

Ref: S &E/E-8B2/24

Date: 27.05.2024

The Director (S)  
Ministry of Environment, Forest & Climate Change  
Additional Office Block for GPOA, Ist Floor  
Shastri Bhavan ,Haddows Road,  
Nungambakkam,  
Chennai – 600 006.

**Sub: Half Yearly Compliance Status Report for Environmental Clearance -Reg**

Ref:

- 1) F.No. J-11011/171/2007- IA II (I) Dated : March 5, 2008
- 2) F.No. J-11011/171/2007- IA II (I) Dated : May 20, 2019

Dear Sir,

With reference to the above Environmental Clearances, we are herewith submitting the Compliance Status Report (Half yearly compliance report) for the period ending October 2023 to March 2024.

Thanking you,

Yours faithfully,

For "Greenstar Fertilizers Limited"

  
**P.Senthilnayagam**  
**Whole Time Director**

Encl:

1. Half Yearly Compliance Report
2. Half yearly monitoring report.

CC: i) The District Environmental Engineer,  
Tamil Nadu Pollution Control Board,  
Tuticorin.

**Greenstar Fertilizers Limited**

CIN : U24100TN2010PLC077127

REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.

FACTORY : Muthiahpuram Post, Tuticorin - 628 005. Tamilnadu, India.

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**GREENSTAR FERTILIZERS LIMITED**  
**SPIC NAGAR, TUTICORIN – 628 005**

**ENVIRONMENTAL CLEARANCE FOR ENHANCED PRODUCTION AT SPIC, TUTICORIN**

**F.No. J-11011/171/2007- IA II (I) Dated : March 5, 2008**

**Half Yearly Compliance Status Report**

S.No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
1	There shall be no addition of 'Pollution Load' due to the expansion. The unit shall shift to Natural Gas as fuel within next three years.	<p>There is no addition in the 'Pollution Load' due to enhanced production as per the study report of IIT professor.</p> <p>The following actions were taken</p> <ul style="list-style-type: none"> <li>a) Environmental clearance was obtained from MoEF for the changeover of feedstock from Naphtha to mixed feed stock (Naphtha and Natural gas) on 28.03.2017</li> <li>b) We have obtained consent to operate for Natural gas conversion vide Consent Order NO. 2007231068959 for Air Act and Consent Order NO. 1906127778730 for Water Act Dated: 26/05/2020 from Tamilnadu Pollution control Board.</li> <li>c) We have started receiving natural gas from Ramanathapuram area through IOCL on 13<sup>th</sup> March 2021 and NG is being used in our Ammonia plant.</li> </ul> <p><b>(Now the unit is with M/s SPIC)</b></p>
2	The gaseous emission [SO <sub>2</sub> , NO <sub>x</sub> , NH <sub>3</sub> , and Urea Dust & Fluoride] and particulate matter from various process units shall conform to the prescribed norms by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. The stack height shall be as per the CPCB guidelines. 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. Further, the company	<p>The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub> and Urea Dust &amp; Fluoride) and particulate matter from various process units are monitored on monthly basis, it is also being monitored on bi Annual basis by CPCB empanelled Laboratory <b>(Annexure I)</b> and the emission levels are within limits.</p> <p>The unit will be put off in the event of failure of pollution control system and we will restart only after rectifying the control measures to achieve the desired efficiency. The stack height is as per CPCB guidelines. Interlocking system is provided in the pollution control devices.</p> <p>Company has taken following measures:-</p>

	<p>shall interlock the production system with the pollution control devices.</p>	<ol style="list-style-type: none"> <li>1. Sulphuric acid plant converter catalyst which has been renewed at a cost of Rs.4.4 crores has helped to achieve less than 1.0 Kg/T of SO<sub>2</sub> emission.</li> <li>2. Tail Gas scrubber has been installed at Sulphuric acid plant to keep the emission always under norms even during start up and shut down.</li> </ol>
<p>3</p>	<p>The limits for various pollutants should be within the prescribed limits. Set of dry and wet Cyclones along with a stack shall be provided. The total Particulate emission from all the plants shall be within 50 mg/Nm<sup>3</sup>.</p>	<p>We have provided two sets of dry cyclone and one set of wet cyclone with stacks to limit the pollutant within 50 mg/Nm<sup>3</sup>.</p> <p><b>(Now the unit is with M/s SPIC)</b></p>
<p>4</p>	<p>SO<sub>2</sub> emission level shall be 2 kg/T of the 100% H<sub>2</sub>SO<sub>4</sub> produced and Acid Mist concentration shall be within 10 mg/nm<sup>3</sup>. Monitoring of Prilling Tower shall be carried out as per the CPCB Guidelines.</p> <p>Recovered Hydrofluoro Silicic Acid from the Fluorine recovery unit shall be reused in the process.</p>	<p>The SO<sub>2</sub> emissions from Sulphuric acid plants stack is below 1Kg/T of H<sub>2</sub>SO<sub>4</sub> produced and acid mist concentration is within 10 mg/nm<sup>3</sup>. Sulphuric acid plant converter catalyst has been renewed at a cost of Rs.4.4 crores , which helped achieve less than 1.0 Kg/T of SO<sub>2</sub> emission.</p> <p>Online analyzers for particulate matter and ammonia have been installed in urea prilling tower and the real time data are connected to TNPCB and CPCB.</p> <p>Hydro-fluorosilicic acid is recovered by operating the fluorine recovery unit and used for manufacturing of Aluminum Fluoride.</p> <p><b>(Urea plant is now with M/s. SPIC)</b></p>
<p>5</p>	<p>Regular monitoring of ambient air quality for SPM, RPM, SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, and Urea Dust &amp; Fluoride shall be carried out. The location of existing ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board and additional stations shall be set up, if required. It shall be ensured that stations are in the downwind directions as well as where maximum ground level concentration are anticipated.</p>	<p>Ambient Air Quality monitoring is being carried out regularly for SPM, RPM, SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, Urea Dust and Fluoride by our Environment monitoring cell manually twice a week at 9 locations, in which 4 locations are located inside the factory premises and 5 are outside the factory premises.</p> <p>The location of existing ambient air quality monitoring stations was set up in consultation with TNPCB in the predominant downwind direction, where maximum ground level concentrations are anticipated.</p> <p>In addition to this Continuous Online ambient</p>

		Air Quality monitoring stations are provided one each in M/s SPIC and M/s Greenstar and the data of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NH <sub>3</sub> , and NO, NO <sub>2</sub> , NO <sub>x</sub> , wind direction, wind speed, RH and temperature are transferred to Care Air Centre, TNPCB Chennai. Ambient air quality is monitored on bi Annual basis by CBCB empanelled laboratory as per NAAQ standards.(Annexure I)
6	Fugitive emissions in the bagging plant shall be controlled through two wet de-dusting systems. Urea dust laden air from various dust emission points will be sucked through and sent to the dust chambers and scrubbers. The scrubber liquor will be sent for urea recovery system and urea plant. Cyclone separators/Bag Houses will be provided at transfer points for controlling urea dust. Dust collected at these points will be reprocessed in the urea plant.	Urea from plant is directly sent to Urea Bagging plant for bagging most of the time. It is transported through rubber belt soft conveyors. Only one transfer point is provided. Closed SS duct is provided in transfer points to avoid fugitive emissions. Electronic Packer scale weighers are provided which eliminates manual handling and avoid fugitive emission. Urea dust laden air from various dust emission points are sucked through and sent to the dust chambers and scrubbers. The scrubber liquor is sent for urea recovery system of urea plant. Cyclone separators are provided for controlling urea dust. Dust collected are collected and reprocessed in the urea plant. <b>(Units- Urea plant and Urea Bagging plant are now with M/s. SPIC)</b>
7	The fugitive emissions in the work zone environment, product, and raw material storage area shall be regularly monitored as per the guidelines of CPCB and data shall be submitted to the concerned authorities. The fugitive emissions shall be controlled and conform to the limits prescribed by the CPCB in future.	Adequate measures like routine maintenance, preventive maintenance of equipment etc. are taken to control fugitive emissions in the work zone environment, product raw material storage area. Regular monitoring of fugitive emission as per the guidelines of CPCB is carried out and data is submitted to the concerned authorities. It is also Monitored on biannual basis through CPCB empanelled laboratory (Annexure I) and the results confirms to the limits prescribed by the CPCB.
8	There shall be no increase in the water consumption and waste water generation. Efforts shall be made for water conservation to achieve water consumption less than 8m <sup>3</sup> /ton of urea produced. All discharge of waste water shall be through the Marine outflow system. No effluent arising from the	There is no increase in water consumption and waste water generation. We have reduced water consumption by adopting various conservation measures and the present water consumption for Urea is less than 8 m <sup>3</sup> per ton of urea produced. The effluent is treated in integrated effluent treatment plant. Some portion of the treated

	process plants and associated facilities shall be discharged to the storm water drain. The quality of storm water shall be regularly monitored.	effluent is discharged in to sea occasionally. Quality of Storm water is regularly monitored. <b>(Now the unit is with M/s SPIC)</b>
9	Regular monitoring of ground water by installing piezometric welis around the guard pond and sludge disposal sites for ali relevant parameters including pH, fluoride and ARSENIC shall be periodically monitored and report shall be submitted to the concerned RO of the Ministry, CPCB and State Pollution Control Board. Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Poilution Control Board.	Ground water quality is monitored at 19 locations by our Environment Monitoring Cell on monthly basis. All the stipulated parameters are monitored. 4 Peizometric welis are located around the arsenic encapsulation and 4 Peizometric wells are provided around chromium encapsulation locations. Parameters inciuding pH, fluoride and arsenic are periodically monitored and the report is submitted to the RO of the Ministry, CPCB and State Poliution Controi Board. Water samples are also analyzed through CPCB empanelled laboratory on bi Annual basis and the results confirms with the stipulated standards. <b>(Annexure I)</b>
10	2.5 TPA of Sulphur Sludge, 14m <sup>3</sup> /yr of Spent Nickel Catalyst, 3m <sup>3</sup> /yr of Spent Co, Mo Spent Catalyst, 20m <sup>3</sup> /yr of Spent Iron Catalyst, 4m <sup>3</sup> /yr of Spent ZnO Catalyst & 5m <sup>3</sup> /yr V <sub>2</sub> O <sub>5</sub> catalyst and 250 Kg/d of Calcium Carbonate sludge shall be sent to the Secured Landfill site within the premises. 30 Kl/yr of Used oii shall be stored in leak proof steel drums for sale to registered recyclers ad 700 Used batteries shall be sold to authorized reprocesses.	The sulphur sludge is used as filler material in DAP Plant. Calcium carbonate sludge is completely reused (in house) as filler material in DAP plant, Fresh Authorization has also been obtained for the same vide authorization no: 23HFC52334953 dated 25/08/2023. Spent nickel catalyst, and spent ZnO catalyst of M/s SPIC were sent to Authorized HW Recyclers – Rajkob Industries, Maharashtra. Spent Co, Mo and spent iron cataiyist of M/s SPiC were sent to Re Sustainability industrial waste management Solutions Ltd. <b>(Now the unit is with M/s SPIC)</b> V2O5 catalyst of M/s Greenstar fertilizers Ltd, is sent to Re Sustainability Industrial waste management Solutions Ltd. Used oil is stored and disposed to authorized recyclers. Used batteries are given to the approved recyclers.
11	All safety precautions, as submitted to Ministry shall be instailed and undertaken. Adequate protection measures for handiing of Ammonia vapours in case of process upset condition shall be undertaken. Safety valve exhaust and drains shali be connected to a separate close header from which Ammonia vapours shall be	All safety precautions as submitted to Ministry are implemented. Adequate protection measures for handiing of Ammonia vapors in case of process upset condition are undertaken. Safety vaives' exhaust and drains are connected to a separate closed header from which Ammonia vapor is vented from vent stack after diluting the stream.



