



ADM/ENV/2022-23/ 43

22.11.2022

To,
The Secretary
State Level Impact Assessment Authority
Dept. Of Forest Ecology & Environment
7th Floor, 4th 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 April-2022 to September-2022.

At an 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 April-2022 to September-2022 as per Environment Clearance Compliance Points.

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

Thanking You,

Yours faithfully,

For Grasim Industries Ltd,
Chemical Division, Karwar

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(Sandeep Singh)

Joint President & Unit Head

Encl : Annexure-1 to Annexure-10

Grasim Industries Limited

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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	:	April 2022 to September 2022

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
	1	Caustic Soda	100000
	2	Chlorine Generation	88750
	3	Hydrochloric Acid (100%)	50400
	4	Liquid Chlorine	39011
	5	Sodium Hypo Chlorite	720
	6	Compressed Hydrogen	7956000 NM3
	7	Dilute Sulphuric Acid (78 %)	1029
			42668.87
			37868.62
			24804.53
			13356.27
			377.54
			Nil
			297.148

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 April 2022 to September 2022 is 2433.58 KLD Details of the same is attached in Annexure-1
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 Wastewater generation from the Caustic Soda plant is 210 KLD. Waste water from DM Plant regeneration & process effluent is being utilised in CS process. Waste water from Caustic Soda Plant ETP is being utilize in Phosphoric acid ETP for Milk of lime Preparation. Addition to above 248 KLD vapour condensate from caustic soda Plant is recycled in CS plant. Total Waste water generation from Phosphoric Acid is 1200 KLD. Waste water is being utilised for Milk of lime preparation and in Waste water from Cooling Tower as Blow down is being utilised for flocculants preparation & drum filter cloth washing and Waste water from Boiler Blow down is being utilised for cooling Tower water makeup. The total waste water recycled for the Period from April 2022 to September 2022 is 109182 M3, and 596.62 KLD Waste water is recycled in process for the Period of April 2022 to September 2022. (Annexure-2)

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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 Annexure-3.
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 Annexure- 3 & Annexure-9 (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 TDS meter for the online monitoring of the treated effluent.	Noted & Being complied. Flow meter has been provided at ETP. 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.
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. Ambient Noise Level Monitoring results are attached as Annexure-7
8.	Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R No.826 dated 16 th September 2009. The level of PM ₁₀ , SO ₂ , NO _x , CO, NH ₃ , BaP, Cl ₂ 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 -	Being complied. Ambient Air Quality monitoring is being carried out at five identified locations as per NAAQS for the mentioned parameters. Report of Ambient Air quality and Stack emission monitoring is attached as Annexure 4 & 5. NABL/MoEF approved Laboratory Analysis report) attached as Annexure-9 A display board has been set up on the factory's main gate at National Highway gate for display and the display board is

Karnataka, the respective zonal office of CPCB and KSPCB.

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.

Being complied.

Online CEMS has been already installed at process vent like HCL-A, B, C, D, E & F Furnaces, Sodium Hypochlorite vents, 10 TPH Coal Fired Boiler & 18 TPH Coal Fired Boiler stacks. Online CEMS was commissioned at HCL E & F Furnace on 31.07.2019.

For Monitoring of flue gas (SO₂/NO_x) & PM Online CEMS has been also installed at 10 & 18 TPH boilers (Coal Fired). All online CEMS are connected to CPCB server on real time basis.

Photographs of OCEMS Analyser is given below:



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 ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO, Cl ₂ 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 & 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. Water spray arrangements has been made at Coal yard area to control dust emission.</p> <p>10 TPH & 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 Annexure-8</p>

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13.	Regular monitoring of ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , Cl ₂ , NH ₃ , 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.	Being complied. Regular Monitoring is being carried out by NABL/ MoEF approved laboratory and the report is attached as Annexure 4 . Monitoring locations has been decided in consultation with KSPCB and monitoring results of all parameters are well within the prescribed norms.
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 ₂ & HCL.	Being complied. For control measures, Caustic scrubber has been provided at hypo plant and water scrubbers at HCL plant to control Cl ₂ & HCL & emissions are well within stipulated norms.
15.	The air pollution control systems shall be operated efficiently & effectively to achieve the norms prescribed by the CPCB/KSPCB at vent/stack outlets.	Being complied. Suitable APCEs has been installed at various units of the Plant & are working efficiently. Details of APCE's are given in Annexure-6 . PM, SO ₂ , NO _x , Cl ₂ , NMHC, CO, and HCl emissions are well within the norms.
16.	The air pollution control system shall be designed and bag filter shall be provided to the boilers to control particulate emissions.	Being complied. Bag filters have been provided to boilers (Coal fired) of 10 & 18 TPH to control Particulate emissions (PM)
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.	Being complied. Third party monitoring of bag filter is being carried out by MoEF /NABL approved laboratory. Bag filter efficiency test for Coal fired Boilers of 18 TPH and 10 TPH is scheduled in the month of December 2022.
18.	Imported Coal used in the Coal fire Boiler shall not exceeds 31,104 MT/Annum	Being complied. Imported coal used in the coal fire Boiler for the period of April 2022 to September 2022 is 10,327 MT.
19.	Imported Coal to be used shall have Sulphur content and Ash content not exceeding 1% and 20% respectively.	Being complied. GIL, Karwar is using Imported Coal with Sulphur content below 1% & Ash Content is < 10% .
20.	Emission of Sulphur shall not exceed the prescribed standards.	Noted & being complied. No prescribed limit is mentioned for SO ₂ emission for coal fired boiler stack is mentioned in EC and CFO. However, SO ₂ & NO _x is below 600 mg/Nm ³ .

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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.	Noted & being complied. Boiler Ash is being stored separately. Fly ash is stored in at RCC concrete floor and side retaining walls. No direct exposure of fly ash & dust is there with the workers. Also, All workers are provided with the required PPEs.
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.	Noted & being complied. Coal is stored in covered shed. Covered shed is having RCC ground floor, dedicated boundary with RCC is there to covered surrounding of shed. RCC open drain has been provided surrounding to ensure rain water flow and also coal fines are removed from time to time.
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. Silo ash conditioner is provided to avoid dust emission while unloading of fly ash from silo for transportation.
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 and is also consumed internally for construction purpose as for RCC road, Flooring area car sheds in Plant & Colony e.t.c
26.	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 a. All handling and transport of imported coal shall be excessive through covered coal conveyers only. b. Enclosure shall be provided at coal loading and unloading operations. c. 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. d. All the vessels used and transfer points in the manufacturing process shall be closed to reduce the fugitive emission.	Being complied. Fugitive emission is carried out on regular basis and is within the limits. a) Coal Handling is done under covered area & is transported via covered conveyor belt. b) Coal unloading is done in covered coal storage by JCP. c) Water Spraying is done on coal at coal storage yard. d) Conveyor belt has been covered to avoid dust emissions. e) Closed crusher house has been installed due to less capacity of coal plant. Coal storage area is covered with the shed.



	<p>e. 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.</p> <p>f. Accumulated Coal dust/fly ash on the ground and other surfaces shall be removed/swept regularly and water the area after sweeping.</p> <p>g. Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.</p> <p>h. Air born dust shall be controlled with water sprinklers at suitable location in the plant.</p> <p>i. Coal shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only.</p> <p>j. A greenbelt shall be developed all around the plant boundary and also along the roads to mitigate fugitive and transport dust emission.</p>	<p>f) Coal dust and Fly ash collecting area is maintained well at regular basis.</p> <p>g) 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.</p> <p>h) Water Spraying is done on coal at coal storage yard.</p> <p>i) Coal truck is being covered by tarpaulin. Fly ash is being transported in trippers covered by tarpaulin.</p> <p>j) Greenbelt has been developed in the plant and colony to mitigate dust emission around the roads and plant boundary areas. Planted 100 Nos. saplings inside Plant Premises & Colony in FY 2022-23, up to September 22. different varieties of plants planted are Cashew, Teak, Murgal Sampige e.t.c.</p>
27	<p>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>	<p>Noted & Complied.</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.	<p>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>	<p>Being Complied</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.	<p>Chlorine sensor and Hydrogen sensor with alarm system shall be provided at various locations within plant premises.</p>	<p>Being complied.</p> <p>29 Nos. Chlorine & 02 Nos. Hydrogen sensors has been provided at respective sections inside plant boundaries. Snapshot is provided at Annexure-10.</p>
30.	<p>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>	<p>Noted & Complied.</p> <p>Chlorine is being stored in below 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>

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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.	Being complied Fire hydrant line has been installed at all sections and also fire tender is available in case of any emergency.
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.	Noted & being complied. Storage and use of hazardous chemicals is being done according to the prevailing rules & regulation.
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.	Noted & being complied. For the storage of material 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.
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 Chemicals. Close handling system for chemicals shall be provided.	Noted & being complied. Bund and dyke walls have been provided for HCL, Chlorine and hypo storage tanks as a control measure to prevent any leakages.
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

