being complied Regular monitoring of ambient noise level is carried out and the report is enclosed as Work place noise level monitoring for workers is regularly conducted. <b>Annexure 8.</b>
41.	Greenbelt shall be developed in at least 33% of area with suitable places of the plant as per the CPCB guidelines to mitigate the effects of fugitive emission. Selection of plant species shall be as per the CPCB guidelines.	Noted & being Complied. Total Plant area is 256.51 acres and out of total area, more than 60 % area is already under greenbelt and plantation. We have planted 150 Nos. of saplings inside Plant Premises & Colony FY 2023-24, Varieties of plants planted are Ashoka,Neem,Cashew etc.
42.	The company shall harvest surface as well as rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	Noted & Being Complied. The Company has provided Wells for collecting Rainwater and run off water to recharge the ground water level and a system is in place to pump and reuse the water inside the plant to conserve fresh water.



43.	To project proponent shall install energy efficient devices and appliances confirming to the bureau of energy efficiency norms.	Noted & Complied. GIL, Karwar has installed energy efficient devices and appliances confirming to the bureau of energy efficiency norms.
44.	The energy audit shall be conducted at regular intervals and the recommendation of the audit report shall be implemented.	Energy Audit done by BEE authorized auditor & report submitted to BEE Delhi and recommendation implemented.
45.	The company shall undertake following waste minimisation measures a. Metering and control of quantities of active ingredients to minimise waste. b. Re use of by products from the process as raw materials or raw materials substitute in other process. c. Use of automated and enclosed filling to minimise spillages. d. Use of washing of high pressure hoses for cleaning to reduce waste water generation. e. Leakages from the pipes, pumps shall be minimal and if occurs shall be arrested promptly.	Noted & Complied. a) Company is taking care for the reduction of waste by using quality purity of raw material for the minimization of waste. b) Chlorine & Hydrogen are two by product in Caustic Soda plant, which is being utilized in manufacturing in HCL and liquid chlorine, also waste chlorine is gets absorbed in caustic solution resulting by-product Sodium Hypochlorite. c) Filling is done through automatic system with enclosed containment provision. d) No major washing activity required in the process. However, the waste water is recycled in various other process to reduce waste water generation. Floor washing waste water is being treated in Caustic ETP and Treated waste water is being consumed in the PA Plant ETP. e) In place of single seal pump, double seal pump is provided to ensure no leakages from the pump. Daily inspection is carried out, for better monitoring and leakages also dyke wall is provided at Hazardous chemical storage area.
46.	Pucca flooring/impervious layer shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.	Noted & being complied. Work areas are provided with the Flooring. At chemical storage handling area flooring with acid tiling is done with dyke wall. At filling station containment provision is provided.
47.	The adequate financial provisions shall be made in the budget of project for implementation of the above suggested environmental safeguards. Fund so earmarked shall not be diverted for any other purpose.	Noted Being Complied. Every year, taken budget for implementation of the environmental safeguards and fund is utilised for environment protection and abatement of pollution.



48.	All the recommendation made in the EIA/EMP and other documents submitted by the project proponent shall be strictly implemented.	Being complied. All the recommendation made in the EIA/EMP and other documents submitted by the Company are being implemented strictly.
49.	The project proponent shall comply with the recommendation made in the EIA/EMP/Risk assessment report. Recommendations made in the Risk Assessment Study Report submitted by the project proponent shall be vigorously implemented.	GIL, Karwar is complying with the recommendation made in the EIA/EMP/Risk Assessment Report.
50.	Storage facilities for the fuel shall be made in the plant area in consultation with Department of Explosives, Nagpur. Disaster Management plan shall be prepared to meet any eventuality in case of an accident taking place due to storage or Fuel.	Being complied. Storage facilities for the fuel has been made in the plant area in consultation with Department of Explosives, Nagpur. On Site Emergency plan, Disaster Management plan has been prepared. Onsite as well as Offsite emergency plan has been prepared.
51.	The Project authorities also shall earmark at least 5% of the total cost of the project towards the corporate social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Authority.	Noted Please. CSR activities are guided by the ABG Group CSR activities are guided by the ABG Group. CSR amount spent towards different work for this financial year 23-24 is 31.75 Lacs.

#### **B. GENERAL CONDITIONS**

S.N.	Details of Conditions	Compliance Status
1.	The project authorities shall strictly adhere to the stipulations made by the Karnataka State Pollution Control Board (KSPCB).	Noted & being complied.
2.	At no time, the emission shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Noted Please. At no time, the emission levels exceed the stipulated standards as proper measure are being taken for the same. No event of failure of pollution control system(s) has occurred till date. Control measures are being/will be adopted to avoid such an event.
3.	No further expansion or modification in the plant shall be carried out without prior approval of the SEIAA/Ministry of Environment and Forests as the case may be. In case of deviations or alternations in the project proposal from those submitted to this Authority for clearance, a fresh reference shall be made to the Authority to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted Please. No further expansion or modification in the plant has been carried out without prior approval of the SEIAA/Ministry of Environment and Forests.