	vented from vent stack after diluting the stream.	
12	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January 2000 and Hazardous Wastes [Management and Handling] Rules, 2003 along with Emergency Preparedness Rules. Authorization from the State Pollution Control Board must be obtained for collection / treatment / storage / disposal of hazardous wastes, if any.	All the rules and regulation under MSiHC Rules 1989 are being followed. On Site Emergency drills are being carried out as per approved plan. We have obtained separate authorization for M/s SPIC and M/s Greenstar Fertilizers Limited.
13	The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection [CREP].	<ul style="list-style-type: none"> <li>✓ Water consumption of the unit per MT of Urea produced is less than 10m<sup>3</sup>/MT.</li> <li>✓ The unit has adopted glycine based technology for absorption system in Ammonia plant in June 1998.</li> <li>✓ Cooling water systems were switched over to non-Chromate based treatment programme in 1998.</li> <li>✓ There is no process effluent in urea plant as everything is recycled back to the process.</li> <li>✓ The nitrogenous fertilizer plant effluent mainly the cooling tower blow down is collected in effluent sumps and then sent to integrated effluent treatment plant for treatment</li> <li>✓ No effluent is discharged into storm water drain.</li> <li>✓ The storm water quality is monitored during the time of monsoon.</li> <li>✓ Urea Prilling tower is based on forced draft system. The air pollution control equipment have been installed to reduce the concentration of pollutants.</li> <li>✓ In M/s. Greenstar Fertilizers Limited phosphoric acid plant, four stage off gas recovery system has been installed in</li> </ul>

		<p>addition to turbulent contact absorber (TCA - 3) for scrubbing of fluoride present in emission gases The total fluoride concentration at the exit of TCA -3 and HH Off gas stack is maintained below 10 mg/Nm<sup>3</sup>.</p> <ul style="list-style-type: none"> <li>✓ Tail gas scrubber is provided in sulphuric acid plant at a cost of 80 lakhs.</li> <li>✓ Gypsum is disposed to cement manufacturing units and is also utilized in agriculture as a soil conditioner.</li> <li>✓ The spent catalysts are collected in mild steel drum and disposed to Re Sustainability Industrial waste management Solutions Ltd or to authorized recyclers (Urea plant is now with M/s. SPIC)</li> </ul>												
14	The company shall install rainwater harvesting systems from the rooftops 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.	We have provided Rain water harvesting system for storm water collection as well as for roof top collection and the collected water is used for various activities.												
15.	33% of the total land area shall be developed as green belt in consultation with DFO. The Green Belt shall be as per the CPCB Guidelines.	<p>We have taken up plantations within the project sites and the colony areas by covering more than 33 % of the total land area.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Area</th> <th>Greenstar</th> <th>Township</th> </tr> </thead> <tbody> <tr> <td>Total area (Hectares)</td> <td>56.43</td> <td>118.723</td> </tr> <tr> <td>Greenbelt Area (Hectares)</td> <td>19.6</td> <td>103.648</td> </tr> <tr> <td>% Greenbelt area</td> <td>34.73%</td> <td>87.30%</td> </tr> </tbody> </table>	Area	Greenstar	Township	Total area (Hectares)	56.43	118.723	Greenbelt Area (Hectares)	19.6	103.648	% Greenbelt area	34.73%	87.30%
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**B) General Conditions:**

S.NO	GENERAL CONDITIONS	COMPLIANCE STATUS
1	The project authorities shall strictly adhere to the stipulations made by the state pollution control board.	All the stipulations made by the state Pollution Control Board are strictly adhered.
2	No further expansion or modification in	

	the plant shall be carried out without prior approval of the MoEF.	No further expansion or modification in the plant was carried out without prior approval of the MoEF. Environmental clearance was obtained from MoEF for the Modernization of existing DAP plant from 606100 MTPA to 900000 MTPA by M/s Greenstar Fertilizers on 25 <sup>th</sup> January 2021. And CTO has been obtained on 27/12/2022.
3	The Project proponent shall also comply with all the Environmental protection measures and Safe guards recommended in the EIA / EMP report.	We have implemented all the Environmental protection measures and safe guards recommended in the EIA / EMP.
4	Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the EP Act 1986 for Marine discharge norms.	Cooling tower blow down water is collected and treated in Integrated Effluent Treatment Plant and reused in M/s Greenstar Fertilizers Limited and a small portion of this is discharged into sea after confirming its quality. The treated and untreated effluent is also monitored by our Environment Monitoring Cell on monthly basis. in addition to this continuous online effluent monitoring system has been installed for pH, Ammonical nitrogen, flow and TSS - real time data is being uploaded on the web site of TNPCB and CPCB. The treated effluent is also analyzed by CPCB empanelled laboratory on bi Annual basis and all the parameters area found within the stipulated norms. <b>(Annexure I)</b> <b>(Now the unit is with M/s SPIC)</b>
5	The overall noise level in and around the plant area shall be kept well within the standard by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generations	Noise level is monitored at 4 locations along the factory boundary at day and night time. The noise levels are within limit. We have provided noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generations.
6	Proper Housekeeping and adequate occupational health programmes shall be carried out and records shall be maintained for at least 30 – 40 years. The programmes shall include lung function and sputum test, besides the regular tests, once in 6 months, sufficient preventive	We are maintaining good housekeeping. We have an Occupational Health (OH) Centre with a full time doctor and supporting staff. OH tests including lung function test, sputum tests, audiometry and regular tests are carried out for all employees as per the Factory's Act and



	measures shall be adapted to avoid direct exposure to dust etc.,	records are maintained. Preventive measures are adopted to avoid direct exposure.
7	A separate environmental management cell equipped with full-fledged laboratory facilities shall be set up under the control of a senior executive.	A separate environmental management cell equipped with full-fledged laboratory facilities is available. The Environment Management Cell is having 4 Environment engineers and Lab chemists and they are reporting to Head of Safety and Environment, who in turn is reporting to the Top Management.
8	Adequate funds shall be ear marked to meet the capital cost and recurring cost per annum for the Environmental protection measures. The amount so earmarked shall be used judiciously to implement the conditions stipulated by the MoEF as well as the state Government. The funds so provided shall not be diverted for any other purpose.	We have provided separate budgetary provisions for implementing environmental protection measures. The funds are not diverted for other purpose. xpenditures for Environmental protection measures include <ul style="list-style-type: none"> <li>a) We have installed AAQ continuous monitoring station for M/s Greenstar Fertilizers Limited at a cost of Rs.55 Lakhs.</li> <li>b) Replacing of the SA Plant Converter Catalyst at a cost of Rs.4.4 crores.</li> <li>c) SA Plant FAT modification job to increase SO<sub>2</sub> Absorption efficiency was carried out at a cost of Rs.1, 80,375.</li> <li>d) Startup scrubber has been provided in sulphuric acid plant at a cost of Rs.80 Lakhs.</li> <li>e) Online continuous emission monitoring of ammonia has been installed in both DAP and Complex fertilizers stack at a cost of Rs.30 lakhs (per stack).</li> <li>f) Online continuous monitoring for HF has been installed in DAP, SSP and PA plant at a cost of Rs.45 lakhs.</li> <li>g) Oniine HF analyzer has been installed for ambient air monitoring at a cost of Rs.21lakhs</li> </ul>

		<p>h) Online PM analyzer has been installed in DAP and SSP plant RG mill stack at a cost of Rs.6.25 lakhs.</p> <p>i) We have also installed online effluent monitoring system at STP for the parameters pH, TSS, BOD and COD at a cost of Rs 23 Lakhs.</p>
9	<p>The company shall under take the welfare measures and the community development measures for the local people in the vicinity of the project area.</p>	<p>We have undertaken many measures for improving the socio economic condition of the local people in the surrounding area. Have undertaken CER Activities in the areas, including community welfare measures in the project area for the overall improvement of the environment such as infrasturctutre for drinking water supply, sanitation, Health, Efucation, Skill development, Roads, cross drains, electrification includind solar power, solid waste management facilities,Scientific supports Awareness to local farmers to increase yield of crop and fodder, Rain water harvesting, soil moisture conservation works, Avenue plantation in community area.</p> <p>The details of community welfare measures undertaken during the year 2023-2024 as below:</p> <ul style="list-style-type: none"> <li>• We contributed Rs. 27500 towards the World record submission for a 3 year old child Diyashika in Muthiahpuram.</li> <li>• We Donated Food for Kabbadi competition in Soosai nagar and iyyan Kovil Street at a cost of Rs.65000.</li> <li>• We Donated Food for Kabbadi competition BAR association, thoothukudi at a cost of Rs.50000.</li> <li>• We provided drinking water to Soosai nagar at a cost of Rs.648000</li> <li>• We provided drinking water to Thangammalpuram at a cost of 648000 Lakhs.</li> </ul>