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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 There is no such noise generation in Chlor alkali plant. Regular monitoring of ambient noise level is carried out and the report is enclosed as Annexure 7 . Work place noise level for workers are as per the Factories Act and Rules.
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 256.32 acres and out of total area, 62% area is already under greenbelt and plantation (157.6 Acres). We have planted 100 Nos. of saplings inside Plant Premises & Colony in FY 2022-23 up to September 2022, Verities of plants planted are Cashew, Teak, Murgal & Sampige 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.	Noted & Complied. The Audit is scheduled in the month of December 2022.
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

		<p>washing waste water is being treated in Caustic ETP and Treated waste water is being consumed in the PA Plant ETP.</p> <p>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.</p>
46.	Pucca flooring/impervious layer shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.	<p>Noted & being complied.</p> <p>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.</p>
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.	<p>Noted Being Complied.</p> <p>Every year, taken budget for implementation of the environmental safeguards and fund is utilised for environment protection and abatement of pollution.</p>
48.	All the recommendation made in the EIA/EMP and other documents submitted by the project proponent shall be strictly implemented.	<p>Being complied.</p> <p>All the recommendation made in the EIA/EMP and other documents submitted by the Company are being implemented strictly.</p>
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.	<p>GIL, Karwar is complying with the recommendation made in the EIA/EMP/Risk Assessment Report.</p>
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.	<p>Being complied.</p> <p>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 for the plan has been prepared.</p>
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.	<p>Noted Please.</p> <p>CSR activities are guided by the ABG Group. GIL CSR amount spent towards CSR work for the period of April-2022 to September - 2022 is 11.24 Lacs.</p>

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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-4 & 5 . 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

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		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.	Noted & Complied. The Solar power of 20 MW is procured and have a power supply agreement for 20 Years.
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-7 .
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 28.05.2022
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 http://www.seiaa.kar.nic.in or http://www.seiaa.karnataka.gov.in , http://www.environmentclearance.nic.in . This shall be advertised within seven days from the date of	Noted & being complied. EC letter has been already published in the local newspaper.

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	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.	
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"> • Date of Financial approval- 30.06.2016. • Date of Start of the project – 20.05.2017 • After completion of the project, financial closure date will be submitted.
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.

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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.

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Annexure-1

Grasim Industries Limited
(Chemical Division, Binaga, Karwar)
(For the period :- April -2022 to September -2022)
Water Consumption Details

Month & Year	Domestic Water in M3	Industrial Water consumption in M3	Total (M3)
Apr-22	7200	66486	73686
May-22	7435	70708	78143
Jun-22	7170	66195	73365
Jul-22	7409	69520	76929
Aug-22	7409	65726	73135
Sep-22	7170	62918	70088
Total	43793	401553	445346
Water Consumption/ Day	239.31	2194.28	2433.58

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Annexure-2

Grasim Industries Limited
(Chemical Division, Binaga, Karwar)

Waste Water & Solid waste Generation
(For the period :- April -2022 to September -2022)

Month	Waste Water Recycling(In M3)			Gardening STP (Gardening)	Discharge To Sea PA + CS (Brine) ETP	Waste Water (in M3) Domestic Inlet	Solid waste Generation (Sludge) in MT		
	Caustic Soda	Caustic Soda ETP	PA Plant				Caustic Soda	Phosphoric Acid	Fly Ash Generation
Apr-22	1507	715	14761	1562	19189	1605	72.80	941.88	180.61
May-22	1761	330	14883	1593	17599	1625	45.24	1077.45	199.32
Jun-22	1692	310	13548	1515	18848	1545	42.12	922.46	145.24
Jul-22	1774	230	14033	1630	20426	1675	45.24	1109.87	122.08
Aug-22	1826	115	20573	1635	19308	1680	38.22	1118.36	137.14
Sep-22	1945	310	18869	1550	19322	1625	70.46	910.80	129.56
Total	10505	2010	96667	9485	114692	9755	314.08	6080.82	913.95
Avg	1750.83	335.00	16111.17	1580.83	19115.33	1625.83	52.35	1013.47	152.33
Per/ Day	57.40	10.98	528.23	51.83	626.73	53.31	1.72	33.23	4.99

Waste water Generation KLD	637.72	KLD
Domestic Waste Water Generation KLD	53.31	KLD
Total Waste Water Generation KLD	691.02	KLD

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Grasim Industries Limited
(Chemical Division, Binaga, Karwar)

Monthly Analytical Report

(For the period :- April -2022 to September -2022)

Sr. No	Parameter	KSPCB Norms	Monthly Composite					Average	
			Apr-22	May-22	Jun-22	Jul-22	Aug-22		Sep-22
1	Colour & Odour	No colour & No odour	No color & No Odour	No color & No Odour	No color & No Odour	No color & No Odour	No color & No Odour	No color & No Odour	No color & No Odour
2	Suspended Solids (mg/l)	100	53	69	52	59	53	68	59.00
3	Temperature 0C	Should not exceed 5° C receiving water temperature	31.0	31.4	30.8	30.5	30.8	31.2	30.95
4	pH Value	5.5 – 9.0	6.9	7.8	7.5	7.8	7.9	7.2	7.52
5	Oil and grease (mg/l)Max	20	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	Total Residual Chlorine(As N)mg/l Max	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7	Ammonical Nitrogen (As N) mg/l Max	50	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	Total Kjeldhal Nitrogen (as N) mg/l max	100	10.64	11.76	11.48	12.88	12.6	12.04	11.90
9	Free ammonia (as NH ₃) mg/l max.	5	Nil	Nil	Nil	Nil	Nil	Nil	Nil
10	B.O.D (3 days at 27 ° C) mg/l	100	42.50	44.17	41.0	50.35	40.70	44.10	43.80
11	C.O.D. mg/l	250	169.34	192.76	161.28	192.76	192.76	185.47	182.40
12	Mercury (as Hg) mgpl	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Lead (as Pb) mg/l	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	Copper (as Cu) mg/l	3	0.22	0.27	0.35	0.35	0.35	0.24	0.30
15	Zinc (as Zn) mg/l	15	0.29	0.26	0.36	0.32	0.38	0.29	0.32
16	Fluoride (as F) mg/l	15	10.1	9.96	10.34	10.09	10.28	10.38	10.19
17	Sulphide (as S) mg/l	5	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	Nitrate Nitrogen mg/l	20	Nil	Nil	Nil	Nil	Nil	Nil	Nil
19	Bio – assay	Fish Survives in 5% Solution of treated effluent	Fish is Surviving in 5% Solution of treated effluent.	Fish is Surviving in 5% Solution of treated effluent.	Fish is Surviving in 5% Solution of treated effluent.	Fish is Surviving in 5% Solution of treated effluent.	Fish is Surviving in 5% Solution of treated effluent.	Fish is Surviving in 5% Solution of treated effluent.	Fish Survives in 5% Solution of treated effluent

Month	Qty. of Treated Effluent discharged to sea (M3)		
	Total	Minimum	Maximum
Apr-22	19189	464	770
May-22	17599	394	568
Jun-22	18848	49	822
Jul-22	20426	489	800
Aug-22	19308	276	768
Sep-22	19322	554	747
	114692		627

Annexure-4

Grasim Industries Limited
Chemical Division, Binaga, Karwar
Ambient Air Monitoring Results

For the Period April -2022 to September -2022

Sr. No	Sampling Location	PM 10 (µg/m ³)	PM 2.5 (µg/m ³)	Sulphur Dioxide (µg/m ³)	Nitrogen Dioxide (µg/m ³)	Ammonia (NH ₃) (µg/m ³)	Carbon Monoxide (CO) (mg/m ³)	Benzo(a)Pyrene (BaP) (ng/m ³)	Benzene (C ₆ H ₆) (µg/m ³)	Toluene (µg/m ³)	Xylene (µg/m ³)	Cl ₂ (µg/m ³)	HCL (mg/Nm ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)
1	North West of Cell House	43.65	24.44	4.26	9.58	BDL	1.46	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	South West of Cell House	43.30	23.93	4.32	9.53	BDL	1.35	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	South East of Cell House	46.42	25.20	4.42	9.63	BDL	1.46	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	C- Type Quarter	45.02	24.15	4.47	9.63	BDL	1.39	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	D- Type Quarter	44.29	23.74	4.60	9.68	BDL	1.40	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

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Annexure -5

Grasim Industries Limited
(Chemical Division, Binaga, Karwar)
Stack Monitoring Results

(For the Period --April -2022 to September -2022)