4.	The gaseous emission ( $PM_{10}$ , $PM_{2.5}$ , $SO_2$ , $NO_x$ , $NH_3$ , BaP, CO, VOC) and Particulate Matter along with RSPM levels from various process units shall confirm to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack monitoring for $PM_{10}$ , $PM_{2.5}$ , $SO_2$ , $NO_x$ , CO, VOC shall be carried.	Noted and Complied.  Ambient & Stack Monitoring results are attached as Annexure-2 & 3. At no time, the emission levels exceed the stipulated standards as proper measure are being taken for the same. No event of failure of pollution control system(s) has occurred till date. Control measures are being/will be adopted to avoid such an event.
5.	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as mentioned in October 1994 and January 2000. All transportation of Hazardous Chemicals shall be as per the MVA, 1989. Authorisation from the KSPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Noted & being complied. Rules and regulations under Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as mentioned in October 1994 and January 2000 are complied. All transportation of Hazardous chemicals is being done as per Motor Vehicles Act, 1989. We have obtained authorisation for collection, storage and disposal of Hazardous waste under the hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 Authorisation no 331384 dated 20.05.2022 Valid up to 30/06/2026.
6.	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 and other Wastes (Management and Transboundary Movement) Rules, 2016. Authorisation from the KSPCB must be obtained for collection/treatment/storage/disposal of hazardous wastes.	Noted & being complied. We have obtained authorisation for collection, storage and disposal of Hazardous waste under the hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 Authorisation no 331384 dated 20/05/2022 Valid up to 30/06/2026.
7.	Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for lighting and heating should be provided. Details in this regard should be submitted to the SEIAA.	We are procuring solar power through grid network. About 80% off our total power is procured through renewal energy .

8.	The overall noise level in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencer, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, Rules, 1989 viz. dBA (day time) and 70 dBA (night time).	Noted & being complied. Acoustic enclosure has been provided for the DG sets and the area is covered by trees. Ambient Noise level is monitored at regular intervals. Report is attached as Annexure-8.
9.	The project proponent shall also comply with all the environmental protection measures and safeguards as per the information provided.	Noted & Being Complied.
10.	The implementation of the project vis-a-vis environmental action plans shall be monitored by MoEF, Regional Office at Bengaluru/KSPCB/CPCB and the Regional Director (Environment), Department of Environment and Ecology, Government of Karnataka, Karwar. A six monthly compliance status report shall be submitted to monitoring agencies.	Noted and compiled GIL, Karwar have been submitting the six monthly EC compliance report every year.  Last Six monthly EC compliance report was submitted on 30.11.2023
11.	The project proponent shall inform the public that the project has been accorded environmental clearance by the SEIAA and copies of the clearance letter are available with the KSPCB and may also be seen at Website of the Authority at <a href="http://www.seiaa.kar.nic.in">http://www.seiaa.kar.nic.in</a> or <a href="http://www.seiaa.karnataka.gov.in">http://www.seiaa.karnataka.gov.in</a> , <a href="http://www.environmentclearance.nic.in">http://www.environmentclearance.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that 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 MoEF Regional Office at Bengaluru/KSPCB/CPCB/ and the Regional Director (Environment), Department of Environment and Ecology, Government of Karnataka, Karwar.	Noted & complied.  EC letter has been already published in the local newspaper.
12.	The project authorities shall inform the MoEF Regional Office at Bengaluru/KSPCB/CPCB and the Department of Ecology and Environment, Bengaluru, the date of financial closure and financial approval of the project by the concerned authorities and the date of start of the project.	<ul style="list-style-type: none"> <li>• Date of Financial approval-30.06.2016.</li> <li>• Date of Start of the project -20.05.2017</li> </ul>
13.	The SEIAA, Karnataka may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted Please.



14.	The SEIAA, Karnataka reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Noted Please.
15.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted Please.
16.	The issue of Environment Clearance doesn't confer any right to the project proponent to operate/ run the project without obtaining statutory clearances/ sanctions from all other concerned Authorities.	Noted Please.
17.	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted Please.
18.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted Please.
19.	Officials from the Department of Environment and Ecology, Bengaluru/ Regional Office of MoEF, Bengaluru who would be monitoring the implementation of Environmental safeguards should be given full cooperation, facilities and documents/ data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF/ SEIAA should be forwarded to the APCCF, Regional Office of MoEF, Bengaluru the Regional Director (Environment), Department of Environment and Ecology, Government of Karnataka, Karwar/ Regional Officer, KSPCB Bengaluru	Noted and Being Complied.
20.	In case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.	Agreed & Noted Please.

21.	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provision of the Environment(Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Agreed & Noted Please.
22.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the competent authorities.	Noted and Complied. All statutory clearances has been obtained as applicable for the project.
23.	These stipulations would be enforced among others under the provision of water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 2006.	Noted and Complied.
24.	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it is found that construction of the project has been started without obtaining environmental clearance.	Noted Please.



# MSV Analytical Laboratories

Recognition by MoEF Under Environment (Protection) Act, 1986  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16, T.S No 695 / A / 32 / B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Bellary - 583103. Contact No : Mob: 9449803895, (O):9045456764, 08392-255169  
E-mail : msvabellary2018@gmail.com, labmsv@gmail.com Website : www.msvabellary.com

MSVAL/AN/RF/01/00

Page 2 of 2

## ANALYSIS REPORT OF WASTE WATER QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Sample Marked as : Treated water
3. Name of the location : Effluent Treatment Plant
4. Sample Collected By : MSV Analytical Laboratories
5. Sample quantity : Pet Bottle, 10 Liter.
6. Sample Description/condition : Good/Satisfactory
7. Date of Sample Collection : 20.03.2024
8. Date of sample receipt : 20.03.2024
9. Sample Code : 2630
10. Analysis Starting Date : 20.03.2024
11. Analysis Completion Date : 25.03.2024
12. Report Issue Date : 25.03.2024