		<ul style="list-style-type: none"> <li>• We have donated 10LPH water filter to EB ASS.</li> <li>• Desilting of Paaimana Vaayikaal – Athimarapatti was carried out at a cost of Rs. 531000.</li> <li>• Desilting of Mullakadu Water canal was carried out at a cost of Rs.42500.</li> <li>• We distributed notebooks to 500 school children in Surrounding Villages at a cost of Rs.147500.</li> <li>• We distributed Uniforms to School children at a cost of Rs.40000.</li> <li>• Rs.8000 was donated as School Fees to under privileged students.</li> <li>• We donated food on Ramzan for Muslim community a cost of Rs.17466.</li> <li>• We Donated Rs.100000 towards Born to Win Trans awards ceremony .</li> <li>• Desilting of Canals were carried out at Athimarapatty canal and Mullakadu.</li> <li>• School Buildings were constructed at Veeranayakkan Thattu.</li> </ul>
10	<p>Concerned regional office of this Ministry state pollution control Board / CPCB shall monitor the implementation of the stipulated conditions. Six monthly compliance status report and monitoring data along with statistical interpretation shall be submitted to them regularly and shall be placed on the web site of the company</p>	<p>Compliance status report is being submitted regularly by the unit to MoEF, RO once in six months and for others on monthly basis. Compliance status report is uploaded on the Company's Website.</p>
11	<p>The project proponent should advertise in at least two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of</p>	<p>Newspaper advertisements were given in two local newspaper and copies of the same were submitted to MoEF, RO.</p>

	<p>the locality concerned, informing that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with the SPCB/ Committee may also be seen at the website of the ministry and forest at <a href="http://enviro.nic.in">http://enviro.nic/in</a>. The advertisement should be made within seven days from the date of issue of the clearance letter and a copy of the same should be forwarded to the concerned regional office of the ministry.</p>	
12	<p>The project authorities shall inform the regional office as well as the ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.</p>	<p>Information was provided and Project was completed.</p>

**GREENSTAR FERTILIZERS LIMITED**  
**SPIC NAGAR, TUTICORIN – 628 005**

**ENVIRONMENTAL CLEARANCE FOR ENHANCED PRODUCTION AT SPIC, TUTICORIN**

**F.No. J-11011/171/2007- IA II (I) Dated : May 20, 2019**

**Half Yearly Compliance Status Report**

S.No.	CONDITIONS	COMPLIANCE STATUS
5.	<p>Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval to the amendment/ bifurcation of the environmental clearance dated 5<sup>th</sup> March 2008, as stated in para 3 above, with additional terms and conditions as under:-</p> <p style="padding-left: 40px;">a) Total Fresh water requirement shall not exceed 3840 cum/day to be met through Tamil Nadu water supply and Drainage board from Thamiraparani river. Permission in this regard, shall be obtained from the concerned regulatory authority.</p>	<p>The present water consumption is within 3840 m<sup>3</sup>/day And it is drawn from Tamiraparani river through TWAD. The water is drawn combined for both M/s SPIC Ltd., and M/s Greenstar fertilizers Ltd., and permission is obtained in this regard.</p>
5 b)	<p>As already committed by the project proponent, Zero liquid Discharge shall be ensured and no waste/ treated water shall be discharged outside the premises.</p>	<p>we are following Zero liquid discharge as committed .</p>
6.	<p>All the other terms and conditions stipulated in the Environmental Clearance dated 5<sup>th</sup> March 2008 remain unchanged.</p>	<p>This is a communication order informing the bifurcation of Environmental Clearance dated 5<sup>th</sup> March 2008 between M/s Greenstar Fertilizers Ltd. And M/s SPIC Ltd. We complied with all the conditions in the EC dated 05<sup>th</sup> march 2008.</p>



Ref: S &amp;E/E-8 B2 /24

The Director (S)  
Ministry of Environment, Forest & Climate Change  
Additional Office Block for GPOA, Ist Floor  
Shastri Bhavan ,Haddows Road,  
Nungambakkam,  
Chennai – 600 006

**Sub: Half Yearly Compliance Status Report for Environmental Clearance -Reg**

Ref:

- 1) F.No J -11011/620/2009 IA-II(I) dated 18.03.2010.
- 2) No J -11011/620/2009 IA II (I) dated 11.01.2019

Dear Sir,

With reference to the above Environmental Clearances, we are herewith submitting the Compliance Status Report (Half yearly compliance report) for the period ending Oct 2023 to Mar 2024.

Thanking you,

Yours faithfully,

For "Greenstar Fertilizers Limited"



**P.Senthil Nayagam**  
Whole Time Director

Encl:

1. Half Yearly Compliance Report
2. Half yearly monitoring report.

CC: The District Environmental Engineer,  
Tamil Nadu Pollution Control Board,  
Tuticorin.

**Greenstar Fertilizers Limited**

CIN : U24100TN2010PLC077127

REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.

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**GREENSTAR FERTILIZERS LIMITED****SPIC NAGAR, TUTICORIN – 628 005**

Sub: SSP Unit Environmental Clearance-Half Yearly Compliance Status Report

Ref: No J -11011/620/2009 IA-II(I) dated 18.03.2010

**A.SPECIFIC CONDITIONS**

S.NO	SPECIFIC CONDITION	COMPLIANCE STATUS
1	The gaseous emissions from various process units shall conform to the standards prescribed by the consent authorities from time to time. The state pollution control board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	The gaseous emission is monitored on monthly basis and the emission levels are within the standards. We shall shut down the unit in the event of failure of any pollution control system adopted and it will not be restarted until the control measures are rectified to achieve the desired efficiency.
2	There should be no process effluent generation. The scrubbed effluent from the fluorine scrubber shall be recycled back in the process. The domestic effluent after treatment shall be used for green belt development.	There is no process effluent generation in the Single Super Phosphate unit. The water used in the fluorine scrubber unit is recycled back in the process. The domestic effluent from plant and township is treated in 700 KLD sewage treatment plant and treated effluent is being utilized for gardening/green belt development.
3	The company shall achieve SO <sub>2</sub> emission of 1Kg per tone of Sulphuric acid produced. The acid mist emission shall conform to the prescribed standards. The stack height for the sulphuric acid plant shall be provided as per the guidelines and on the basis of normal plant operation. The scrubbed gases should be left out at the same height of the plant.	We have achieved the SO <sub>2</sub> emission at the level of below 1 Kg / T of Sulphuric acid produced by changing the entire converter catalyst at a cost of 5 crores. SO <sub>2</sub> emission is within the limit and Sulphuric Acid Plant stack height is as per the TNPCB guidelines, and the scrubbed gas is left out at the same height of the plant.

4	The company shall undertake monitoring of fluoride from the scrubber vents and the data shall be submitted to the RO / MOEF, state pollution control board/ CPCB.	Fluoride at the exit of scrubber vent was monitored and the reports are submitted to MoEF and CPCB.  Online Continuous stack emission monitoring analyzer for fluoride has been installed and the data is being uploaded to TNPCB.
5	To control the total fluoride emission within the prescribed standards of 25 mg/NM3. The company shall install four stage fluorine scrubbers with 99.8% efficiency.	We have installed four stage fluorine scrubbers to control the fluoride emission and the emission level is below 10 mg/nm3 as per the reports. As stated the scrubbers efficiency is about 99.8%.
6	The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitoring data on its website and shall update the same periodically. It shall simultaneously be sent to the regional office of MOEF, the respective Zonal office of CPCB and the state pollution control board. The levels of SPM, RSPM, SO <sub>2</sub> , fluoride and NO <sub>x</sub> (Ambient levels) and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.	We have installed continuous online AAQMS one each in SPIC and Greenstar plants and the monitoring data are hooked in to the TNPCB care air center since 2012 and 2015 respectively.  Further the results of monitoring data are regularly submitted to the regional office of MoEF, CPCB and the State pollution control Board.  The online monitored data such as PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , ammonia, NO, NO <sub>2</sub> , SO <sub>2</sub> , HF, wind speed, wind direction, temperature, relative humidity is displayed near the factory main entrance gate for the public.
7	The company shall monitor the SO <sub>2</sub> emission from the sulphuric acid plant. Measures shall be taken to control the emission from the sulphuric acid plant. Monitoring of SO <sub>2</sub> and fluoride should be carried out as per the CPCB guidelines.	We have installed on line stack monitoring equipment in the Sulphuric acid plant to measure SO <sub>2</sub> emission and the monitored data is transmitted to care air center of TNPCB. Monitoring of SO <sub>2</sub> and fluoride are carried out as per the CPCB guidelines.
8	Green belt of adequate width and density of about 33% of the plant area shall be provided to mitigate the effects of fugitive emissions all around the plant. The development of green belt should be in consultation with the DFO as per the CPCB guidelines.	SSP unit is located within the existing factory/facility and the company has developed greenbelt within the factory and colony area.

		<table border="1"> <tr> <td>Area</td> <td>Greenstar</td> <td>Township</td> </tr> <tr> <td>Total area (Hectares)</td> <td>56.43</td> <td>118.723</td> </tr> <tr> <td>Greenbelt Area (Hectares)</td> <td>19.6</td> <td>103.648</td> </tr> <tr> <td>% Greenbelt area</td> <td>34.73%</td> <td>87.30%</td> </tr> </table> <p>Greenbelt development has been carried out in consultation with the local DFO. The plantation works and survival are maintained good.</p>	Area	Greenstar	Township	Total area (Hectares)	56.43	118.723	Greenbelt Area (Hectares)	19.6	103.648	% Greenbelt area	34.73%	87.30%
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9	The company should take measures for harvesting the rain water to recharge the ground water.	Rain water harvesting facilities are made.												
10	The company shall undertake eco developmental measures including community welfare measure in the project area for the overall improvement of the environment.	ECO development measures including community welfare measures like tree plantation Environmental awareness programs, Environmental pamphlets are being carried out for the overall improvement of the Environment.												
11	Provision shall be made for the housing of the construction labours within the site with all the necessary infrastructure and facility, such as fuel for cooking, mobile toilet, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure which is to be removed after the completion of the project. All the construction waste shall be managed so that there is no impact on the surrounding environment.	<p>The facilities/provisions such as drinking water and toilet facilities are being provided to the construction workers during the construction time.</p> <p>The construction waste is being managed within the project site without creating any adverse impact on the surrounding environment as stated.</p>												