SI No.	Chimney attached to	Parameter	Unit	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Average
1	10TPH Boiler (Coal Fire boiler)	Particulate matter (PM)	mg/Nm3	--	31	--	--	--	--	--
		Sulphur Dioxide (SO2)	mg/Nm3	--	19508	--	--	--	--	--
		Nitrogen Dioxide (Nox)	mg/Nm3	--	--	--	--	--	--	--
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--
2	18TPH Boiler (Coal Fire boiler)	Particulate matter (PM)	mg/Nm3	62.71	51.42	83.985	89.045	90.5	53.955	71.94
		Sulphur Dioxide (SO2)	mg/Nm3	365.44	302.15	213	139	215.74	186.33	211.24
		Nitrogen Dioxide (Nox)	mg/Nm3	237.03	283.89	223.44	146.49	195.81	175.38	205.00
		Discharge Volume	NM3/Hr	23517.5	23532	23623.5	23652.5	23712.5	23546.5	23597.42
3	Sodium Hypo Chlorite Plant	Chlorine (CL)	mg/Nm3	1.3	1.56	1.635	1.595	0.9	1.42	1.40
		Discharge Volume	NM3/Hr	2346.5	2352.5	2358	2342.5	2356.5	2346.5	2350.42
4	HCl Furnace A	Acid mist as HCl	mg/Nm3	3.85	3.125	1.5	1.625	1.745	1.5	2.22
		Discharge Volume	NM3/Hr	550.5	558	550.5	554.5	556	552	553.58
5	HCl Furnace B	Acid mist as HCl	mg/Nm3	4.705	2.675	3.085	3.04	2.105	3.045	3.11
		Discharge Volume	NM3/Hr	554	555.5	559.5	556.5	551.5	555.5	555.42
6	HCl Furnace C	Acid mist as HCl	mg/Nm3	4.745	3.65	3.12	4.095	3.49	3.85	3.83
		Discharge Volume	NM3/Hr	557.5	559	552.5	557.5	555	564	557.58
7	HCl Furnace D	Acid mist as HCl	mg/Nm3	--	--	--	--	--	--	--
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--
8	HCl Furnace E	Acid mist as HCl	mg/Nm3	--	--	--	--	--	--	#DIV/0!
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--
9	HCl Furnace F	Acid mist as HCl	mg/Nm3	6.695	2.555	1.865	4.14	1.745	2.025	3.17
		Discharge Volume	NM3/Hr	560	551.5	559.5	553.5	3059.5	555.5	973.25
10	Phosphoric Acid Plant	Fluoride	mg/Nm3	2.19	2.99	2.365	2.9	2.225	2.52	2.53
		HCl	mg/Nm3	627	623.5	622	627.5	621.5	626	624.58
			mg/Nm3	4.945	5.025	3.85	5.435	5.23	4.095	4.76
11	Food Grade Calcium Phosphate Reactor Vent	Particulate matter (PM)	mg/Nm3	--	--	--	--	--	--	--
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--
12	Food Grade Calcium Phosphate central vent	Particulate matter (PM)	mg/Nm3	--	--	--	--	--	--	--
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--
13	Food Grade Calcium Phosphate Drier	Particulate matter (PM)	mg/Nm3	--	--	--	--	--	--	--
		Discharge Volume	NM3/Hr	--	--	--	--	--	--	--

Annexure- 6

**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

[Signature]

Annexure-7

Grasim Industries Limited
(Chemical Division, Binaga, Karwar)

(Noise Level Monitoring For the Period April -2022 to September -2022)

Sr. No	Location	Noise Level Monitoring Results																	
		Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		Average					
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night				
1	NW of Cell House	57.8	55.6	56.4	54.2	57.6	55.2	58.5	56.7	58.2	56.5	60.4	58.1	58.2	56.1				
2	SW of Cell House	54.9	53.4	54.3	53.2	56.8	54.3	56.8	55.3	55.9	54.7	56.7	55.4	55.9	54.4				
3	SE of Cell House	64.2	63.1	64.6	63.8	64.5	62.8	62.5	61.0	62.7	60.8	63.2	61.7	63.6	62.2				
4	Lagoon No. IV	47.2	46.3	47.1	46.7	48.7	46.5	46.5	45.8	45.8	43.7	47.1	45.9	47.1	45.8				
5	Phosphoric Acid Drum Filter	67.3	65.7	66.2	64.3	67.9	65.6	65.8	64.3	64.7	63.6	65.8	63.9	66.3	64.6				
6	Technical Block Area	58.9	57.3	57.9	56.4	58.7	56.2	57.4	55.8	58.2	57.6	59.5	57.5	58.4	56.8				
7	Occupational Health Centre	57.3	56.1	58.0	57.1	57.3	55.4	56.3	54.9	55.5	54.9	54.8	53.2	56.5	55.3				
8	Stores	53.4	52.3	54.2	52.2	54.8	53	50.9	49.8	50.1	48.7	51.4	49.7	52.5	51.0				
9	Electronic Weigh Bridge	56.7	55.8	57.4	55.9	54.2	52.1	53.5	52.0	52.8	51.6	53.6	51.8	54.7	53.2				
10	Time Office	51.3	50.4	52.5	51.2	50.1	49.4	52.9	51.6	53.4	52.1	54.2	52.3	52.4	51.2				
11	Shopping Complex	55.7	53.6	56.7	53.9	55.3	53.1	54.6	52.8	54.7	53.4	55.6	54.1	55.4	53.5				
12	Guest House	44.1	42.8	45.8	43.0	44.3	43.0	42.8	41.4	42.8	41.4	43.1	41.6	43.8	42.2				
13	G-Type Colony	58.3	56.9	59.2	57.1	58.2	56.0	56.5	55.9	55.6	53.2	55.3	53.1	57.2	55.4				
14	Bal Bhavan School	45.3	44	47.1	44.7	44.1	42.4	43.8	42.6	43.1	42.2	43.4	42.1	44.5	43.0				
15	Old Dispensary	43.1	42.2	43.4	41.8	42.6	40.5	41.7	40.4	42.7	40.3	43.9	40.4	42.9	40.9				
16	D- Type colony	42.4	40.5	43.1	40.4	41.3	40.1	42.6	41.5	42.1	41.1	43.1	41.8	42.4	40.9				

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Annexure-8

Grasim Industries Limited
(Chemical Division, Binaga, Karwar)

(Fugitive Emission For the Period April -2022 to September -2022)

FUGITIVE EMISSION RESULTS

LOCATIONS	Paramter	Units	PARAMETERS	
			May-2022	July-2022
Lime Godown	SPM	mg/m ³	0.90	0.88
Rock Phosphating Godown	SPM	mg/m ³	0.22	0.24
Boiler Coal Yard	SPM	mg/m ³	0.90	0.94
HCL Storage Yard	HCL	mg/m ³	ND	ND
Chlorine Filling Station	Chlorine	mg/m ³	ND	ND

Signature

ACCREDITATIONS / RECOGNITIONS
 MoEF&CC, New Delhi
 ISO/IEC 17025:2017
 (NABL TC-6990)
 ISO 9001:2015
 ISO 45001:2018
 FOSTAC - FSSAI
 AGMARK



CIN: U74900KA2013PTC069193

**NICHROME TESTING LABORATORY
 AND RESEARCH PRIVATE LIMITED**

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR,
 DHARWAD, KARNATAKA, INDIA PIN : 580 008
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Page 1 of 1

Name of Customer and Address:

M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga – 581307,
 Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
 Date : 05.07.2022

Sampling Location:

North West of Cell House Station – 1
 (Above First Aid Center)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
 Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

TEST REPORT

ULR Code No: TC699022000006363P
 Report Number: NTLR/SEP/6363
 Sample Number: SEP/22/6363
 Type of Sample: AIR – AMBIENT
 Discipline : Chemical
 Group: Atmospheric Pollution
 Sample Collected by: Nichrome Testing Laboratory
 and Research Private Limited
 Particulars of Sample Collected: Respirable Dust Sampler (APM 460 BL)
 Fine Particulate Sampler (APM 550 Mini)
 Benzene Sampler & CO Analyzer.
 Environmental Condition: 26° C
 Date of Collection: 05/09/2022
 Date of Sample receipt: 06/09/2022
 Date of Analysis started: 06/09/2022
 Date of Completion: 08/09/2022
 Date of Report: 08/09/2022
 Wind Direction: North East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
PM ₁₀	IS 5182 (Part 23) : 2017	IS 5182 (Part 23) : 2017	µg/m ³	24 Hrs	41.71	100
PM _{2.5}	IS 5182 (Part 24) : 2019	IS 5182 (Part 24)2019	µg/m ³	24 Hrs	21.27	60
Sulphur di Oxide	IS 5182 (Part 2) : 2017	IS 5182 (Part 2) : 2017	µg/m ³	24 Hrs	4.22	80
Oxides of Nitrogen	IS 5182 (Part 6) : 2017	IS 5182 (Part 6) : 2017	µg/m ³	24 Hrs	9.61	80
Ammonia (NH ₃)	Methods of air sampling and analysis 3rd Edition (Part 2)401: 1988	Methods of air sampling and analysis 3rd Edition (Part 2)401: 1988	µg/m ³	1 Hr	BDL	400
Ozone (O ₃)	IS 5182 (Part 9): 1988	IS 5182 (Part 9): 1988	µg/m ³	1 Hr	BDL	180

BDL-Below Detectable Limit, BDL- (Ammonia – 5 µg/m³, Ozone-3 µg/m³)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.



Authorized Signatory
Channabasappa Maikar (Chemical)

--END OF REPORT--

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are deemed unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008.KARNATAKA
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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

North West of Cell House Station – 1
(Above First Aid Center)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

Report Number:

NTLR/SEP/6363

Sample Number:

SEP/22/6363

Type of Sample:

AIR – AMBIENT

Sample Collected by:

Nichrome Testing Laboratory
and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
Fine Particulate Sampler (APM 550 Mini)
Benzene Sampler & CO Analyzer.