Discipline: Chemical Group: Pollution & Environment Sub Group: Waste Water ULR NO: MSVAL/2024/1714

S.no	Parameters	Protocol	Unit	Result	Tolerance Limit as per KSPCB Standards
18	Free Ammonia	IS 2488(Part-6)	mg/L	0.86	Max 5
19	Mercury (as Hg)	IS 3025(part-48)	mg/L	<0.001	-
20	Bioassay	IS:6582-1971(RA-2003)	-	As per condition C - 7	
21	Bio - Monitoring Test	-	-	Fish Survives in 5% solution of treated effluent	

INFERENCE	As per KSPCB Standards Report Status: - The analyzed values for above measured parameters are within the limits.
-----------	---

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.  
2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Gases and minerals filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. I.C samples will be discarded after 1 month from the date of test reports.  
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.  
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.  
5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695/AJ32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (D) : 9945456764, 08392-255169  
Email : msvalbellary2016@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



MSVAL/AN/RF/01/00  
Page 1 of 2

## ANALYSIS REPORT OF WASTE WATER QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Sample Marked as : Treated water
3. Name of the location : Effluent Treatment Plant
4. Sample Collected By : MSV Analytical Laboratories
5. Sample quantity : Pet Bottle, 10 Liter.
6. Sample Description/condition : Good/Satisfactory
7. Date of Sample Collection : 20.03.2024
8. Date of sample receipt : 20.03.2024
9. Sample Code : 10223
10. Analysis Starting Date : 20.03.2024
11. Analysis Completion Date : 25.03.2024
12. Report Issue Date : 25.03.2024

Discipline: Chemical    Group: Pollution & Environment    Sub Group: Waste Water    ULR NO: TC407124000007046F

S.no	Parameters	Protocol	Unit	Result	Tolerance Limit as per KSPCB Standards
1	Color	IS : 3025(Part-4)	-	Colorless	Colorless
2	Odor	IS : 3025(Part-5)	-	Odorless	Odorless
3	Temperature	2550 B-APHA 23 <sup>rd</sup> Edition	°C	28	Should not exceed 5°C above receiving water temperature
4	pH	4500 H+ B-APHA 23 <sup>rd</sup> Edition	-	6.70	5.5 - 9.0
5	Oil & Grease	5520 D APHA 23 <sup>rd</sup> Edition	mg/L	<1.0	Max 20
6	Total Residual chlorine	IS 3025(Part-26)	mg/L	<0.2	Max 1
7	Ammonical Nitrogen as N	4500-NH <sub>3</sub> C-APHA 23 <sup>rd</sup> Edition	mg/L	1.45	Max 50
8	Total kjeldhal Nitrogen as N	4500-N org B-APHA 23 <sup>rd</sup> Edition	mg/L	4.78	Max 100
9	Bio-chemical Oxygen Demand (3 days at 27°C)	IS-3025:1993(part-44)	mg/L	54.0	Max 100
10	Chemical Oxygen Demand	5230 B-APHA 23 <sup>rd</sup> Edition	mg/L	170.0	Max 250
11	Lead as Pb	3120B-APHA 23 <sup>rd</sup> Edition	mg/L	<0.05	Max 2
12	Copper as Cu	3120B-APHA 23 <sup>rd</sup> Edition	mg/L	<0.01	Max 3
13	Zinc as Zn	3120B-APHA 23 <sup>rd</sup> Edition	mg/L	1.18	Max 15
14	Fluoride (as F)	4500-F B,D-APHA 23 <sup>rd</sup> Edition	mg/L	6.09	Max 15
15	Sulphide	4500-S2- F APHA 23 <sup>rd</sup> Edition	mg/L	0.81	Max 5
16	Nitrate Nitrogen	IS: 3025(Part-34)	mg/L	4.36	Max 20
17	Total Suspended solids	2540 F APHA 23 <sup>rd</sup> Edition	mg/L	37.0	Max 100



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Gase and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total Liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S.No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94488 03895, (0) : 9945456784, 08392-255169

Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



MSVAL/AA/RF/01/00

Page 1 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada - 581 307
2. Name of the location : Station - 1 OHC (Occupational Health Center)
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler & CO Meter
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 10203
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407124000007034F

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	µg / m <sup>3</sup>	53.58	100
2	Particulate Matter PM <sub>2.5</sub>	IS-5182(Part-24)	µg / m <sup>3</sup>	22.76	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	µg / m <sup>3</sup>	12.04	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	µg / m <sup>3</sup>	17.11	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	µg/m <sup>3</sup>	<0.01	180
6	Lead	IS-5182(Part22)	µg/m <sup>3</sup>	<0.01	1
7	Carbon Monoxide as CO	MSVAL/SOP/A/007	mg/m <sup>3</sup>	0.41	4
8	Ammonia as NH <sub>3</sub>	IS-5182(Part-25)	µg/m <sup>3</sup>	2.10	400
9	Arsenic as As	MSVAL/SOP/AA/005	ng/m <sup>3</sup>	<0.01	6
10	Nickel as Ni	IS-5182(Part-26)	ng/m <sup>3</sup>	<0.01	20

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

- Note:**
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thinblies will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. LC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

MSV/AA/RF/01/00  
(LP-2026)

Recognition by MoEF Under Environment (Protection) Act, 1986  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16, T.S No 695 / A / 32 / D1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalla Road, KEB Circle, Bellary - 583103. Contact No : Mob: 9449803895, (0)9945456764, 08392-255189  
E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/AA/RF/01/00