**B) GENERAL CONDITIONS**

S.NO	<u>GENERAL CONDITIONS</u>	<u>COMPLIANCE STATUS</u>
1	The project authorities shall strictly adhere to the stipulations made by the state pollution control board.	All the stipulations made by the State Pollution Control Board are being adhered.
2	No further expansion or modification in the plant shall be carried out without prior approval of the MOEF. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of	We ensure No further expansion or modification in the plant is carried out without prior approval of the MoEF. Environmental clearance was obtained from MoEF for the Modernization of existing DAP plant from 606100 MTPA to 900000 MTPA by M/s Greenstar Fertilizers on 25 <sup>th</sup> January

	the conditions imposed and to add additional environmental protection measures required, if any.	2021. And CTO has been obtained on 27/12/2022.
3	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.	All measures are in place to adhere to the prescribed emission standards. In the event of failure of pollution control system, we will restart after the control measures are rectified to achieve the desired efficiency.
4	The location of ambient air quality monitoring stations shall be decided in consultation with the state pollution control board.(SPCB) and it shall be ensured that atleast one station is installed in the upwind and down wind direction as well as where maximum ground level concentrations are anticipated.	The locations of ambient air quality monitoring station were selected in consultation with TNPCB and these stations are covered up wind, downwind direction as well as where maximum ground level concentrations are anticipated. In addition to this, Continuous online Monitoring station is provided one each in M/s SPIC and M/s Greenstar and the data of PM 10, PM 2.5, SO2, NH3, and NO, NO2, NOx, wind direction, wind speed. RH and Temperature are transferred to Care Air Center, TNPCB Chennai. Ambient air quality is monitored on bi Annual basis by CBCB empanelled laboratory as per NAAQ standards (Annexure I)
5	Dedicated scrubbers and stacks of appropriate height as per the central pollution board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.	Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines are provided. The scrubbed water is sent back to the process.
6	The overall noise level in and around the plant area shall be kept well within the standard by providing noise control measures including acoustic hoods, silencers, enclosures etc on all sources of noise generations. The ambient noise shall conform to the standards prescribed under Environment ( Protection) Act, 1986 rules, 1989.	Noise level is monitored at 4 locations along the factory boundary at day and night time. The noise levels are within limits. We have provided noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generations.
7	The project proponent shall also comply with all the environmental protection measures and safe guards proposed in the project report submitted to the ministry. All the recommendations made in the	We have implemented all the environmental protection measures and safe guards proposed in the project report and complied with. All the recommendations for environmental



	<p>respect of environmental management and risk mitigation measures relating to the project shall be implemented.</p>	<p>management and risk mitigation measures are being implemented.</p>
<p>8</p>	<p>The company will undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities will be undertaken by involving local villages and administrations.</p>	<p>We have undertaken many measures for improving the socio economic condition of the local people in the surrounding area. Have undertaken CER Activities in the areas, including community welfare measures in the project area for the overall improvement of the environment such as infrastructure for drinking water supply, sanitation, Health, Education, Skill development, Roads, cross drains, electrification including solar power, solid waste management facilities, Scientific supports Awareness to local farmers to increase yield of crop and fodder, Rain water harvesting, soil moisture conservation works, Avenue plantation in community area.</p> <p>The details of community welfare measures undertaken during the year 2023-2024 as below:</p> <ul style="list-style-type: none"> <li>• We contributed Rs. 27500 towards the World record submission for a 3 year old child Diyashika in Muthiahpuram.</li> <li>• We Donated Food for Kabbadi competition in Soosai nagar and Iyyan Kovil Street at a cost of Rs.65000.</li> <li>• We Donated Food for Kabbadi competition BAR association, thoothukudi at a cost of Rs.50000.</li> <li>• We provided drinking water to Soosai nagar at a cost of Rs.648000 .</li> <li>• We provided drinking water to Thangammalpuram at a cost of 648000 Lakhs.</li> <li>• We have donated 10LPH water filter to EB ASS.</li> <li>• Desilting of Paaimana Vaayikaal – Athimarapatti was carried out at a cost of Rs. 531000.</li> </ul>

		<ul style="list-style-type: none"> <li>• Desilting of Mullakadu Water canal was carried out at a cost of Rs.42500.</li> <li>• We distributed notebooks to 500 school children in Surrounding Villages at a cost of Rs.147500.</li> <li>• We distributed Uniforms to School children at a cost of Rs.40000.</li> <li>• Rs.8000 was donated as School Fees to under privileged students.</li> <li>• We donated food on Ramzan for Muslim community a cost of Rs.17466.</li> <li>• We Donated Rs.100000 towards Born to Win Trans awards ceremony</li> <li>• Desilting of Canals were carried out at Athimarapatty canal and Mullakadu.</li> <li>• School Buildings were constructed at Veeranayakkan Thattu.</li> </ul>
9	The company shall undertake eco developmental measures including community welfare measure in the project area for the overall improvement of the environment.	Eco developmental measures such as plantation work in and around the SPIC nagar including community welfare measures are undertaken for the overall improvement of the environment.
10	A separate environmental management cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	A separate environmental management cell is equipped with full-fledged laboratory facilities. The Environment Management Cell is having 4 Environment engineers and 4 lab chemist and they are reporting to AGM Safety and Environment, who in turn is reporting to the top management.
11	The project authorities shall earmark adequate funds to implement the conditions stipulated by the ministry of environment and forest as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	We have allocated Adequate funds to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State government along with the implementation schedule for all the conditions stipulated. The fund are not diverted for the other purpose.

12	The implementation of the project vis-à-vis environmental action plan shall be monitored by the concerned regional office of the ministry /SPCB/CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the company.	Compliance status report is being submitted regularly to MoEF, RO and others. Compliance status report is uploaded on the Company's Website.
13	A copy of the clearance letter shall be sent by the proponent to the concerned panjayath, Zilla parishad/Municipal corporation, Urban local body and local NGO, if any, from whose suggestions/representations, if any, are to be received while processing the proposal.	Copy of the clearance letter was sent to the local panchayat.
14	The project proponent shall also submit six monthly report on the status of compliance of the stipulated EC condition including results of monitored data ( Both in hard copies as well as by e mail) to the respective regional office of the MOEF, respective Zonal offices of the CPCB and the state pollution control board.	We are submitting six monthly compliance reports on the status of the conditions stipulated by the Ministry's RO, respective Zonal offices of the CPCB and the state pollution control board.
15	The environmental statement for each financial year ending 31 <sup>st</sup> March in form 5 as is mandated shall be submitted to the concerned state pollution control board, as prescribed under the Environment (Protection) Rules 1986 as amended subsequently, shall also be put on the website of the company along with the status of the compliance of the environmental clearance conditions and shall also be sent to the respective regional offices of the MOEF by e mail.	The annual environmental statement in form V is being submitted to MoEF and TNPCB.  Form V has been uploaded on the company's website.
16	The project proponent shall inform the public that environmental clearance has been accorded by the ministry and copies of the clearance letter are available with the SPCB/Committee may also be seen at the website of the ministry at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised	Newspaper advertisements were given in two local newspaper and copies of the same was submitted to RO, MoEF.

	within seven days from the date of issue of the clearance letter at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned regional office of the ministry.	
17	The project authorities shall inform the regional office as well as the ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Already informed. Project is completed. Date of commencement : 17.05.2010 Month of completion : October 2010

**GREENSTAR FERTILIZERS LIMITED**  
**SPIC NAGAR, TUTICORIN – 628 005**

Sub: SSP Unit Environmental Clearance-Half Yearly Compliance Status Report

No J -11011/620/2009 IA II (I) dated 11.01.2019

**A. SPECIFIC CONDITIONS**

S.No	SPECIFIC CONDITION	COMPLIANCE STATUS
6.	As per the relevant provisions of the EIA Notification,2006 the environmental clearance to the project 'Installation of Single Super Phosphate (SSP) Production unit of capacity 350 MTPD at downstream of existing acid plants at SPIC Nagar, Tuticorin Tamil Nadu, granted by the Ministry vide letter dated 18 <sup>th</sup> March 2010, is hereby transferred from M/s Southern Petrochemical Industries Corporation Ltd to M/s Greenstar Fertilizers Limited, on the same terms and conditions under which prior environmental clearance was initially granted and for the same validity period.	This is a communication order informing the transfer of the Single super phosphate in the name of M/s Greenstar Fertilizers Ltd., subject to the implementation of terms and conditions which are stipulated in Environment clearance dated 18 <sup>th</sup> March 2010. A Separate compliance report for EC dated 18 <sup>th</sup> march 2010 is enclosed.

Date: 27.05.2024

Ref: S &amp;E/E-8B2/24

The Director (S)  
Ministry of Environment, Forest & Climate Change  
Additional Office Block for GPOA, Ist Floor  
Shastri Bhavan ,Haddows Road,  
Nungambakkam,  
Chennai – 600 006.

**Sub: Half Yearly Compliance Status Report for Environmental Clearance -Reg**

Ref:


1) F.No.J-11011/123/2014-IA-II(I),Dt:30.05.2018

Dear Sir,

With reference to the above Environmental Clearances, we are herewith submitting the Compliance Status Report (Half yearly compliance report) for the period ending October 2023 to March 2024.

Thanking you,

Yours faithfully,  
For "Greenstar Fertilizers Limited"



P.Senthilnayagam  
Whole Time Director

Encl:

1. Half Yearly Compliance Report
2. Half yearly monitoring report.

CC: The District Environmental Engineer,  
Tamil Nadu Pollution Control Board,  
Tuticorin.

**Greenstar Fertilizers Limited**

CIN : U24100TN2010PLC077127

REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.

FACTORY : Muthiahpuram Post, Tuticorin - 628 005. Tamilnadu, India.

T : +91(461) 2355411 I E: feedback@greenstar.net.in

Web : www.greenstarfertilizers.com



**GREENSTAR FERTILIZERS LIMITED**  
**SPIC NAGAR, TUTICORIN – 628 005**

Sub: Expansion of Phosphoric Acid plant Half Yearly Compliance Status Report

Ref:F.No.J-11011/123/2014-IA-II(I),Dt:30.05.2018

S.NO	SPECIFIC CONDITION	COMPLIANCE STATUS
6.	In view of the above, the proposal for amendment /transfer of the Environmental clearances dated 5 <sup>th</sup> March, 2008 and 18 <sup>th</sup> March, 2010 need to be submitted for further action in to the matter.	<p>This is a communication order informing that the project involves expansion of one of the intermediate product and hence there is no requirement of Environmental Clearance.</p> <p>In compliance to this we have submitted application to obtain separate EC in the name of Greenstar and also obtained separate EC on January 2019 and amendment EC on May 2019.</p>

Ref: S &amp;E/E-8B2/24

The Director (S)  
Ministry of Environment, Forest & Climate Change  
Additional Office Block for GPOA, Ist Floor  
Shastri Bhavan ,Haddows Road,  
Nungambakkam,  
Chennai – 600 006.