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

06/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

Wind Direction:

North East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
Carbon Monoxide(CO)	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	mg/m ³	1 Hr	1.53	4
Benzene (C ₆ H ₆)	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	5
Lead (Pb)	IS 5182 (Part 23) : 2017	CPCB MANUAL	µg/m ³	24 Hrs	BDL	1
Benzo(a) Pyrene (BaP)	IS 5182 (Part 23) : 2017	IS 5182 (Part 12)	ng/m ³	24 Hrs	BDL	1
Arsenic (As)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	6
Nickel (Ni)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	20
Toluene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Xylene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Cl ₂	IS 5182 (Part 19)	IS 5182 (Part 19)	µg/m ³	24 Hrs	ND	-
HCL	EPA METHOD - 8	EPA METHOD - 8	mg/m ³	24 Hrs	ND	-

BDL-Below Detectable Limit, BDL- (Benzene-2 µg/m³, Lead-0.1 µg/m³, Benzo(a)Pyrene-0.1 ng/m³, Arsenic-3.5 ng/m³, Nickel-7.0 ng/m³, Toluene - 2 µg/m³, Xylene -2 µg/m³) (ND – Not Detected)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.

--END OF REPORT--



Authorized Signatory
Channabasappa Maikar (Chemical)

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ANP/2022-9

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC-6990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



CIN: U74900KA2013PTC069193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD, KARNATAKA, INDIA PIN : 580 008
PH : 0838 - 2771115, 2778521
email : nicechem@gmail.com, website : nichromelabs.com

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TESTING / CONSULTING / ENGINEERING / TRAINING

Format No: NTLR/F/33/07

Page 1 of 1

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga - 581307,
Dist - Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

South West of Cell House Station - 2
(Above DM Plant)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

TEST REPORT

ULR Code No:	TC699022000006364P
Report Number:	NTLR/SEP/6364
Sample Number:	SEP/22/6364
Type of Sample:	AIR - AMBIENT
Discipline :	Chemical
Group:	Atmospheric Pollution
Sample Collected by:	Nichrome Testing Laboratory and Research Private Limited
Particulars of Sample Collected:	Respirable Dust Sampler (APM 460 BL) Fine Particulate Sampler (APM 550 Mini) Benzene Sampler & CO Analyzer.
Environmental Condition:	26° C
Date of Collection:	05/09/2022
Date of Sample receipt:	06/09/2022
Date of Analysis started:	06/09/2022
Date of Completion:	08/09/2022
Date of Report:	08/09/2022
Wind Direction:	South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
PM ₁₀	IS 5182 (Part 23) : 2017	IS 5182 (Part 23) : 2017	µg/m ³	24 Hrs	43.48	100
PM _{2.5}	IS 5182 (Part 24) : 2019	IS 5182 (Part 24) 2019	µg/m ³	24 Hrs	22.17	60
Sulphur di Oxide	IS 5182 (Part 2) : 2017	IS 5182 (Part 2) : 2017	µg/m ³	24 Hrs	4.31	80
Oxides of Nitrogen	IS 5182 (Part 6) : 2017	IS 5182 (Part 6) : 2017	µg/m ³	24 Hrs	9.65	80
Ammonia (NH ₃)	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	µg/m ³	1 Hr	BDL	400
Ozone (O ₃)	IS 5182 (Part 9): 1988	IS 5182 (Part 9): 1988	µg/m ³	1 Hr	BDL	180

BDL-Below Detectable Limit, BDL- (Ammonia - 5 µg/m³, Ozone-3 µg/m³)

Inference as per NAAQ Standards	Above tested parameters are conforming to standards.
---------------------------------	--



Authorized Signatory
Channabasappa Maikar (Chemical)

-END OF REPORT-

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008.KARNATAKA
PH : 0836 – 2771115, FAX :2778521, email : nicechem@gmail.com

Format No: NTLR/F/33/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Report Number:

NTLR/SEP/6364

Sample Number:

SEP/22/6364

Type of Sample:

AIR – AMBIENT

Sample Collected by:

Nichrome Testing Laboratory
and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
Fine Particulate Sampler (APM 550 Mini)
Benzene Sampler & CO Analyzer.

Customer Reference:

PO NO : 8150008761

Date : 05.07.2022

Sampling Location:

South West of Cell House Station – 2
(Above DM Plant)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

06/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

Wind Direction:

South East

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

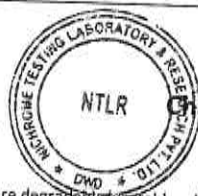
RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
Carbon Monoxide(CO)	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	mg/m ³	1 Hr	1.16	4
Benzene (C ₆ H ₆)	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	5
Lead (Pb)	IS 5182 (Part 23) : 2017	CPCB MANUAL	µg/m ³	24 Hrs	BDL	1
Benzo(a) Pyrene (BaP)	IS 5182 (Part 23) : 2017	IS 5182 (Part 12)	ng/m ³	24 Hrs	BDL	1
Arsenic (As)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	6
Nickel (Ni)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	20
Toluene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Xylene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Cl ₂	IS 5182 (Part 19)	IS 5182 (Part 19)	µg/m ³	24 Hrs	ND	-
HCL	EPA METHOD - 8	EPA METHOD - 8	mg/m ³	24 Hrs	ND	-

BDL-Below Detectable Limit, BDL- (Benzene-2 µg/m³, Lead-0.1 µg/m³, Benzo(a)Pyrene-0.1 ng/m³, Arsenic-3.5 ng/m³, Nickel-7.0 ng/m³,
Toluene - 2 µg/m³, Xylene -2 µg/m³) (ND – Not Detected)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.



Authorized Signatory
Channabasappa Maikar (Chemical)

-END OF REPORT-

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degraded or unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad jurisdiction. 6. When laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ACCREDITATIONS / RECOGNITIONS
 MoEF&CC, New Delhi
 ISO/IEC 17025:2017
 (NABL TC- 6990)
 ISO 9001:2015
 ISO 45001:2018
 FOSTAC - FSSAI
 AGMARK



CIN: U74900KA2013PTC069193

**NICHROME TESTING LABORATORY
 AND RESEARCH PRIVATE LIMITED**

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR,
 DHARWAD, KARNATAKA, INDIA PIN : 580 008
 PH : 0836 - 2771115, 2778521
 email : nicechem@gmail.com, website : nichromelabs.com

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TESTING / CONSULTING / ENGINEERING / TRAINING

Format No: NTLR/F/33/07

Page 1 of 1

Name of Customer and Address:

M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga – 581307,
 Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
 Date : 05.07.2022

Sampling Location:

South East of Cell House Station – 3
 (Above PA Cooling Tower)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
 Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

TEST REPORT

ULR Code No: TC69902200006365P
 Report Number: NTLR/SEP/6365
 Sample Number: SEP/22/6365
 Type of Sample: AIR – AMBIENT
 Discipline : Chemical
 Group: Atmospheric Pollution
 Sample Collected by: Nichrome Testing Laboratory
 and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
 Fine Particulate Sampler (APM 550 Mini)
 Benzene Sampler & CO Analyzer.

Environmental Condition:

Date of Collection: 05/09/2022
 Date of Sample receipt: 06/09/2022
 Date of Analysis started: 06/09/2022
 Date of Completion: 08/09/2022
 Date of Report: 08/09/2022
 Wind Direction: South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
PM ₁₀	IS 5182 (Part 23) : 2017	IS 5182 (Part 23) : 2017	µg/m ³	24 Hrs	45.00	100
PM _{2.5}	IS 5182 (Part 24) : 2019	IS 5182 (Part 24)2019	µg/m ³	24 Hrs	22.95	60
Sulphur di Oxide	IS 5182 (Part 2) : 2017	IS 5182 (Part 2) : 2017	µg/m ³	24 Hrs	4.41	80
Oxides of Nitrogen	IS 5182 (Part 6) : 2017	IS 5182 (Part 6) : 2017	µg/m ³	24 Hrs	9.68	80
Ammonia (NH ₃)	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	µg/m ³	1 Hr	BDL	400
Ozone (O ₃)	IS 5182 (Part 9): 1988	IS 5182 (Part 9): 1988	µg/m ³	1 Hr	BDL	180

BDL-Below Detectable Limit, BDL- (Ammonia – 5 µg/m³ Ozone-3 µg/m³)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.

--END OF REPORT--



Authorized Signatory

Channabasappa Maikar (Chemical)

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008.KARNATAKA
PH : 0836 – 2771115, FAX :2778521, email : nicechem@gmail.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Report Number:

NTLR/SEP/6365

Sample Number:

SEP/22/6365

Type of Sample:

AIR – AMBIENT

Sample Collected by:

Nichrome Testing Laboratory
and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
Fine Particulate Sampler (APM 550 Mini)
Benzene Sampler & CO Analyzer.