Page 2 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada-- 581 307
2. Name of the location : Station - 1 OHC(Occupational Health Center)
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 2627
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: MSVAL/2024/1711

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
11	Benzene as C <sub>6</sub> H <sub>6</sub>	IS:5182(part 11)	µg/m <sup>3</sup>	<0.1	5
12	Benzo (α) Pyrene (BaP)	IS:5182(part 12)	ng/m <sup>3</sup>	<0.1	1
13	Toluene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
14	Xylene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
15	Cl <sub>2</sub>	IS 5182 (Part 19)	µg/m <sup>3</sup>	Not Detected	-
16	HCL	EPA METHOD - 8	mg/Nm <sup>3</sup>	Not Detected	-

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by

Authorized Signatory

B.China Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



- Note:
1. The results listed only to the tested samples & applicable parameters.
  2. Water Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, 01 : 9945456764, 08382-255169  
Email : msvlabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



MSVAL/AA/RF/01/00  
Page 1 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada-- 581 307
2. Name of the location : Station 2 - Geca Club
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler & CO Meter
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 10204
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407124000007035F

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	µg / m <sup>3</sup>	40.57	100
2	Particulate Matter PM <sub>2.5</sub>	IS-5182(Part-24)	µg / m <sup>3</sup>	16.92	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	µg / m <sup>3</sup>	11.08	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	µg / m <sup>3</sup>	14.75	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	µg/m <sup>3</sup>	<0.01	180
6	Lead	IS-5182(Part22)	µg/m <sup>3</sup>	<0.01	1
7	Carbon Monoxide as CO	MSVAL/SOP/A/007	mg/m <sup>3</sup>	0.25	4
8	Ammonia as NH <sub>3</sub>	IS-5182(Part-25)	µg/m <sup>3</sup>	1.46	400
9	Arsenic as As	MSVAL/SOP/AA/005	ng/m <sup>3</sup>	<0.01	6
10	Nickel as Ni	IS-5182(Part-26)	ng/m <sup>3</sup>	<0.01	20

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. One and minerals filter papers & Trimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF Under Environment (Protection) Act, 1986  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18, T.S No 695 / A / 32 / B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sangarakalla Road, KEB Circle, Bellary - 583103, Contact No : Mob: 9449303895, (D):9945456764, 08392-255169  
E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/AA/RF/01/00

Page 2 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada-- 581 307
2. Name of the location : Station 2 - Geca Club
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 2628
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: MSVAL/2024/1712

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
11	Benzene as C <sub>6</sub> H <sub>6</sub>	IS:5182(part 11)	µg/m <sup>3</sup>	<0.1	5
12	Benzo (a) Pyrene (BaP)	IS:5182(part 12)	ng/m <sup>3</sup>	<0.1	1
13	Toluene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
14	Xylene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
15	Cl <sub>2</sub>	IS 5182 (Part 19)	µg/m <sup>3</sup>	Not Detected	-
16	HCL	EPA METHOD - 8	mg/Nm <sup>3</sup>	Not Detected	-

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



- Note:
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days, Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No. 16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganskalku Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255189  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



TC-4071

MSVAL/AA/RF/01/00

Page 1 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada - 581 307
2. Name of the location : Station 3 - Guest House
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler & CO Meter
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 10205
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407124000007036F

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	µg / m <sup>3</sup>	35.62	100
2	Particulate Matter PM <sub>2.5</sub>	IS-5182(Part-24)	µg / m <sup>3</sup>	13.48	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	µg / m <sup>3</sup>	10.50	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	µg / m <sup>3</sup>	13.92	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	µg/m <sup>3</sup>	<0.01	180
6	Lead	IS-5182(Part22)	µg/m <sup>3</sup>	<0.01	1
7	Carbon Monoxide as CO	MSVAL/SOP/A/007	mg/m <sup>3</sup>	0.15	4
8	Ammonia as NH <sub>3</sub>	IS-5182(Part-25)	µg/m <sup>3</sup>	0.90	400
9	Arsenic as As	MSVAL/SOP/AA/005	ng/m <sup>3</sup>	<0.01	6
10	Nickel as Ni	IS-5182(Part-26)	ng/m <sup>3</sup>	<0.01	20

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



- Note:** 1. The results listed only to the tested samples & applicable parameters.  
2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.  
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.  
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.  
5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF Under Environment (Protection) Act, 1986  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16, T.S No 695 / A / 32 / B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalle Road, KEB Circle, Bellary - 583103. Contact No : Mob: 9449803895, (D):9945456754, 08392-255169  
E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/AA/RF/01/00

Page 2 of 2

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada - 581 307
2. Name of the location : Station 3 - Guest House
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with FDS GTI-131, RDS APM-460,  
Benzene Sampler
5. Duration of Monitoring : 24 Hours
6. Date of Monitoring : 19.03.2024
7. Date of Sample Receipt : 20.03.2024
8. Sample Code : 2629
9. Analysis Starting Date : 20.03.2024
10. Analysis Completion Date : 25.03.2024
11. Report Issue Date : 25.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: MSVAL/2024/1713

S.No	Parameter	Protocols	Units	Result in Avg.	Standards
11	Benzene as C <sub>6</sub> H <sub>6</sub>	IS:5182(part 11)	µg/m <sup>3</sup>	<0.1	5
12	Benzo (α) Pyrene (BaP)	IS:5182(part 12)	ng/m <sup>3</sup>	<0.1	1
13	Toluene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
14	Xylene	IS 5182 (Part 11)	µg/m <sup>3</sup>	<0.5	-
15	Cl <sub>2</sub>	IS 5182 (Part 19)	µg/m <sup>3</sup>	Not Detected	-
16	HCL	EPA METHOD - 8	mg/Nm <sup>3</sup>	Not Detected	-

INFERENCE	As per NAAQS Standards
	Report Status: - The analyzed values for above measured parameter are within the limits.