**Sub: Half Yearly Compliance Status Report for Environmental Clearance –Reg**

Ref: Environment Clearance F.No. J – 11011/620/2009/- IA II (I) Dated : 25<sup>th</sup> Jan 2021


Dear Sir,

With reference to the above Environmental Clearance, we are herewith submitting the Compliance Status Report (Half yearly compliance report) for the period ending October 2023 to March 2024.

Thanking you,

Yours faithfully,

For "Greenstar Fertilizers Limited"

  
P.Senthilnayagam  
Whole Time Director

Encl:

1. Half Yearly Compliance Report
2. Half yearly monitoring report.

CC:

The District Environmental Engineer,  
Tamil Nadu Pollution Control Board,  
Tuticorin.

**Greenstar Fertilizers Limited**

CIN : U24100TN2010PLC077127

REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.

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**GREENSTAR FERTILIZERS LIMITED**  
**SPIC NAGAR, TUTICORIN – 628 005**

**ENVIRONMENTAL CLEARANCE FOR MODERNIZATION OF EXISTING DAP PLANT FROM 606100**  
**MTPA to 900000 MTPA**

**F.No. J-11011/620/2009- IA-II (I) Dated : Jan 25, 2021**

**Half Yearly Compliance Status Report**

S.No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
15. (i)	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	We are complying with the environmental protection measures and safeguards proposed in the documents submitted to the ministry. All the recommendations made in the EIA/ EMP in respect of environmental management and risk mitigation measures were being implemented. We have obtained Consent To Operate from TNPCB vide Consent order no. 2307253309323 dated 12.08.2023.
15. (ii)	The project proponent shall undertake a study on fertility of soil and comparative study of micro- species in the soil where their product is applied on large scale.	We have conducted soil fertility study in Tuticorin district in Tamilnadu and Kolar district in Karnataka state and the report is submitted to Ministry vide letter no. S&E/E-23/21 dated 24.12.2021.
15. (iii)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/ utilities. Treated Industrial effluent shall not be used for gardening / greenbelt development/ horticulture.	Zero Liquid Discharge was implemented. No waste and treated water were discharged outside the premises. Treated Industrial effluents were not used for gardening/ greenbelt development/horticulture.

15. (iv)	Continuous online (24*7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.	Continuous Online (24*7) monitoring system for stack emissions were installed for measurement of flue gas discharge and the pollutants concentration, and the data were transmitted to the CPCB and SPCB servers. Online continuous emission monitoring of ammonia has been installed in both and Complex fertilizers stack. Online continuous emission monitoring for HF has been installed in DAP, SSP and PA plant. Online HF analyzer has been installed for ambient air monitoring. Online PM analyzer has been installed in DAP and SSP plant, RG mill stack. We have installed online effluent monitoring system at STP for parameters pH, TSS, BOD and COD. Online monitoring is not applicable for effluent monitoring since effluent is generated and hence no open channel/drain carrying effluent within the premises.
15. (v)	Total fresh water requirement shall not exceed 2591 m <sup>3</sup> /day will be met from Tamil Nadu Water supply and Drainage Board/ M/s SPIC Ltd. Prior permission in this regard shall be obtained from the concerned regulatory authority/ CGWA.	Total fresh water requirement of 2591 m <sup>3</sup> /day is drawn from Tamiraparani river through TWAD. Additional water requirement of about 1035 M <sup>3</sup> /day for the manufacturing of Non EC attracting intermediate product is also met through existing arrangement .The water is drawn combined for both M/s SPIC Ltd., and M/s Greenstar fertilizers Ltd.,
15. (vi)	Storm water from the roof top shall be channelized through to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.	We have provided provision for collection of storm water from the roof top channelized through to the storage tank constructed for harvesting of rain water in the premises. Harvested water was used for industrial processes in the unit. No recharge structure was provided within the premises. Separate drains were provided for Process effluent and storm water avoids mixing of any wastewater with storm water.

15. (vii)	As committed, natural gas shall be used as fuel in all the boilers, after commissioning of the pipeline by the oil companies.	M/s SPIC has started receiving Natural Gas from IOCL on 13 <sup>th</sup> March 2021. Once full availability is ensured we shall comply the usage of NG.
15. (viii)	Occupational health center for surveillance of the worker's health shall be set up. The health data be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.	Occupational Health (OH) Centre for surveillance of worker's health was set up with a full time doctor and supporting staff. Workers are being deployed in duties based on the health data. All workers and employees were provided with required safety kit/mask for personal protection. OH tests including lung function test, sputum tests, audiometry and regular tests were carried out for all employees as per the Factory's Act and records are maintained.
15. (ix)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.	Training was imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training were provided to employees.
15. (x)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire- fighting system shall be as per the norms.	We have arrangements such as fire protection system and a trained fire crew for fighting fire during any manufacturing process in material handling. Fire- fighting systems are as per the TAC Act and Factories Act.
15. (xi)	The project proponent shall undertake waste minimization measures as below	
	(a) Metering and control of quantities of active ingredients to minimize waste	Raw material and other ingredients are added in measured quantities through mechanical means and therefore waste generation is minimized.
	(b) Re-use of by-products from the process as raw materials or as raw material substitutes in other processes	Hydroflurosilicic acid generated as byproduct in PA process is being utilized at ALF3 plant. Gypsum generation from PA Process is sold to cement manufacturing units
	(c) Use of automated filling to minimize spillage	Mechanized chutes are being used for filling at Bagging plants and hence spillages are minimized.
	(d) Use of Close Feed system into batch reactors	Closed Feed system is being used in ALF3 batch reactors.



	(e) Venting equipment through vapour recovery system	Relief vent systems are provided at critical locations												
	(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.	High pressure hoses for equipment clearing are used												
15. (xii)	The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the periphery. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of the tree canopy shall be monitored through remote sensing map.	The green belt of at least 5-10 m width were developed more than 33% of the total project area which includes plantation made along the periphery. The details of green belt includes. <table border="1" data-bbox="917 645 1396 878"> <thead> <tr> <th>Area</th> <th>Greenstar</th> <th>Township</th> </tr> </thead> <tbody> <tr> <td>Total area (Hectares)</td> <td>56.43</td> <td>118.723</td> </tr> <tr> <td>Greenbelt Area (Hectares)</td> <td>19.6</td> <td>103.648</td> </tr> <tr> <td>% Greenbelt area</td> <td>34.73%</td> <td>87.30%</td> </tr> </tbody> </table>	Area	Greenstar	Township	Total area (Hectares)	56.43	118.723	Greenbelt Area (Hectares)	19.6	103.648	% Greenbelt area	34.73%	87.30%
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15. (xiii)	The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule -1 species in the study area, as applicable to the project, and subject to chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/ Wildlife Department in a time bound manner.	Our plant is located away from Gulf of Mannar. How ever We have submitted Gulf of Mannar Bio Diversity conservation plan vide letter dated 13.09.2022 to chief wild life warden for approval, and contributed Rs.20 Lakhs towards conservation plan vide letter dated 13.07.2022.												
15.(xiv)	The activities and the action plan proposed by the project proponent to address the socio- economic issues in the study area, shall be completed as per the schedule presented before the committee and as described in the EMP report in letter and spirit. All the commitments made shall be satisfactorily implemented.	The activities and the action plan proposed by us to address the socio – economic issues in the study area, were completed as stipulated. All the commitments made were satisfactorily implemented.												
15. (xv)	A separate Environmental Management Cell (having qualifies person with Environmental Science/ Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	A separate environmental management cell having qualified person with Environmental Engineering Specialization in the project area with equipped with full – fledged laboratory facilities was set up to carry out Monitoring functions.												

S.No.	A. GENERAL CONDITION	COMPLIANCE STATUS
(i)	No further expansion or modifications in the plant, other than mentioned in the CIA notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to this Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	We ensure No further expansion or modification in the plant was carried out without prior approval of the MoEF.
(ii)	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	We shall ensure that the energy source for lighting purpose shall be preferably LED based.
(iii)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noise level is monitored at 4 locations along the factory boundary at day and night time. The noise levels are within limit. We have provided noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generations.
(iv)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	We have undertaken CER activities in the areas including community welfare measures for overall improvement of the environment such as Infrastructure for drinking water supply sanitation, Health, Education, Skill development, Roads, cross drains, Electrification including solar power, solid waste management facilities, Scientific supports Awareness to local farmers to increase yield of crop and fodder, Rain water harvesting , soil moisture conservation works, Avenue plantation in community area.

(v)	<p>The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and climate change as well as the State Government along with the implemented schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.</p>	<p>We have allocated adequate funds are being provided to implement the conditions stipulated by the Ministry of Environment and forest as well as the State government along with the implementation schedule for all the conditions stipulated. The funds are not diverted for other purpose.</p> <p>Expenditures for Environmental protection measures include</p> <ul style="list-style-type: none"> <li>• Online continuous emission monitoring of ammonia has been installed in both DAP and Complex fertilizers stack at a cost of Rs.30 lakhs (per stack)</li> <li>• Online continuous monitoring for HF has been installed in DAP and PA plant at a cost of Rs.30 lakhs.</li> <li>• Online HF analyzer has been installed for ambient air monitoring at a cost of Rs.21lakhs</li> <li>• Online PM analyzer has been installed in DAP and SSP plant RG mill stack at a cost of Rs.6.25 lakhs.</li> <li>• Online HF analyzer installed for SSP, DAP II and PA stacks at the cost of Rs. 45 lakhs.</li> <li>• We have also installed online effluent monitoring system at STP for the parameters pH, TSS, BOD and COD at a cost of Rs 23 Lakhs.</li> </ul>
(vi)	<p>A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.</p>	<p>Copy of the clearance letter was sent to concerned Municipal corporation.</p>
(vii)	<p>The project proponent shall also submit six monthly reports on the status of compliance of the stipulated</p>	<p>We are submitting six monthly compliance reports regularly to RO, MoEF &amp; CC. The Latest six monthly compliance reports were</p>

	Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	submitted to Regional Office, MoEF& CC on 15.11.2023 Compliance status report was uploaded on the Company's Website <a href="https://www.greenstarfertilizers.com/investors/environmental-compliance-reports/">https://www.greenstarfertilizers.com/investors/environmental-compliance-reports/</a>
(viii)	The environmental Statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry.	The annual environmental statement in form V was submitted to TNPCB. A copy of form V was submitted to Regional office, MoEF& CC along with six monthly compliance report
(ix)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/ Committee and may also be seen at Website of the Ministry and at <a href="http://parivesh.nic.in/">http://parivesh.nic.in/</a> . this shall be advertised within seven days from the date of issue of the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	We have made advertisements in the local newspaper given in two local newspaper i.e., Dinamani and The Indian Express dated 20.01.2020. A copy of the same was forwarded to the Regional Office of the Ministry.
(x)	The project authorities shall inform the Regional office as well as the Ministry , the date of Financial closure and final approval of the project by the concerned authorities and the date of Start of the project.	The date of Financial closure and final approval of the project were submitted to Regional office of Ministry, to MoEF on 30.12.2022.