Customer Reference:

PO NO : 8150008761

Date : 05.07.2022

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

06/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

Wind Direction:

South East

Sampling Location:

South East of Cell House Station – 3
(Above PA Cooling Tower)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
Carbon Monoxide(CO)	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	mg/m ³	1 Hr	1.25	4
Benzene (C ₆ H ₆)	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	5
Lead (Pb)	IS 5182 (Part 23) : 2017	CPCB MANUAL	µg/m ³	24 Hrs	BDL	1
Benzo(a) Pyrene (BaP)	IS 5182 (Part 23) : 2017	IS 5182 (Part 12)	ng/m ³	24 Hrs	BDL	1
Arsenic (As)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	6
Nickel (Ni)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	20
Toluene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Xylene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Cl ₂	IS 5182 (Part 19)	IS 5182 (Part 19)	µg/m ³	24 Hrs	ND	-
HCL	EPA METHOD - 8	EPA METHOD - 8	mg/m ³	24 Hrs	ND	-

BDL-Below Detectable Limit, BDL- (Benzene-2 µg/m³, Lead-0.1 µg/m³, Benzo(a)Pyrene-0.1 ng/m³, Arsenic-3.5 ng/m³, Nickel-7.0 ng/m³, Toluene - 2 µg/m³, Xylene -2 µg/m³) (ND – Not Detected)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degraded/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

--END OF REPORT--



Authorized Signatory
Channabasappa Maikar (Chemical)

ACCREDITATIONS / RECOGNITIONS
 MoEF&CC, New Delhi
 ISO/IEC 17025:2017
 (NABL TC- 6990)
 ISO 9001:2015
 ISO 45001:2018
 FOSTAC - FSSAI
 AGMARK



CIN: U74900KA2013PTC069193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

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TC-6990

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga – 581307,
 Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
 Date : 05.07.2022

Sampling Location:

C - Types Quarters (Auditorium)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia, Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

ULR Code No: TC69902200006419P
 Report Number: NTLR/SEP/6419
 Sample Number: SEP/22/6419
 Type of Sample: AIR – AMBIENT
 Discipline : Chemical
 Group: Atmospheric Pollution
 Sample Collected by: Nichrome Testing Laboratory and Research Private Limited
 Particulars of Sample Collected: Respirable Dust Sampler (APM 460 BL) Fine Particulate Sampler (APM 550 Mini) Benzene Sampler & CO Analyzer.
 Environmental Condition: 26° C
 Date of Collection: 06/09/2022
 Date of Sample receipt: 07/09/2022
 Date of Analysis started: 07/09/2022
 Date of Completion: 09/09/2022
 Date of Report: 09/09/2022
 Wind Direction: South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
PM ₁₀	IS 5182 (Part 23) : 2017	IS 5182 (Part 23) : 2017	µg/m ³	24 Hrs	44.82	100
PM _{2.5}	IS 5182 (Part 24) : 2019	IS 5182 (Part 24)2019	µg/m ³	24 Hrs	22.85	60
Sulphur di Oxide	IS 5182 (Part 2) : 2017	IS 5182 (Part 2) : 2017	µg/m ³	24 Hrs	4.46	80
Oxides of Nitrogen	IS 5182 (Part 6) : 2017	IS 5182 (Part 6) : 2017	µg/m ³	24 Hrs	9.68	80
Ammonia (NH ₃)	Methods of air sampling and analysis 3rd Edition (Part 2)401: 1988	Methods of air sampling and analysis 3rd Edition (Part 2)401: 1988	µg/m ³	1 Hr	BDL	400
Ozone (O ₃)	IS 5182 (Part 9): 1988	IS 5182 (Part 9): 1988	µg/m ³	1 Hr	BDL	180

BDL-Below Detectable Limit, BDL- (Ammonia – 5 µg/m³, Ozone-3 µg/m³)

Inference as per NAAQ Standards Above tested parameters are conforming to standards.



Authorized Signatory
Manabasappa Maikar (Chemical)

:-END OF REPORT:-

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are deposited in our laboratory will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008, KARNATAKA
PH : 0836 – 2771115, FAX : 2778521, email : nicechem@gmail.com

Format No: NTLR/F/33/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

C - Types Quarters (Auditorium)

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4% NaOH & D/W Solutions & Charcoal Tube

Report Number:

NTLR/SEP/6419

Sample Number:

SEP/22/6419

Type of Sample:

AIR – AMBIENT

Sample Collected by:

Nichrome Testing Laboratory
and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
Fine Particulate Sampler (APM 550 Mini)
Benzene Sampler & CO Analyzer.

Environmental Condition:

26° C

Date of Collection:

06/09/2022

Date of Sample receipt:

07/09/2022

Date of Analysis started:

07/09/2022

Date of Completion:

09/09/2022

Date of Report:

09/09/2022

Wind Direction:

South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
Carbon Monoxide(CO)	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	mg/m ³	1 Hr	1.27	4
Benzene (C ₆ H ₆)	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	5
Lead (Pb)	IS 5182 (Part 23) : 2017	CPCB MANUAL	µg/m ³	24 Hrs	BDL	1
Benzo(a) Pyrene (BaP)	IS 5182 (Part 23) : 2017	IS 5182 (Part 12)	ng/m ³	24 Hrs	BDL	1
Arsenic (As)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	6
Nickel (Ni)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	20
Toluene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Xylene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Cl ₂	IS 5182 (Part 19)	IS 5182 (Part 19)	µg/m ³	24 Hrs	ND	-
HCL	EPA METHOD - 8	EPA METHOD - 8	mg/m ³	24 Hrs	ND	-

BDL-Below Detectable Limit, BDL- (Benzene-2 µg/m³, Lead-0.1 µg/m³, Benzo(a)Pyrene-0.1 ng/m³, Arsenic-3.5 ng/m³, Nickel-7.0 ng/m³, Toluene - 2 µg/m³, Xylene -2 µg/m³) (ND – Not Detected)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.



Authorized Signatory

Channabasappa Maikar (Chemical)

--END OF REPORT--

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are found to be unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 6990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



CIN: U74900KA2013PTC069193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD, KARNATAKA, INDIA PIN : 580 008
PH : 0836 - 2771115, 2778521
email : nicechem@gmail.com, website : nichromelabs.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

Guest House Quarter 1st Floor

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

ULR Code No:

TC699022000006420P

Report Number:

NTLR/SEP/6420

Sample Number:

SEP/22/6420

Type of Sample:

AIR – AMBIENT

Discipline :

Chemical

Group:

Atmospheric Pollution

Sample Collected by:

Nichrome Testing Laboratory
and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)
Fine Particulate Sampler (APM 550 Mini)
Benzene Sampler & CO Analyzer.

Environmental Condition:

26° C

Date of Collection:

06/09/2022

Date of Sample receipt:

07/09/2022

Date of Analysis started:

07/09/2022

Date of Completion:

09/09/2022

Date of Report:

09/09/2022

Wind Direction:

South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
PM ₁₀	IS 5182 (Part 23) : 2017	IS 5182 (Part 23) : 2017	µg/m ³	24 Hrs	46.59	100
PM _{2.5}	IS 5182 (Part 24) : 2019	IS 5182 (Part 24)2019	µg/m ³	24 Hrs	23.76	60
Sulphur di Oxide	IS 5182 (Part 2) : 2017	IS 5182 (Part 2) : 2017	µg/m ³	24 Hrs	4.57	80
Oxides of Nitrogen	IS 5182 (Part 6) : 2017	IS 5182 (Part 6) : 2017	µg/m ³	24 Hrs	9.80	80
Ammonia (NH ₃)	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	Methods of air sampling and analysis 3rd Edition (Part 2) 401: 1988	µg/m ³	1 Hr	BDL	400
Ozone (O ₃)	IS 5182 (Part 9): 1988	IS 5182 (Part 9): 1988	µg/m ³	1 Hr	BDL	180

BDL-Below Detectable Limit, BDL- (Ammonia – 5 µg/m³, Ozone-3 µg/m³)

Inference as per NAAQ Standards

Above tested parameters are conforming to standards.



Authorized Signatory

Channabasappa Maikar (Chemical)

---END OF REPORT---

Note:

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NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

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PH : 0836 – 2771115, FAX :2778521, email : nicechem@gmail.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

Guest House Quarter 1st Floor

Sample Description:

PM₁₀, PM_{2.5} Filter Papers, SO₂, NO₂, Ammonia,
Ozone, 4%NaOH & D/W Solutions & Charcoal Tube

Report Number:

NTLR/SEP/6420

Sample Number:

SEP/22/6420

Type of Sample:

AIR – AMBIENT

Sample Collected by:

Nichrome Testing Laboratory

and Research Private Limited

Particulars of Sample Collected:

Respirable Dust Sampler (APM 460 BL)

Fine Particulate Sampler (APM 550 Mini)

Benzene Sampler & CO Analyzer.