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



- Note:
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 895/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, ID : 9945456764, 08392-255168  
Email : msvlabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Stack ID : 18 TPH Boiler
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10220
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007043F

### GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	Coal
Ambient Temperature (°C)	28
Stack Temperature (°C)	128
Velocity (m/s)	8.61
Height (m)	36
Diameter (m)	1.1
Cross sectional area (m <sup>2</sup> )	0.9507

### RESULTS

Parameters	Protocol	Unit	Result	Standard
Particulate Matter	IS-11255(Part1)	mg/Nm <sup>3</sup>	56.03	150
Sulphur dioxide	IS-11255(Part 2)	mg/Nm <sup>3</sup>	224.1	-
Nitrogen dioxide	IS-11255(Part 7)	mg/Nm <sup>3</sup>	239.5	-
Moisture	IS 11255 (Part-3)	%/mass	1.95	-
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	22121	-

INFERENCE	As per KSPCB Standards,
	Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 895/A/32/81, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sengankallu Road, KEB Circle, Bellari - 583103 Contact No : Mob : 94498 03895, (01) : 9945456764, 08392-255169

Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com

MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Stack ID : 10 TPH Boiler
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 10.12.2023
5. Date of Sample Receipt : 11.12.2023
6. Sample Code : 10377
7. Analysis Starting Date : 11.12.2023
8. Analysis Completion Date : 13.12.2023
9. Report Issue date : 13.12.2023

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack Emission ULR No: MSVAL/2023/6666

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	Coal
Ambient Temperature (°C)	30
Stack Temperature (°C)	129
Velocity (m/s)	8.52
Height (m)	50
Diameter (m)	1.0
Cross sectional area (m <sup>2</sup> )	0.7857

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Particulate Matter	IS-11255(Part1)	mg/Nm <sup>3</sup>	62.15	150
Sulphur dioxide	IS-11255(Part 2)	mg/Nm <sup>3</sup>	124.99	-
Nitrogen dioxide	IS-11255(Part 7)	mg/Nm <sup>3</sup>	109.08	-
Moisture	IS 11255 (Part-3)	%/mass	1.55	-
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	18225	-

INFERENCE	As per KSPCB Standards, Report Status :- The analyzed values for above measured parameter are within the limits
-----------	--

Analysed by



\*\*\* End of Report\*\*\*

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

- Note:**
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ore and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising made without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada - 581 307
2. Stack ID : HCL A Furnace
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10217
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007040F

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	-
Velocity (m/s)	5.92
Height (m)	21.5
Diameter (m)	0.15
Cross sectional area (m <sup>2</sup> )	0.0176

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Acid Mist	MSVAL/SOP/SE/002	mg/Nm <sup>3</sup>	4.12	35
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	304	-

INFERENCE	As per KSPCB Standards, Report Status :- The analyzed values for above measured parameter are within the limits
-----------	--

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water Pollution & Environment & Food samples will be discarded after 10 days. Gases and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 895/A/32/B1, Block No 18 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganskalku Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, 90 : 9945456764, 08392-255169  
Email : msvlabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



MSVAL/SE/RE/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : HCL B Furnace
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10218
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007041F

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	-
Velocity (m/s)	6.28
Height (m)	21.5
Diameter (m)	0.15
Cross sectional area (m <sup>2</sup> )	0.0176

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Acid Mist	MSVAL/SOP/SE/002	mg/Nm <sup>3</sup>	3.95	35
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	323	-

INFERENCE	As per KSPCB Standards,
	Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thermals will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sangenakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (01) 9945456764, 08392 255169  
Email : msvlabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada - 581 307
2. Stack ID : HCL C Furnace
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10216
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007039F

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	-
Velocity (m/s)	6.92
Height (m)	21.5
Diameter (m)	0.15
Cross sectional area (m <sup>2</sup> )	0.0176

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Acid Mist	MSVAL/SOP/SE/002	mg/Nm <sup>3</sup>	5.10	35
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	355	-

INFERENCE	As per KSPCB Standards,
	Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. I.C samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695(A/32/81, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169  
Email : msvlabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



TC- 4071

MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : HCL F Furnace
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10219
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007042F

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	-
Velocity (m/s)	6.65
Height (m)	30
Diameter (m)	0.15
Cross sectional area (m <sup>2</sup> )	0.0176

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Acid Mist	MSVAL/SOP/SE/002	mg/Nm <sup>3</sup>	5.35	35
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	342	-

INFERENCE	As per KSPCB Standards, Report Status :- The analyzed values for above measured parameter are within the limits
-----------	--

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (D) : 9945456764, 08382-255169  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvlabellary.com



MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : Sodium Hypochlorite Plant
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10234
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack emission ULR No: TC407124000007057F

## GENERAL DETAILS

Instrument Used for Sampling	Sample collected with GTI-121
Fuel Used	-
Velocity (m/s)	6.30
Height (m)	21.5
Diameter (m)	0.3
Cross sectional area (m <sup>2</sup> )	0.0707

## RESULTS

Parameters	Protocol	Unit	Result	Standard
Acid Mist	MSVAL/SOP/SE/002	mg/Nm <sup>3</sup>	0.80	15
Gas Discharge Rate	IS 11255(Part-3)	Nm <sup>3</sup> /hr	1294	-