(xi)	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Adhered to.
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**Compliance of "Charter on Corporate Responsibility for Environmental Protection" by M/s. Greenstar Fertiizers Limited. Thoothukudi**

**I. WASTE WATER MANAGEMENT:**

Sl.No.	Charter Condition	Status of Compliance
1.	Efforts will be made for conservation of water, particularly with a target to have consumption less than 8, 12 & 15 M <sup>3</sup> /tonne of urea produced for plant based on gas, naphtha and fuel oil, respectively. In case of plants using Naphtha and Gas both as feed stocks, water consumption target of less than 10 M <sup>3</sup> /tonne will be achieved. An action plan for this will be submitted by June 2003 and targets will be achieved by March 2004.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)
2.	Use of arsenic for CO <sub>2</sub> absorption in Ammonia Plants and chromate based chemicals for cooling systems, which is still continuing in some industries, will be phased out and replaced with non-arsenic and non-chromate systems by December 2003. In this regard, action plan will be submitted by June 2003.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)
3.	Adequate treatment for removal of oil, chromium (till non-chromate based cooling system is in place) and fluoride will be provided to meet the prescribed standards at the source (end of respective process unit) itself. Action plan will be firmed up by June 2003 for compliance by March 2004	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)
4.	Proper and complete nitrification and denitrification will be ensured, wherever such process is used for effluent treatment, by September 2003.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)
5.	Ground water monitoring around the storage facilities and beyond the factory premises will	Regular Ground water monitoring is done once in a month both inside and outside



Sl.No.	Charter Condition	Status of Compliance
	be carried out at regular intervals particularly for pH, fluoride, CPCB will finalize the guidelines for groundwater monitoring by December 2003.	factory premises by Industry and TNPCB. 19 nos of monitoring wells have been provided in M/s Greenstar and the regular monitoring is being done by the industry. Samples are collected once in a month and analyzed for pH, Fluoride. TNPCB is carrying out monitoring of 4 wells outside the factory.
6.	No effluent arising from process plants and associated facilities will be discharged to the storm water drain. The quality of storm water will be regularly monitored by all the industries	No effluent is discharged into storm water drain. The storm water quality is monitored at the time of rains and is then reused.
7.	The industries, where waste water/effluent flows through the storm water drains even during the dry season will install continuous systems for monitoring the storm water quality for pH, ammonia and fluoride. If required, storm water will be routed through effluent treatment plant before discharging. An action plan will be submitted by June 2003 and necessary action will be taken by June 2004.	During rain, in Phosphatic fertilizer plant the rainwater is collected in a sump and pumped to Phosphoric acid plant tank for use in filtration section.

## II. AIR POLLUTION MANAGEMENT

Sl.No.	Charter Condition	Status of Compliance
1.	All the upcoming Urea Plants will have urea prilling towers based on natural draft so as to minimize urea dust emissions.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)
2.	The existing urea plants, particularly, the plants having forced draft prilling towers, will install appropriate systems (e.g.scrubber, etc.) for achieving existing norms of urea dust emissions. In this regard, industries will submit action plan by June 2003 and completion of necessary actions by June 2004.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.)



Sl.No.	Charter Condition	Status of Compliance
3.	The sulphuric acid plants having SCSA system will switch over to DCDA system by March 2004 to meet the emission standard for SO <sub>2</sub> as 2 kg/tonne of H <sub>2</sub> SO <sub>4</sub> produced. An action plan for this will be submitted by June 2003.	DCDA process is adopted since 1994. Now it is under M/s Greenstar Fertilizers, we had completely renewed the old catalyst and achieved SO <sub>2</sub> emission less than 1.0 kg/tonne of H <sub>2</sub> SO <sub>4</sub> produced
4.	Sulphuric acid plants having DCDA system will improve the conversion and absorption efficiencies of the system as well as scrubbers to achieve SO <sub>2</sub> emissions of 2 kg/tonne of acid produced in case of plants having capacity above 300 tpd and 2.5 kg/tonne in case of plants having capacity upto 300 tpd. An action plan will be submitted by June 2003 and emission levels will be complied with by September 2004.	Sulphuric acid manufacturing process is based on DCDA system. In order to improve the conversion efficiency further, fresh V <sub>2</sub> O <sub>5</sub> catalyst was charged in Sulphuric Acid Plant converter. By this, the stipulated 1.0 kg/tonne of acid produced is complied with.
5.	Stack height for sulphuric acid plants will be provided as per the guidelines and on the basis of normal plant operations (and not when the scrubbers are in use) by June 2003. The scrubbed gases are to be let out at the same height of the stack.	The stack height provided in SA plant is 60M which is sufficient to meet the stringent standard of 1.0 kg/ton of 100% H <sub>2</sub> SO <sub>4</sub> . Tail Gas scrubber has been installed at Sulphuric acid plant to keep the emission always under norms even during start up and shut down.
6.	An action plan for providing proper dust control systems at rock phosphate grinding unit in phosphoric acid plants/single super phosphate plants, so as to achieve particulate emission levels of 150 mg/NM <sup>3</sup> will be submitted by September 2003 and complied with by march 2004.	In Rock grinding section of Phosphoric Acid plant improved pulsejet bag filter was provided in 1995 to remove the particulate matter in the exhaust gas. The concentration of particulate matter in RG mill exhaust is less than the stipulated standard.
7.	Particulate as well as gaseous fluoride will be monitored and adequate control systems will be installed by June 2004 to achieve the norms on total fluoride emissions (25 mg/Nm <sup>3</sup> )	Four stage off gas recovery system has been installed in addition to turbulent contact absorber (TCA - 3) for scrubbing of fluoride present in emission gases The total fluoride concentration at the exit of TCA -3 and HH Off gas stack is maintained below standards.  Fluorine recovery unit is in operation since 1987 and the Hydro fluosilicic acid produced is converted into a value added product - Aluminium Fluoride.

Sl.No.	Charter Condition	Status of Compliance
8.	Continuous SO <sub>2</sub> emission monitoring systems will be installed in sulphuric acid plants (having capacity 200 tpd and above) by March 2004. Action plan for this will be submitted by June 03.	We have provided continuous online analyzer for monitoring of SO <sub>2</sub> concentration in SA stack and is uploaded to TNPCB and CPCB
9.	Regular monitoring of ambient air quality with regard to SO <sub>2</sub> , NO <sub>x</sub> , PM, SO <sub>3</sub> , Fluoride and acid mist will be carried out.	<p>Ambient air samples are collected twice in a week in all the 9 permanent ambient air stations. The parameters analysed are SO<sub>2</sub>, NO<sub>x</sub>, PM, Fluoride and Ammonia.</p> <p>As part of CREP compliance, the parameters SO<sub>3</sub> and acid mist are also analysed by the Unit in ambient air.</p> <p>As per Supreme Court Monitoring Committee directions online display of Ambient Air Data has been started by the Unit.</p> <p>The parameters uploaded are Ambient temperature, relative humidity, Ambient Ammonia level, Ambient SO<sub>2</sub>, NO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> levels, Ambient HF.</p> <p>Ambient Air Quality and fugitive emission survey is being conducted by CPCB empanelled laboratory bi - Annually as per NAAQ standards.(Annexure I)</p>

### III. SOLID WASTE MANAGEMENT

Sl.No.	Charter Condition	Status of Compliance
1.	Gypsum will be effectively managed by providing proper lining, dykes with approach roads and monitoring of ground water quality around storage facilities. Accumulated gypsum will be properly capped. In this regard, action plan will be submitted by June 2003 and for compliance by Dec. 2003	<p>Gypsum is disposed to cement manufacturing units as a substitute to lime stone to enhance the calcium oxide concentration in cement. Gypsum is also utilized in agriculture as a soil conditioner. By continuous disposal methods, the quantity of gypsum utilized is higher than the generation quantity and thereby the accumulation is reduced. The dykes are provided with approach roads for transportation of the material. We have provided liner system for the dykes as per CPCB Guidelines. In gypsum dyke area monitoring wells have been provided to check the ground water quality. Fluoride levels in the monitoring wells are well within the standard.</p> <p>Fluoride levels in the monitoring wells are well within the standard.</p>

Sl.No.	Charter Condition	Status of Compliance
2.	An action plan for proper handling, storage and disposal of spent catalyst having toxic metals will be submitted by June 2003 and implemented by September 2003. The industry will also explore recovery/buy-back of spent catalyst by Sep. 2003.	The spent catalysts are collected in mild steel drum sealed and disposed in compliance with Hazardous waste rules.
3.	Carbon slurry, sulphur muck and chalk will be properly managed and disposed of in properly designed landfill either within premises or in common facility. Action plan on this will be submitted by June 2003 and implemented by march 2004.	Carbon slurry is not generated in this Unit. Sulphur muck is used as a filler material in the complex fertilizer unit. Calcium carbonate ( ETP Sludge) is being utilized in Complex fertilizer as filler and its generation is reduced by using imported lime.
4.	Existing stock of chromium and arsenic bearing sludge will be properly disposed by December 2003. Industries will also explore recovery of chromium from the sludge. CPCB will provide guidelines for proper disposal of the sludge.	This condition is applicable for Nitrogenous fertilizers plant As M/s.Greenstar fertilizers Limited is Phosphatics fertilizer plant this condition is not applicable.