26° C

Environmental Condition:

Date of Collection:

06/09/2022

Date of Sample receipt:

07/09/2022

Date of Analysis started:

07/09/2022

Date of Completion:

09/09/2022

Date of Report:

09/09/2022

Wind Direction:

South East

RESULTS

PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	DURATION OF MONITORING	RESULT	NAAQ STANDARDS
Carbon Monoxide(CO)	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	NTLR/SOP/101 Issue 1.0 Dated 10.07.2017	mg/m ³	1 Hr	1.30	4
Benzene (C ₆ H ₆)	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	5
Lead (Pb)	IS 5182 (Part 23) : 2017	CPCB MANUAL	µg/m ³	24 Hrs	BDL	1
Benzo(a) Pyrene (BaP)	IS 5182 (Part 23) : 2017	IS 5182 (Part 12)	ng/m ³	24 Hrs	BDL	1
Arsenic (As)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	6
Nickel (Ni)	IS 5182 (Part 23) : 2017	CPCB MANUAL	ng/m ³	24 Hrs	BDL	20
Toluene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Xylene	IS 5182 (Part 11)	IS 5182 (Part 11)	µg/m ³	24 Hrs	BDL	-
Cl ₂	IS 5182 (Part 19)	IS 5182 (Part 19)	µg/m ³	24 Hrs	ND	-
HCL	EPA METHOD - 8	EPA METHOD - 8	mg/m ³	24 Hrs	ND	-

BDL-Below Detectable Limit, BDL- (Benzene-2 µg/m³, Lead-0.1 µg/m³, Benzo(a)Pyrene-0.1 ng/m³, Arsenic-3.5 ng/m³, Nickel-7.0 ng/m³, Toluene - 2 µg/m³, Xylene -2 µg/m³) (ND – Not Detected)

Inference as per NAAQ Standards Above tested parameters are conforming to standards.



Authorized Signatory

Channabasappa Maikar (Chemical)

--END OF REPORT--

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are deemed unsuitable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.



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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga - 581307,
 Dist - Uttar Kannada.

ULR Code No:

TC699022000006421F

Report Number:

NTLR/SEP/6421

Sample Number:

SEP/22/6421

Type of Sample:

STACK

Discipline :

Chemical

Group:

Atmospheric Pollution

Sample Collected by:

Nichrome Testing Laboratory and
 Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS - 100)

Environmental Condition:

26° C

Date of Collection:

06/09/2022

Date of Sample receipt:

06/09/2022

Date of Analysis started:

07/09/2022

Date of Completion:

09/09/2022

Date of Report:

09/09/2022

Customer Reference:

PO NO : 8150008761

Date : 05.07.2022

Sampling Location:

18 TPH Boiler

Sample Description:

Thimble, SO₂ & NO₂ Solution

GENERAL DETAILS

Fuel Used	Coal
Height (m)	36
Diameter (m)	1.10
Stack Temperature ⁰ C	128
Ambient Temperature ⁰ C	27
Flue Gas Velocity (m/sec.)	8.77

RESULTS

SL.NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	KSPCB STANDARDS
1	Particulate Matter	IS 11255 (Part 1) : 2014	IS 11255 (Part 1) : 2014	mg/Nm ³	94.12	150
2	Sulphur di oxide	IS 11255 (Part 2) : 2014	IS 11255 (Part 2) : 2014	mg/Nm ³	12.74	Not Specified
3	Oxides of Nitrogen	IS 11255 (Part 7) : 2017	IS 11255 (Part 7) : 2017	mg/Nm ³	19.44	Not Specified
4	Gas Discharge Rate	IS 11255 (Part 3) : 2019	IS 11255 (Part 3) : 2019	Nm ³ /hr	22300.04	-

Inference as per KSPCB Standards

Above tested parameters are conforming to standards.

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are damaged/unsuitable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

:-END OF REPORT:-



Authorized Signatory
 Channabasappa Maikar (Chemical)

Annexure - 9

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 8990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



CIN: U74900KA2013PTC089193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD, KARNATAKA, INDIA PIN : 580 008
PH : 0836 - 2771115, 2778521
email : nicechem@gmail.com, website : nlchromelabs.com

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TEST REPORT

Name of Customer and Address:
M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

ULR Code No: TC699022000006366P
Report Number: NTLR/SEP/6366
Sample Number: SEP/22/6366
Type of Sample: STACK
Discipline : Chemical
Group: Atmospheric Pollution
Sample Collected by: Nichrome Testing Laboratory and Research Private Limited

Customer Reference:
PO NO : 8150008761
Date : 05.07.2022

Particulars of Sample Collected: Stack Sampler (ESS – 100)
Environmental Condition: 26° C
Date of Collection: 05/09/2022
Date of Sample receipt: 05/09/2022
Date of Analysis started: 06/09/2022
Date of Completion: 08/09/2022
Date of Report: 08/09/2022

Sampling Location:
HCl Plant B Furnace

Sample Description:
Distilled Water

GENERAL DETAILS

Fuel Used	-
Height (m)	21.50
Diameter (m)	0.15
Stack Temperature ⁰ C	38
Ambient Temperature ⁰ C	27
Flue Gas Velocity (m/sec.)	7.30

RESULTS

SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Gas Discharge Rate	IS 11255 (Part 3) : 2019	IS 11255 (Part 3) : 2019	Nm ³ /hr	445.05	-

Inference as per KSPCB Consent Conditions	Above tested parameters are conforming to Consent Conditions.
---	---

-:END OF REPORT:-



Authorized Signatory
Channabasappa Maikar (Chemical)

Note:
1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

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PH : 0836 – 2771115, FAX :2778521, email : nicechem@gmail.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

HCl Plant B Furnace

Sample Description:

Distilled Water

Report Number:

NTLR/SEP/6366

Sample Number:

SEP/22/6366

Type of Sample:

STACK

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS – 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

RESULTS

SL.NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Acid Mist as HCl	EPA METHOD - 8	EPA METHOD - 8	mg/Nm ³	16.15	35

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.

Authorized Signatory
Channabasappa Maikar (Chemical)



-:END OF REPORT:-

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 6990)
ISO 9001:2015
ISO 45001:2018
FOSTAG - FSSAI
AGMARK



CIN: U74900KA2013PTC069193

**NICHROME TESTING LABORATORY
AND RESEARCH PRIVATE LIMITED**

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DHARWAD, KARNATAKA, INDIA PIN : 580 008
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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga - 581307,
Dist - Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

HCl Plant C Furnace

Sample Description:

Distilled Water

ULR Code No:

TC699022000006367P

Report Number:

NTLR/SEP/6367

Sample Number:

SEP/22/6367

Type of Sample:

STACK

Discipline :

Chemical

Group:

Atmospheric Pollution

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS - 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

GENERAL DETAILS


Fuel Used	-
Height (m)	21.50
Diameter (m)	0.15
Stack Temperature ⁰ C	40
Ambient Temperature ⁰ C	27
Flue Gas Velocity (m/sec.)	7.74

RESULTS

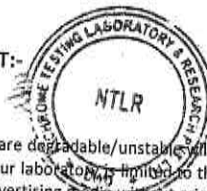
SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Gas Discharge Rate	IS 11255 (Part 3) : 2019	IS 11255 (Part 3) : 2019	Nm ³ /hr	468.80	-

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.


Authorized Signatory
Channabasappa Maikar (Chemical)

:-END OF REPORT:-



Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

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PH : 0836 – 2771115, FAX :2778521, email : nicechem@gmail.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

HCl Plant C Furnace

Sample Description:

Distilled Water

Report Number:

NTLR/SEP/6367

Sample Number:

SEP/22/6367

Type of Sample:

STACK

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS – 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

RESULTS

SL.NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Acid Mist as HCl	EPA METHOD - 8	EPA METHOD - 8	mg/Nm ³	17.00	35

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.


Authorized Signatory
Channabasappa Maikar (Chemical)



--:END OF REPORT:--

Note:

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ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 6990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
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TC-6990



CIN: U74900KA2013PTC069193

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PH : 0838 - 2771115, 2778521
email : nicechem@gmail.com, website : nichromelabs.com

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TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

HCl Plant E Furnace

Sample Description:

Distilled Water

ULR Code No:

TC699022000006368P

Report Number:

NTLR/SEP/6368

Sample Number:

SEP/22/6368

Type of Sample:

STACK

Discipline :

Chemical

Group:

Atmospheric Pollution

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS – 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

GENERAL DETAILS

Fuel Used	-
Height (m)	21.50
Diameter (m)	0.15
Stack Temperature ^o C	39
Ambient Temperature ^o C	27
Flue Gas Velocity (m/sec.)	7.57

RESULTS

SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Gas Discharge Rate	IS 11255 (Part 3) : 2019	IS 11255 (Part 3) : 2019	Nm ³ /hr	460.03	-

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.

-:END OF REPORT:-



Authorized Signatory

Channabasappa Maikar (Chemical)

Note:

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NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008, KARNATAKA
 PH : 0836 – 2771115, FAX : 2778521, email : nicechem@gmail.com

Format No: NTLR/F/19/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga – 581307,
 Dist – Uttar Kannada.

Report Number:

NTLR/SEP/6368

Sample Number:

SEP/22/6368

Type of Sample:

STACK

Sample Collected by:

Nichrome Testing Laboratory and
 Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS – 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

Customer Reference:

PO NO : 8150008761

Date : 05.07.2022

Sampling Location:

HCl Plant E Furnace

Sample Description:


Distilled Water

RESULTS

SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Acid Mist as HCl	EPA METHOD - 8	EPA METHOD - 8	mg/Nm ³	16.50	35

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.