INFERENCE	As per KSPCB Standards,
	Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



- Note:**
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Gases and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 895/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456754, 08392-255189  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



(P-7 of 6)

MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Name of the location : Coal Handling Area
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : 8063
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Fugitive Emission  
ULR No: TC407124000005200F

S. No	Parameter	Protocols	Units	Results
1	Suspended Particulate Matter	IS 5182 Part 4	mg/m <sup>3</sup>	0.56

Analysed by

Authorized Signatory

Hanumanthaiah.P  
Technical Manager

END OF REPORT



- Note:**
1. The results listed only to the tested samples & applicable parameters.
  2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thinplates will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.
  3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
  4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.
  5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S.No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03896, (01) : 9945456754, 08382-255189  
Email : msvabellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvabellary.com



MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Name of the location : Lime Handling Area
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : B064
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Fugitive Emission

ULR No: TC407124000005201F

S. No	Parameter	Protocols	Units	Results
1	Suspended Particulate Matter	IS 5182 Part 4	mg/m <sup>3</sup>	0.51

Analysed by

Authorized Signatory

Hanumanthaiah.P  
Technical Manager

END OF REPORT



**Note:** 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 605/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakalu Road, KEB Circle, Bellari - 583103 Contact No : Mob : 94498 03895, (O) : 9045456764, 08392-255169

Email : msvbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvbellary.com



MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Name of the location : Rock Handling Area
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : 8065
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical  
ULR No: TC407124000005202F

Group: Atmospheric Pollution

Sub Group: Fugitive Emission

S. No	Parameter	Protocols	Units	Results
1	Suspended Particulate Matter	IS 5182 Part 4	mg/m <sup>3</sup>	0.70

Analysed by

Authorized Signatory

Hanumanthaiah.P  
Technical Manager

END OF REPORT



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 18 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalle Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, 9445456764, 08392-255169  
Email : msvalballary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalballary.com



MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Name of the location : HCL Storage Caustic Soda
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : 8066
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical  
ULR No: TC407124000005203F

Group: Atmospheric Pollution

Sub Group: Fugitive Emission

S. No	Parameter	Protocols	Units	Results
1	HCL	IS 5182 Part 4	mg/m <sup>3</sup>	Not Detected

Analysed by

Authorized Signatory

Hanumanthaiah.P  
Technical Manager

END OF REPORT



Note: 1. The results listed only to the listed samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 895(A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalku Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94488 03895, (0) : 9945456784, 08392-255169  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



TC- 4071

MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Name of the location : HCL Storage Phosphoric Acid
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : B067
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Fugitive Emission

ULR No: TC407124000005204F

S. No	Parameter	Protocols	Units	Results
1	HCL	IS 5182 Part 4	mg/m <sup>3</sup>	Not Detected

Analysed by

Authorized Signatory

Hanumanthiah.P  
Technical Manager

END OF REPORT



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. LC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 895/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456754, 08392-255189

Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



TC- 4071

MSVAL/AN/RF/01/00

## ANALYSIS REPORT OF FUGITIVE EMISSION

1. Name and Address of Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Name of the location : Liquid Chlorine Area
3. Sample Collected By : MSV Analytical Laboratories
4. Particulars of the sampling Equipments : Sample collected with High Volume Sampler
5. Duration of Monitoring : 8 Hours
6. Date of Monitoring : 26.02.2024
7. Date of Sample Receipt : 27.02.2024
8. Sample Code : 8073
9. Analysis Starting Date : 27.02.2024
10. Analysis Completion Date : 01.03.2024
11. Report Issue Date : 01.03.2024
12. Sampling Protocol : IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Fugitive Emission

ULR No: TC407124000005210F

S. No	Parameter	Protocols	Units	Results
1	Chlorine	IS 5182 Part 4	mg/m <sup>3</sup>	Not Detected

Analysed by

Authorized Signatory

Hanumanthaiah.P  
Technical Manager

END OF REPORT



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Ballari jurisdiction only.

5. Retention is not more than 6 months otherwise on request.

## Annexure- 5

Grasim Industries Limited  
(Chemical Division, Binaga, Karwar)

**Air Pollution Control Equipment Details (APC'S)**

Sr. No	Air Pollution Sources	Name of APCE's	Attached to	Status
1	10 TPH Boiler (Coal Fired)	Bag Filter	10 TPH Stack	APCE's in working condition
2	18 TPH Boiler (Coal Fired)	Bag Filter	18 TPH Stack	APCE's in working condition
3	Sodium Hypochlorite Scrubber	Caustic Scrubber	Hypo Plant stack	APCE's in working condition
4	Absorption tower for HCL plant	Water Scrubber	HCL Plant Furnace stacks	APCE's in working condition
5	Scrubber for Phosphoric Plant	Water Scrubber	Phosphoric Acid stack	APCE's in working condition





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 18 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Bellari - 583103 Contact No : Mob : 94498 03895, 01 : 9945456764, 08382-255169  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



TC- 4071

MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : 18 TPH Boiler (Bag Filter Efficiency)
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 19.03.2024
5. Date of Sample Receipt : 20.03.2024
6. Sample Code : 10236
7. Analysis Starting Date : 20.03.2024
8. Analysis Completion Date : 25.03.2024
9. Report Issue date : 25.03.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack Emission ULR No: TC407124000007059F