**Ref : SE/E8-B2/24**

**Date: 27.05.2024**

The Director (S)  
Ministry of Environment, Forest & Climate Change  
Additional Office Block for GPOA, Ist Floor  
Shastri Bhavan ,Haddows Road,  
Nungambakkam,  
Chennai – 600 006.

Dear Sir,


**Sub: Half yearly Monitoring Report – Reg.**

- Ref: 1. Ministry's Environmental Clearance letter No. J-11011/171/2007- IA II (I) dt: 05.03.2008  
2. Ministry's Environmental Clearance letter No. J-11011/620/2009IA II (I) dt: 18.03.2010  
3. Ministry's Environmental Clearance letter No.J-11011/123/2014/IA II (I) dt: 30.05.2018  
4. Ministry's Environmental Clearance letter No.J-11011/171/2007/IAII (I) dt: 20.05.2019  
5. Ministry's Environmental Clearance letter No.J-11011/620/2009/IAII (I) dt: 25.01.2021

We are sending herewith the Half yearly Monitoring Reports pertaining to our plants for the period **October 2023 to March 2024.**

Thanking you,

**For "M/s Greenstar Fertilizers Limited."**



**P.Senthiluyagam**  
**Whole Time Director**

- Encl: 1) Ambient air monitoring.  
2) Stack emission monitoring  
3) Well water monitoring.  
4) Fugitive emission monitoring.

**Greenstar Fertilizers Limited**

CIN : U24100TN2010PLC077127

REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.

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## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

AMBIENT AIR QUALITY MONITORINGMONTH: OCTOBER 2023

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
03.10.2023	NW	AAQM STATION	5.0	3.8	81	62	36	BDL
		ADMIN BUILDING	4.6	3.6	68	57	32	BDL
		UREA BAGGING	5.3	4.5	72	60	33	BDL
		OFFICER'S CLUB	3.0	2.5	40	40	28	BDL
		JVP SHED	3.7	2.9	48	48	36	BDL
		AUTO SS	3.8	2.9	60	56	30	BDL
		AGRI CLINIC	2.6	2.1	36	38	24	BDL
		INST CHANGE ROOM SAFETY DEPARTMENT	6.5 6.8	5.3 5.5	49 52	49 47	36 40	BDL BDL
06.10.2023	NW	AAQM STATION	4.9	4.3	96	51	31	BDL
		ADMIN BUILDING	5.2	4.1	62	56	29	BDL
		UREA BAGGING	5.8	4.4	98	59	38	BDL
		OFFICER'S CLUB	3.3	2.9	96	37	31	BDL
		JVP SHED	4.1	3.7	62	60	29	BDL
		AUTO SS	4.4	3.4	72	50	29	BDL
		AGRI CLINIC	3.8	2.4	32	44	32	BDL
		INST CHANGE ROOM SAFETY DEPARTMENT	6.7 7.0	3.5 4.2	75 81	48 49	30 28	BDL BDL
10.10.2023	NW	AAQM STATION	5.3	4.5	83	50	30	BDL
		ADMIN BUILDING	4.9	4.2	70	56	33	BDL
		UREA BAGGING	5.6	4.8	90	48	27	BDL
		OFFICER'S CLUB	5.3	3.4	30	46	30	BDL
		JVP SHED	4.9	4.0	60	60	35	BDL
		AUTO SS	4.2	3.5	54	56	29	BDL
		AGRI CLINIC	4.7	3.1	36	44	21	BDL
		INST CHANGE ROOM SAFETY DEPARTMENT	5.0 3.8	4.9 5.4	71 85	39 46	54 37	BDL BDL
12.10.2023	NW	AAQM STATION	5.4	4.0	97	53	33	BDL
		ADMIN BUILDING	5.1	4.2	80	45	32	BDL
		UREA BAGGING	6.5	5.4	77	48	34	BDL
		OFFICER'S CLUB	4.9	4.2	30	36	25	BDL
		JVP SHED	5.3	4.0	55	60	34	BDL
		AUTO SS	4.4	3.3	73	59	35	BDL
		AGRI CLINIC	3.9	2.9	49	45	30	BDL
		INST CHANGE ROOM SAFETY DEPARTMENT	7.2 7.1	5.8 5.8	90 58	49 47	25 24	BDL BDL

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /Nm3					
			SO2	NO2	NH3	PM 10	PM 2.5	CO / HC
16.10.2023	NW	AAQM STATION	5.0	3.7	69	64	34	BDL
		ADMIN BUILDING	4.4	4.0	72	63	35	BDL
		UREA BAGGING	5.5	4.8	61	58	24	BDL
		OFFICER'S CLUB	5.3	2.9	94	46	34	BDL
		JVP SHED	4.5	3.0	50	55	36	BDL
		AUTO SS	3.8	3.0	65	56	34	BDL
		AGRI CLINIC	3.6	2.8	34	44	31	BDL
		INST CHANGE ROOM	7.0	4.0	63	48	25	BDL
		SAFETY DEPARTMENT	6.7	4.2	59	54	31	BDL
19.10.2023	NW	AAQM STATION	5.4	3.7	94	58	29	BDL
		ADMIN BUILDING	4.1	3.2	68	60	30	BDL
		UREA BAGGING	6.0	4.1	85	59	35	BDL
		OFFICER'S CLUB	3.3	2.6	35	41	24	BDL
		JVP SHED	5.1	3.9	66	52	30	BDL
		AUTO SS	4.0	3.0	50	57	34	BDL
		AGRI CLINIC	3.5	2.3	32	38	22	BDL
		INST CHANGE ROOM	6.9	4.6	90	72	37	BDL
		SAFETY DEPARTMENT	7.3	5.2	81	51	26	BDL
25.10.2023	NW	AAQM STATION	5.5	4.0	77	47	30	BDL
		ADMIN BUILDING	4.3	2.9	60	55	32	BDL
		UREA BAGGING	5.6	4.2	53	54	27	BDL
		OFFICER'S CLUB	5.5	2.7	77	41	30	BDL
		JVP SHED	3.6	3.3	39	55	32	BDL
		AUTO SS	5.0	2.9	52	49	26	BDL
		AGRI CLINIC	3.6	2.5	72	44	31	BDL
		INST CHANGE ROOM	3.2	4.4	42	47	29	BDL
		SAFETY DEPARTMENT	7.0	4.0	71	54	24	BDL
27.10.2023	NW	AAQM STATION	4.5	3.6	72	45	25	BDL
		ADMIN BUILDING	4.2	3.2	80	50	27	BDL
		UREA BAGGING	5.0	4.1	74	60	36	BDL
		OFFICER'S CLUB	4.5	2.8	42	50	25	BDL
		JVP SHED	3.2	2.3	65	44	23	BDL
		AUTO SS	3.6	2.5	57	42	26	BDL
		AGRI CLINIC	6.6	4.3	38	48	20	BDL
		INST CHANGE ROOM	6.9	4.5	83	42	37	BDL
		SAFETY DEPARTMENT	4.5	2.8	67	60	26	BDL



## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

**AMBIENT AIR QUALITY MONITORING**  
**MONTH: NOVEMBER 2023**

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM 10	PM 2.5	CO / HC
02.11.2023	NW	AAQM STATION	7.2	6.5	96	55	32	BDL
		ADMIN BUILDING	5.9	5.3	77	52	29	BDL
		UREA BAGGING	7.2	6.7	94	60	40	BDL
		OFFICER'S CLUB	5.0	3.9	56	37	23	BDL
		JVP SHED	5.4	5.0	60	60	33	BDL
		AUTO SS	4.3	3.8	64	52	29	BDL
		AGRI CLINIC	4.1	3.5	44	40	22	BDL
		INST CHANGE ROOM	7.0	6.2	88	54	39	BDL
		SAFETY DEPARTMENT	7.5	6.6	48	53	30	BDL
07.11.2023	NW	AAQM STATION	6.8	6.0	80	60	33	BDL
		ADMIN BUILDING	6.3	5.5	72	60	34	BDL
		UREA BAGGING	7.3	6.2	97	54	37	BDL
		OFFICER'S CLUB	4.6	3.4	46	45	26	BDL
		JVP SHED	5.0	3.3	54	55	29	BDL
		AUTO SS	4.1	3.2	63	60	33	BDL
		AGRI CLINIC	3.8	3.0	40	48	32	BDL
		INST CHANGE ROOM	7.1	5.4	72	55	35	BDL
		SAFETY DEPARTMENT	7.4	5.7	66	50	32	BDL
10.11.2023	NW	AAQM STATION	6.8	5.6	74	54	35	BDL
		ADMIN BUILDING	5.8	5.0	78	59	31	BDL
		UREA BAGGING	7.0	5.9	98	60	38	BDL
		OFFICER'S CLUB	4.9	4.1	39	53	26	BDL
		JVP SHED	5.2	3.7	58	54	30	BDL
		AUTO SS	4.8	4.1	31	60	33	BDL
		AGRI CLINIC	3.6	2.9	43	48	23	BDL
		INST CHANGE ROOM	7.5	6.2	90	58	36	BDL
		SAFETY DEPARTMENT	7.7	6.4	75	60	40	BDL
14.11.2023	NW	AAQM STATION	6.0	5.1	72	57	30	BDL
		ADMIN BUILDING	5.6	4.9	78	53	33	BDL
		UREA BAGGING	6.8	5.9	30	56	37	BDL
		OFFICER'S CLUB	5.4	5.1	46	40	28	BDL
		JVP SHED	5.9	5.2	53	58	31	BDL
		AUTO SS	4.7	3.9	68	58	33	BDL
		AGRI CLINIC	4.2	3.8	60	50	33	BDL
		INST CHANGE ROOM	7.3	6.3	74	55	35	BDL
		SAFETY DEPARTMENT	7.2	6.5	48	52	35	BDL