 Authorized Signatory
 Channabasappa Maikar (Chemical)



--END OF REPORT--

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ANA 01/10/22-9

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 6990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



CIN: U74900KA2013PTC069193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR,
DHARWAD, KARNATAKA, INDIA PIN : 580 008
PH : 0836 - 2771115, 2778521
email : nicechem@gmail.com, website : nichromelabs.com

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TESTING / CONSULTING / ENGINEERING / TRAINING

Format No: NTLR/F/19/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:
M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:
PO NO : 8150008761
Date : 05.07.2022

Sampling Location:
HCl Plant F Furnace

Sample Description:
Distilled Water

ULR Code No:	TC699022000006369P
Report Number:	NTLR/SEP/6369
Sample Number:	SEP/22/6369
Type of Sample:	Chemical
Discipline :	Atmospheric Pollution
Group:	STACK
Sample Collected by:	Nichrome Testing Laboratory and Research Private Limited
Particulars of Sample Collected:	Stack Sampler (ESS – 100)
Environmental Condition:	26° C
Date of Collection:	05/09/2022
Date of Sample receipt:	05/09/2022
Date of Analysis started:	06/09/2022
Date of Completion:	08/09/2022
Date of Report:	08/09/2022

GENERAL DETAILS

Fuel Used	-
Height (m)	30
Diameter (m)	0.15
Stack Temperature ^o C	41
Ambient Temperature ^o C	27
Flue Gas Velocity (m/sec.)	7.50

RESULTS

SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Gas Discharge Rate	IS 11255 (Part 3) : 2019	IS 11255 (Part 3) : 2019	Nm ³ /hr	452.88	-

Inference as per KSPCB Consent Conditions	Above tested parameters are conforming to Consent Conditions.
---	---

Authorized Signatory
Channabasappa Mojar (Chemical)



-:END OF REPORT:-

Note:

1.The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3.Total liability of our laboratory is limited to the invoiced amount. 4.This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5.If any disputes Subject to Dharwad Jurisdiction. 6.When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / / TRAINING

170, JUDGES BUNGALOW ROAD, NARAYANPUR, DHARWAD – 580008, KARNATAKA
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Format No: NTLR/F/19/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

HCl Plant F Furnace

Sample Description:

Distilled Water

Report Number:

NTLR/SEP/6369

Sample Number:

SEP/22/6369

Type of Sample:

STACK

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Particulars of Sample Collected:

Stack Sampler (ESS – 100)

Environmental Condition:

26° C

Date of Collection:

05/09/2022

Date of Sample receipt:

05/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

08/09/2022

Date of Report:

08/09/2022

RESULTS

SL. NO	PARAMETERS	SAMPLING METHOD	TEST METHOD	UNIT	RESULT	AS PER KSPCB CONSENT CONDITIONS
1	Acid Mist as HCl	EPA METHOD - 8	EPA METHOD - 8	mg/Nm ³	17.00	35

Inference as per KSPCB Consent Conditions

Above tested parameters are conforming to Consent Conditions.


Authorized Signatory
Channabasappa Maikar (Chemical)



--END OF REPORT--

Note:

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TC-6990



CIN: U74900KA2013PTC069193

**NICHROME TESTING LABORATORY
 AND RESEARCH PRIVATE LIMITED**

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR,
 DHARWAD, KARNATAKA, INDIA PIN : 580 008
 PH : 0836 - 2771115, 2778521
 email : nicechem@gmail.com, website : nichromelabs.com

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Page 1 of 1

TEST REPORT

Name of Customer and Address:
 M/S. Grasim Industries Limited,
 Chemical Division, Karwar,
 P.O. Binaga – 581307,
 Dist – Uttar Kannada.

ULR Code No: TC69902200006422F
Report Number: NTLR/SEP/6422
Sample Number: SEP/22/6422
Type of Sample: AMBIENT NOISE (Day)
Discipline : Chemical
Group: Atmospheric Pollution
Sample Collected by: Nichrome Testing Laboratory and
 Research Private Limited
Sampling Method: IS 9989: 2014
Particulars of Sample Collected: Sound Level Meter
Environmental Condition: 26° C
Date of Collection: 06/09/2022
Date of Sample receipt: 06/09/2022
Date of Analysis started: 06/09/2022
Date of Completion: 06/09/2022
Date of Report: 07/09/2022

Customer Reference:
 PO NO : 8150008761
 Date : 05.07.2022

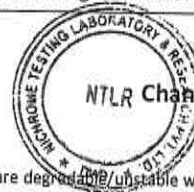
Sample Description:
 Noise Data

RESULTS

SL. NO.	SAMPLING LOCATION	TEST METHOD	TIME FREQUENCY	L _{Min} dB (A)	L _{Max} dB (A)	L _{eq} dB (A)
1	North West of Cell House Station - 1	IS 9989: 2014	11:00 am to 11:15 am	56.1	60.0	58.6
2	South West of Cell House Station - 2	IS 9989: 2014	11:30 am to 11:45 am	65.1	68.1	66.4
3	South East of Cell House Station - 3	IS 9989: 2014	12:00 pm to 12:15 pm	60.1	61.8	60.9
4	Lagoon - IV	IS 9989: 2014	12:20 pm to 12:35 pm	59.2	61.9	60.3
5	Phosphoric Acid Drum Filter	IS 9989: 2014	12:40 pm to 12:55 pm	65.1	68.9	67.1
6	Occupational Health Center	IS 9989: 2014	01:00 pm to 01:15 pm	65.1	69.1	67.1
7	Technical Block	IS 9989: 2014	01:20 pm to 01:35 pm	60.1	63.1	61.4
8	Stores	IS 9989: 2014	01:40 pm to 01:55 pm	50.1	54.1	52.2
9	Weigh Bridge	IS 9989: 2014	02:00 pm to 02:15 pm	55.1	60.1	57.1
10	Time Office	IS 9989: 2014	02:20 pm to 02:35 pm	60.1	65.5	62.3
11	Shopping Complex	IS 9989: 2014	02:40 pm to 02:55 pm	50.1	57.6	53.8
12	G – Type Colony	IS 9989: 2014	03:00 pm to 03:15 pm	50.1	54.4	52.1
13	Bala Bhavan	IS 9989: 2014	03:20 pm to 03:35 pm	55.1	58.0	56.7
14	Old Dispensary	IS 9989: 2014	03:40 pm to 03:55 pm	60.1	66.1	62.8
15	D – Type Colony	IS 9989: 2014	04:00 pm to 04:15 pm	65.1	70.1	67.8
16	Guest House	IS 9989: 2014	04:20 pm to 04:35 pm	50.1	56.1	52.9

As per KSPCB Consent, Ambient Noise level shall not exceed for Day Time (06.00 am to 10.00 pm) is 75 dB (A) Leq

Inference as per KSPCB Standards	Above tested parameters are conforming to standards.
----------------------------------	--



Authorized Signatory
 NTLR Channabasappa Maikar (Chemical)

--END OF REPORT--

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degraded/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

ACCREDITATIONS / RECOGNITIONS

MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 6990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



TC-6990

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CIN: U74900KA2013PTC069193

NICHROME TESTING LABORATORY AND RESEARCH PRIVATE LIMITED

170, 2nd MAIN JUDGES BUNGALOW ROAD, NARAYANPUR,
DHARWAD, KARNATAKA, INDIA PIN : 580 008
PH : 0836 - 2771115, 2778521
email : nicechem@gmail.com, website : nichromelabs.com

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Format No: NTLR/F/34/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

ULR Code No:

TC699022000006431F

Report Number:

NTLR/SEP/6431

Sample Number:

SEP/22/6431

Type of Sample:

AMBIENT NOISE (Night)

Discipline :

Chemical

Group:

Atmospheric Pollution

Sample Collected by:

Nichrome Testing Laboratory and
Research Private Limited

Customer Reference:

PO NO : 8150008761

Date : 05.07.2022

Sampling Method:

IS 9989: 2014

Particulars of Sample Collected:

Sound Level Meter

Environmental Condition:

26° C

Date of Collection:

07/09/2022

Date of Sample receipt:

07/09/2022

Date of Analysis started:

07/09/2022

Date of Completion:

07/09/2022

Date of Report:

08/09/2022

Sample Description:

Noise Data

RESULTS

SL. NO.	SAMPLING LOCATION	TEST METHOD	TIME FREQUENCY	L _{Min} dB (A)	L _{Max} dB (A)	L _{eq} dB (A)
1	North West of Cell House Station - 1	IS 9989: 2014	10:00 pm to 10:15 pm	47.0	59.6	53.6
2	South West of Cell House Station - 2	IS 9989: 2014	10:20 pm to 10:35 pm	59.0	65.6	61.8
3	South East of Cell House Station - 3	IS 9989: 2014	10:40 pm to 10:55 pm	50.1	55.5	52.9
4	Lagoon - IV	IS 9989: 2014	11:00 pm to 11:15 pm	50.1	60.2	55.5
5	Phosphoric Acid Drum Filter	IS 9989: 2014	11:20 pm to 11:35 am	50.0	60.9	58.8
6	Technical Block	IS 9989: 2014	11:40 pm to 11:55 pm	49.1	54.4	51.6
7	Occupational Health Center	IS 9989: 2014	12:00 am to 12:15 am	60.1	66.6	62.2
8	Stores	IS 9989: 2014	12:20 am to 12:35 am	41.0	51.6	47.9
9	Weigh Bridge	IS 9989: 2014	10:00 pm to 10:15 pm	50.2	55.5	52.9
10	Time Office	IS 9989: 2014	10:20 pm to 10:35 pm	52.1	57.8	54.4
11	Shopping Complex	IS 9989: 2014	10:40 pm to 10:55 pm	43.4	50.1	47.3
12	Guest House	IS 9989: 2014	11:00 pm to 11:15 pm	40.1	49.9	45.5
13	G – Type Colony	IS 9989: 2014	11:20 pm to 11:35 pm	42.0	52.4	47.9
14	Bala Bhavan	IS 9989: 2014	11:40 pm to 11:55 pm	45.1	52.5	49.0
15	Old Dispensary	IS 9989: 2014	12:00 am to 12:15 am	54.1	59.8	56.8
16	D – Type Colony	IS 9989: 2014	12:20 am to 12:35 am	50.1	58.8	55.4

As per KSPCB Consent, Ambient Noise level shall not exceed for Night Time (10.00 pm to 06.00 am) is 70 dB (A) Leq

Inference as per KSPCB Standards

Above tested parameters are conforming to standards.