## RESULTS

Sl. No	PARTICULARS	BEFORE APCD (Inlet)	AFTER APCD (Outlet)	DIFFERENCE	% of EFFICIENCY
1	Fuel Used	Coal	Coal	1116.47	95.22%
2	Height (M)	-	36		
3	Diameter (M)	-	1.10		
4	Stack Temperature °C	151	128		
5	Ambient Temperature °C	30	28		
6	Flue Gas Velocity (m/sec.)	9.98	8.61		
7	Particulate Matter (mg/Nm <sup>3</sup> )	1172.5	56.03		

Analysed by

*[Signature]*

Authorized Signatory

*[Signature]*

B.ChinnaLingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Gases and minerals Filter papers & Thinblies will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. I.C samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Bellary - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255189  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com

MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : 18 TPH Boiler (Bag Filter Efficiency)
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 26.12.2023
5. Date of Sample Receipt : 27.12.2023
6. Sample Code : 10375
7. Analysis Starting Date : 28.12.2023
8. Analysis Completion Date : 01.01.2024
9. Report Issue date : 01.01.2024

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack Emission ULR No: MSVAL/2023/6665

## RESULTS

Sl. No	PARTICULARS	BEFORE APCD (Inlet)	AFTER APCD (Outlet)	DIFFERENCE	% of EFFICIENCY
1	Fuel Used	Coal	Coal	1130.08	95.02
2	Height (M)	-	36		
3	Diameter (M)	-	1.10		
4	Stack Temperature °C	154	146		
5	Ambient Temperature °C	31	31		
6	Flue Gas Velocity (m/sec.)	10.11	9.28		
7	Particulate Matter (mg/Nm <sup>3</sup> )	1189.2	59.12		

Analysed by

Authorized Signatory

B.ChinnaLingana Gouda  
Chief executive of the laboratory



**Note:** 1. The results listed only to the tested samples & applicable parameters.  
2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Gases and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. I.C samples will be discarded after 1 month from the date of test reports.  
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.  
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.  
5. Sampling is not done by us unless otherwise specified.





# MSV Analytical Laboratories

(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 895/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakalle Road, KEB Circle, Bellary - 583103 Contact No : Mob : 94498 03695, (0) : 9945456764, 08392 255189  
Email : msvalbelary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbelary.com

MSVAL/SE/RF/01/00

## ANALYSIS REPORT FOR SOURCE EMISSION

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Stack ID : 10 TPH Boiler (Bag Filter Efficiency)
3. Sample Collected By : MSV Analytical Laboratories
4. Date of Monitoring : 10.12.2023
5. Date of Sample Receipt : 11.12.2023
6. Sample Code : 10378
7. Analysis Starting Date : 11.12.2023
8. Analysis Completion Date : 13.12.2023
9. Report Issue date : 13.12.2023

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Stack Emission ULR No: MSVAL/2023/6667

## RESULTS

Sl. No	PARTICULARS	BEFORE APCD (Inlet)	AFTER APCD (Outlet)	DIFFERENCE	% of EFFICIENCY
1	Fuel Used	Coal	Coal	1156.25	94.89
2	Height (M)	-	50		
3	Diameter (M)	-	1.0		
4	Stack Temperature °C	141	129		
5	Ambient Temperature °C	30	30		
6	Flue Gas Velocity (m/sec.)	9.41	8.52		
7	Particulate Matter (mg/Nm <sup>3</sup> )	1218.4	62.15		

Analysed by

Authorized Signatory

B.ChinnaLingana Gouda  
Chief executive of the laboratory



Note: 1. The results listed only to the tested sample & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals filter papers & Thinbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.

Chlorine Hydrogen sensors Details			
Sr.no.	Location	Tag No.	Type of detector
1	Cl <sub>2</sub> compressor	AT-2201	Chlorine detector
2	Cl <sub>2</sub> compressor	AT-2202	Chlorine detector
3	Cl <sub>2</sub> Storage	AT-2401	Chlorine detector
4	Cl <sub>2</sub> Storage	AT-2402	Chlorine detector
5	Cl <sub>2</sub> Storage	AT-2403	Chlorine detector
6	Cl <sub>2</sub> filling	AT-2404	Chlorine detector
7	Cl <sub>2</sub> filling	AT-2405	Chlorine detector
8	Cl <sub>2</sub> filling	AT-2406	Chlorine detector
9	Cl <sub>2</sub> filling	AT-2407	Chlorine detector
10	Cl <sub>2</sub> Storage	AT-2408	Chlorine detector
11	Cl <sub>2</sub> Storage	AT-2409	Chlorine detector
12	Cl <sub>2</sub> cell house	AT-1151	Chlorine detector
13	Cl <sub>2</sub> filling	AT-2411	Chlorine detector
14	Cl <sub>2</sub> filling	AT-2412	Chlorine detector
15	Cl <sub>2</sub> filling	AT-2413	Chlorine detector
16	Hypo	AT-2602	Chlorine detector
17	Padding air	AT-2603	Chlorine detector
18	Cl <sub>2</sub> filling	AT-2410	Chlorine detector
19	Cl <sub>2</sub> 3 <sup>RD</sup> ELECTROLYSER	AT-1154	Chlorine detector
20	Cl <sub>2</sub> WASHING TWR GND	AT-2101	Chlorine detector
21	Cl <sub>2</sub> CDT TNK BLDG	AT-2102	Chlorine detector
22	Cl <sub>2</sub> HYPO BLDG	AT-2604	Chlorine detector
23	Cl <sub>2</sub> WESTSIDE CELL HOUSE	AT-2605	Chlorine detector
24	Cl <sub>2</sub> HYPO DISPATCH	AT-2606	Chlorine detector
25	Cl <sub>2</sub> BOUNDARY WALL	AT-2414	Chlorine detector
26	Cl <sub>2</sub> MATERIAL GATE	AT-2415	Chlorine detector
27	Cl <sub>2</sub> SALT GDWN	AT-0101	Chlorine detector
28	Cl <sub>2</sub> CLNG TWR	AT-7502	Chlorine detector
29	Cl <sub>2</sub> TIME OFFICE	AT-0102	Chlorine detector
30	Cl <sub>2</sub> header HCL Plant	AT-5101	Chlorine detector
31	Old HCL furnace	AT-5102	Chlorine detector
32	Cell house H2	AT-1152	H2 detector
33	Cell house H3	AT-1153	H2 detector
34	H2 sensor at manifold 1	AI-4156	H2 detector
35	H2 sensor at manifold 2	AI-4157	H2 detector
36	H2 sensor near H2 comp 2	AI-4155	H2 detector
37	H2 sensor near H2 comp 1	AI-4154	H2 detector
38	H2 holder outlet near u seal	AI-4158	H2 detector
39	H2 holder inlet near u seal	AI-4159	H2 detector
40	H2 seal pot	AI-4160	H2 detector





# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)  
C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sangankallu Road, KEB Circle, Bellari - 583103 Contact No : Mob : 94498 03885, (0) : 9945456764, 08392-255189  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



MSVAL/AN/RF/01/00

## AMBIENT NOISE LEVEL MONITORING REPORT

1. Name and Address of the Industry : M/s. Grasim Industries Limited,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttar Kannada- 581 307
2. Sample Collected By : MSV Analytical Laboratories
3. Particulars of Sample Collected : Noise meter
4. Date of Monitoring : 19.03.2024
5. Report Issue Date : 25.03.2024
6. Method Adopted : IS 9989: 2020

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Noise ULN NO: TC407124000007037F

S.No	Sample Location	Sample Code	Time Frequency	Results (Day time)			
				Maximum in dB(A) Leq	Minimum in dB(A) Leq	Leq. in dB(A)	Permissible limits in dB(A) Leq
1	Station 1- OHC (Occupational Health Center)	10206	10.50am to 11.05am	67.7	61.4	64.2	75* (6.00am to 10.00pm)
2	Station 4 - Boiler	10207	11.20am to 11.35am	73.8	69.4	71.9	
3	Station 5 - ETP Plant	10208	11.45am to 12.00pm	65.1	60.3	62.5	
4	Station 2 - Geca Club	10209	12.15pm to 12.30pm	51.1	47.9	49.1	55** (6.00am to 10.00pm)
5	Station 3 - Guest House	10210	12.45pm to 01.00pm	45.0	40.3	42.9	

\* Industrial Area Noise Limits, \*\*Residential Area Noise Limits.

INFERENCE	As per KSPCB Standards,
	Report Status :- The Noise level for the all locations is within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

\*\*\* End of Report \*\*\*



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thinbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 & Accredited by NABL  
(Certified by ISO 14001:2015, ISO 45001:2018, ISO 9001:2015, ISO 22000:2018)

C.M.C Ward No 18 & C.T.C W.No.18 T.S No. 895(A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sengankalla Road, KEB Circle, Bellary - 583103 Contact No : Mob : 94488 03895, (0) : 9945456784, 08392-255189  
Email : msvalbellary2018@gmail.com, labmsv@gmail.com Web ID : www.msvalbellary.com



MSVAL/AN/RP/01/00

## AMBIENT NOISE LEVEL MONITORING REPORT

1. Name and Address of the Industry : M/s. Grasim Industries Limited.,  
Chemical Division, Karwar, P.O. Binaga  
Dist - Uttara Kannada- 581 307
2. Sample Collected By : MSV Analytical Laboratories
3. Particulars of Sample Collected : Noise meter
4. Date of Monitoring : 19.03.2024
5. Report Issue Date : 25.03.2024
6. Method Adopted : IS 9989: 2020

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Noise ULR NO: TC407124000007038F

S.No	Sample Location	Sample Code	Time Frequency	Results (Night time)			
				Maximum in dB(A) Leq	Minimum in dB(A) Leq	Leq. in dB(A)	Permissible limits in dB(A) Leq
1	Station 1- OHC (Occupational Health Center)	10211	10.15pm to 10.30pm	65.8	60.1	63.4	70* (10.00pm to 6.00am)
2	Station 4 - Boiler	10212	10.40pm to 10.55pm	67.0	65.4	66.5	
3	Station 5 - ETP Plant	10213	11.05pm to 11.20pm	62.9	57.7	60.8	
4	Station 2 - Ceca Club	10214	11.30pm to 11.45pm	44.1	41.9	43.2	45** (10.00pm to 6.00am)
5	Station 3 - Guest House	10215	11.55pm to 12.10am	43.4	38.7	41.6	

\* Industrial Area Noise Limits, \*\*Residential Area Noise Limits.

INFERENCE	As per KSPCB Standards,
	Report Status :- The Noise level for the all locations is within the limits

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water, Pollution & Environment & Food samples will be discarded after 10 days. Ores and minerals Filter papers & Thimbles will be discarded in 3 months from the date of issue of test reports, unless otherwise specified. ILC samples will be discarded after 1 month from the date of test reports.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary jurisdiction only.

5. Sampling is not done by us unless otherwise specified.