-END OF REPORT-



Authorized Signatory
Channabasappa Maikar (Chemical)

Note:

1. The results listed above pertain only to the tested samples and applicable parameters. 2. Samples which are degradable/unstable will be disposed immediately after testing and others will be disposed after 15 days from the date of issue of test report unless otherwise specified. 3. Total liability of our laboratory is limited to the invoiced amount. 4. This report is not to be reproduced either wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission. 5. If any disputes Subject to Dharwad Jurisdiction. 6. When Laboratory is required by law/contractual agreements to release confidential information, the customer shall be informed unless prohibited by law. 7. Sampling is not done by us unless otherwise specified. 8. Any discrepancy in the test report should be notified within 15 days. 9. For any Complaints kindly register in our Complaint Register maintained with Customer service Coordinator.

Annexure - 9

ACCREDITATIONS / RECOGNITIONS
MoEF&CC, New Delhi
ISO/IEC 17025:2017
(NABL TC- 5990)
ISO 9001:2015
ISO 45001:2018
FOSTAC - FSSAI
AGMARK



CIN: U74900KA2013PTC069193

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Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

Effluent Treatment Plant

Sample Description:

10 Ltr Sample (Can) & 1 Ltr Wide Mouth Glass Bottle

ULR Code No:

TC699022000006423P

Report Number:

NTLR/SEP/6243

Sample Number:

SEP/22/6243

Type of Sample:

TREATED WATER

Discipline:

Chemical

Group:

Pollution & Environment

Sample Collected by:

Customer

Sampling Method:

-

Particulars of Sample Collected:

-

Environmental Condition:

26°C

Date of Collection:

06/09/2022

Date of Sample receipt:

06/09/2022

Date of Analysis started:

06/09/2022

Date of Completion:

12/09/2022

Date of Report:

12/09/2022

Sample Condition:

Satisfactory

RESULTS

SL.NO	PARAMETERS	UNITS	TEST METHOD	RESULT	Tolerance Limits (As per KSPCB Consent)
1	Odour	-	IS 3025 (Part 5): 2007	Agreeable	Not Specified
2	pH @ 25°C	-	APHA 23rd Edition 4500 H+, B: 2017	6.08	5.5 to 9.0
3	Total Suspended Solids, Max	mg/L	APHA 23rd Edition 2540 D: 2017	31.00	100
4	Oil & Grease, Max	mg/L	IS 3025 (Part 39): 2014	BDL	20
5	Biological Oxygen Demand 3 days at 27°C, Max	mg/L	IS 3025 (Part-44): 2014	61.61	100
6	Chemical Oxygen Demand	mg/L	IS : 3025 (Part 58): 2017	153.79	250
7	Ammonical Nitrogen	mg/L	APHA 23rd Edition 4500 NH3 B, C: 2017	3.76	50
8	Total Kjeldhal Nitrogen	mg/L	APHA 23rd Edition 4500 Norg B: 2017	4.59	100
9	Free Ammonia	mg/L	IS 3025 (Part 34): 2014	BDL	5
10	Zinc as Zn	mg/L	IS 3025 (Part 49): 2014	0.204	15
11	Lead as Pb	mg/L	IS 3025 (Part 47): 2014	1.165	2
12	Copper as Cu	mg/L	IS 3025 (Part 42): 2014	0.101	3
13	Fluoride as F	mg/L	APHA 23rd EDITION 4500-F -,D: 2017	2.91	15
14	Nitrate Nitrogen	mg/L	IS 3025 (Part 34): 2014	BDL	20
15	Bloassy	-	IS : 6582 (Part – 2) 2001	As per Condition C - 7	
16	Bio - Monitoring Test	-		Fish Survives In 5% Solution of Treated Effluent	

BDL: Below detectable limit, (Oil & Grease – 10 mg/L, Free Ammonia – 0.1mg/L, Nitrate Nitrogen - 0.5 mg/L)

Inference as per KSPCB Consent Standards

Above tested parameters are conforming to standards.

--END OF REPORT--



Authorized Signatory
Channabasappa Malkar (Chemical)

Note:

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ACCREDITED LABORATORY

TESTING / CONSULTING / ENGINEERING / / TRAINING

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Format No: NTLR/F/16/07

Page 1 of 1

TEST REPORT

Name of Customer and Address:

M/S. Grasim Industries Limited,
Chemical Division, Karwar,
P.O. Binaga – 581307,
Dist – Uttar Kannada.

Customer Reference:

PO NO : 8150008761
Date : 05.07.2022

Sampling Location:

Effluent Treatment Plant

Sample Description:

10 Ltr Sample (Can) & 1 Ltr Wide Mouth Glass Bottle

Report Number: NTLR/SEP/6243

Sample Number: SEP/22/6243

Type of Sample: TREATED WATER

Sample Collected by: Customer

Sampling Method: -

Particulars of Sample Collected: -

Environmental Condition: 26°C

Date of Collection: 06/09/2022

Date of Sample receipt: 06/09/2022

Date of Analysis started: 06/09/2022

Date of Completion: 12/09/2022

Date of Report: 12/09/2022

Sample Condition: Satisfactory

RESULTS

SL.NO	PARAMETERS	UNITS	TEST METHOD	RESULT	Tolerance Limits (As per KSPCB Consent)
1	Colour	-	APHA 23rd Edition 2120 B: 2017	Colourless	Not Specified
2	Temperature	°C	APHA 23rd EDITION, 2250 B	25°C	-
3	Sulphide (as H ₂ S)	mg/L	APHA 23 rd EDITION, 4500- S2-, F: 2017	BDL	5
4	Total Residual Chlorine	mg/L	IS 3025 (Part 26): 2017	BDL	1
5	Mercury as Hg	mg/L	APHA 23rd EDITION 3111 B	BDL	0.01

BDL: Below detectable limit, (Sulphide – 0.05 mg/L, Total Residual Chlorine – 0.2 mg/L, Mercury – 0.001 mg/L)

Inference as per KSPCB Consent Standards	Above tested parameters are conforming to standards.
--	--

Authorized Signatory

Channabasappa Maikar (Chemical)

--END OF REPORT--

Note:

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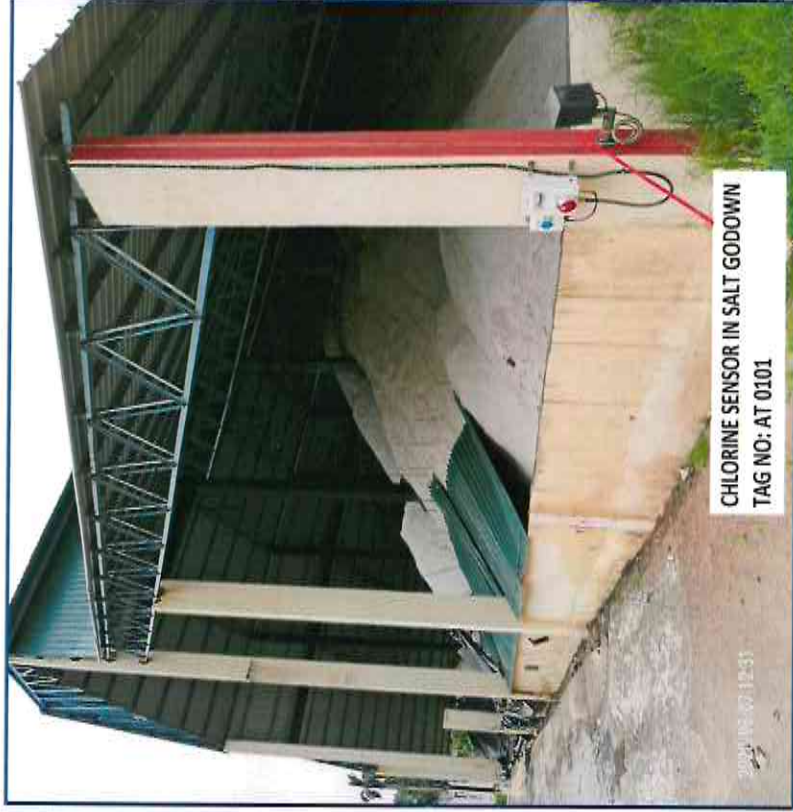
Annexure-10

Chlorine Sensors snaps shot

At Time office gate



At Salt Godown



Ad. me