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /Nm <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM 10	PM 2.5	CO / HC
17.11.2023	NW	AAQM STATION	7.1	6.0	80	58	33	BDL
		ADMIN BUILDING	6.3	5.9	78	52	31	BDL
		UREA BAGGING	7.3	6.2	92	60	37	BDL
		OFFICER'S CLUB	4.6	3.6	50	40	27	BDL
		JVP SHED	5.1	4.2	47	58	32	BDL
		AUTO SS	4.6	4.1	75	51	28	BDL
		AGRI CLINIC	4.2	3.5	43	50	29	BDL
		INST CHANGE ROOM	7.6	6.5	81	54	38	BDL
		SAFETY DEPARTMENT	7.9	6.4	65	44	25	BDL
21.11.2023	NW	AAQM STATION	7.0	5.9	85	50	29	BDL
		ADMIN BUILDING	5.9	5.0	72	55	29	BDL
		UREA BAGGING	6.9	6.0	98	54	35	BDL
		OFFICER'S CLUB	5.4	4.8	43	45	31	BDL
		JVP SHED	5.0	4.3	50	58	35	BDL
		AUTO SS	4.5	3.8	67	52	30	BDL
		AGRI CLINIC	4.1	3.5	36	41	24	BDL
		INST CHANGE ROOM	7.1	6.3	74	58	40	BDL
		SAFETY DEPARTMENT	7.5	6.6	72	54	29	BDL
24.11.2023	NW	AAQM STATION	6.8	5.9	70	58	32	BDL
		ADMIN BUILDING	5.8	4.4	55	60	36	BDL
		UREA BAGGING	7.2	6.3	96	60	34	BDL
		OFFICER'S CLUB	4.9	4.2	46	48	29	BDL
		JVP SHED	5.9	5.0	58	52	33	BDL
		AUTO SS	4.8	4.1	60	55	27	BDL
		AGRI CLINIC	4.5	4.0	47	40	22	BDL
		INST CHANGE ROOM	7.4	6.4	90	53	39	BDL
		SAFETY DEPARTMENT	7.7	6.8	67	56	30	BDL
28.11.2023	NW	AAQM STATION	7.0	5.7	88	58	30	BDL
		ADMIN BUILDING	5.6	4.3	72	53	29	BDL
		UREA BAGGING	7.0	6.0	95	60	38	BDL
		OFFICER'S CLUB	5.4	4.3	65	48	27	BDL
		JVP SHED	5.1	4.0	60	45	27	BDL
		AUTO SS	4.6	4.0	66	52	29	BDL
		AGRI CLINIC	4.1	3.5	42	48	26	BDL
		INST CHANGE ROOM	7.2	5.9	92	59	35	BDL
		SAFETY DEPARTMENT	7.8	6.6	78	52	32	BDL

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

**AMBIENT AIR QUALITY MONITORING****MONTH: DECEMBER 2023**

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM 10	PM 2.5	CO / HC
01.12.2023	SW	AAQM STATION	6.8	6.0	75	54	29	BDL
		ADMIN BUILDING	5.4	4.9	68	48	25	BDL
		UREA BAGGING	6.6	3.5	51	71	40	BDL
		OFFICER'S CLUB	4.7	5.8	93	35	20	BDL
		JVP SHED	5.0	4.7	55	60	31	BDL
		AUTO SS	4.0	3.4	60	57	27	BDL
		AGRI CLINIC	4.2	3.1	40	73	33	BDL
		INST CHANGE ROOM	7.3	6.1	98	62	35	BDL
		SAFETY DEPARTMENT	7.7	6.0	61	50	28	BDL
04.12.2023	SW	AAQM STATION	6.6	6.3	90	58	31	BDL
		ADMIN BUILDING	6.6	5.9	70	56	33	BDL
		UREA BAGGING	4.9	3.2	97	40	38	BDL
		OFFICER'S CLUB	4.7	3.1	40	51	24	BDL
		JVP SHED	4.0	2.9	51	54	28	BDL
		AUTO SS	4.1	2.6	54	42	30	BDL
		AGRI CLINIC	6.7	6.1	42	47	25	BDL
		INST CHANGE ROOM	7.0	6.3	78	44	41	BDL
		SAFETY DEPARTMENT	7.1	2.9	54	48	30	BDL
07.12.2023	SW	AAQM STATION	7.0	5.9	85	59	34	BDL
		ADMIN BUILDING	6.0	5.5	90	49	30	BDL
		UREA BAGGING	6.5	4.9	43	43	29	BDL
		OFFICER'S CLUB	5.3	4.0	54	54	33	BDL
		JVP SHED	5.4	4.5	35	35	35	BDL
		AUTO SS	5.3	3.5	54	54	26	BDL
		AGRI CLINIC	4.2	6.0	44	54	48	BDL
		INST CHANGE ROOM	7.1	5.9	70	47	40	BDL
		SAFETY DEPARTMENT	7.4	6.0	49	50	31	BDL
12.12.2023	SW	AAQM STATION	6.4	5.5	80	60	33	BDL
		ADMIN BUILDING	5.9	5.3	74	55	31	BDL
		UREA BAGGING	5.6	5.2	41	45	40	BDL
		OFFICER'S CLUB	5.1	4.5	58	54	33	BDL
		JVP SHED	6.9	4.1	61	64	33	BDL
		AUTO SS	4.5	3.6	65	54	26	BDL
		AGRI CLINIC	4.4	6.0	70	58	29	BDL
		INST CHANGE ROOM	7.5	6.1	62	56	35	BDL
		SAFETY DEPARTMENT	7.0	4.1	41	48	29	BDL

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /Nm <sup>3</sup>					CO / HC
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM 10	PM 2.5	
17.12.2023	SW	AAQM STATION	Not carried out due to flood					
		ADMIN BUILDING						
		UREA BAGGING						
		OFFICER'S CLUB						
		JVP SHED						
		AUTO SS						
		AGRI CLINIC						
		INST CHANGE ROOM						
20.12.2023	SW	AAQM STATION	Not carried out due to flood					
		ADMIN BUILDING						
		UREA BAGGING						
		OFFICER'S CLUB						
		JVP SHED						
		AUTO SS						
		AGRI CLINIC						
		INST CHANGE ROOM						
24.12.2023	SW	AAQM STATION	3.2	3.9	20	32	12	BDL
		ADMIN BUILDING	2.8	2.4	10	34	15	BDL
		UREA BAGGING	1.2	3.3	12	22	18	BDL
		OFFICER'S CLUB	1.9	2.2	21	36	5	BDL
		JVP SHED	2.9	2.0	24	41	9	BDL
		AUTO SS	2.8	1.1	16	54	17	BDL
		AGRI CLINIC	3.5	3.0	17	61	3	BDL
		INST CHANGE ROOM	2.4	4.4	19	28	5	BDL
		SAFETY DEPARTMENT	1.7	2.8	4	39	16	BDL
28.12.2023	SW	AAQM STATION	2.4	3.9	18	25	10	BDL
		ADMIN BUILDING	3.6	4.8	15	24	8	BDL
		UREA BAGGING	1.7	1.5	14	28	7	BDL
		OFFICER'S CLUB	1.5	2.7	25	41	15	BDL
		JVP SHED	3.4	4.6	35	31	14	BDL
		AUTO SS	2.4	1.3	15	35	21	BDL
		AGRI CLINIC	3.2	1.8	14	28	12	BDL
		INST CHANGE ROOM	2.8	1.7	10	17	4	BDL
SAFETY DEPARTMENT	4.8	1.1	9	19	3	BDL		

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

**AMBIENT AIR QUALITY MONITORING**  
**MONTH: JANUARY 2024**

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
02.01.2024	SW	AAQM STATION	2.5	4.1	42	32	35	BDL
		ADMIN BUILDING	2.6	3.8	23	25	20	BDL
		UREA BAGGING	2.7	4.2	41	46	27	BDL
		OFFICER'S CLUB	1.4	3.3	11	34	20	BDL
		JVP SHED	1.3	3.4	20	45	21	BDL
		AUTO SS	2.8	3.5	25	43	21	BDL
		AGRI CLINIC	1.2	3.6	17	30	18	BDL
		INST CHANGE ROOM	2.0	3.7	30	57	30	BDL
		SAFETY DEPATMENT	2.3	3.8	36	53	28	BDL
05.01.2024	SW	AAQM STATION	1.7	2.5	31	32	25	BDL
		ADMIN BUILDING	2.3	4.8	27	38	27	BDL
		UREA BAGGING	3.0	4.6	32	45	30	BDL
		OFFICER'S CLUB	1.6	3.8	25	46	22	BDL
		JVP SHED	1.5	3.0	22	42	25	BDL
		AUTO SS	2.0	3.8	11	35	21	BDL
		AGRI CLINIC	1.6	2.6	32	28	22	BDL
		INST CHANGE ROOM	2.7	3.4	38	47	25	BDL
		SAFETY DEPATMENT	2.9	3.2	31	44	24	BDL
08.01.2024	SW	AAQM STATION	2.8	3.1	52	42	24	BDL
		ADMIN BUILDING	2.9	2.9	46	36	17	BDL
		UREA BAGGING	2.9	4.5	55	51	30	BDL
		OFFICER'S CLUB	2.7	4.7	28	30	24	BDL
		JVP SHED	1.2	4.7	34	48	32	BDL
		AUTO SS	1.3	4.5	50	47	25	BDL
		AGRI CLINIC	1.4	4.1	18	25	23	BDL
		INST CHANGE ROOM	2.5	4.3	56	48	22	BDL
		SAFETY DEPATMENT	3.0	4.1	52	51	31	BDL
13.01.2024	SW	AAQM STATION	2.4	3.6	52	51	23	BDL
		ADMIN BUILDING	2.5	3.5	46	23	31	BDL
		UREA BAGGING	2.6	3.9	71	51	35	BDL
		OFFICER'S CLUB	2.5	3.5	25	37	23	BDL
		JVP SHED	2.4	4.0	32	51	30	BDL
		AUTO SS	2.3	3.5	66	43	19	BDL
		AGRI CLINIC	1.2	3.8	21	48	24	BDL
		INST CHANGE ROOM	3.1	4.5	32	57	30	BDL
		SAFETY DEPATMENT	3.0	5.0	49	52	29	BDL

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
18.01.2024	SW	AAQM STATION	3.3	4.7	18	45	26	BDL
		ADMIN BUILDING	2.0	4.0	24	42	29	BDL
		UREA BAGGING	2.9	4.6	40	48	29	BDL
		OFFICER'S CLUB	1.5	3.5	10	34	20	BDL
		JVP SHED	1.5	3.3	20	40	22	BDL
		AUTO SS	2.0	3.0	23	44	21	BDL
		AGRI CLINIC	1.8	3.6	17	30	19	BDL
		INST CHANGE ROOM	2.3	3.2	56	55	32	BDL
SAFETY DEPARTMENT	2.5	3.6	36	52	29	BDL		
22.01.2024	SW	AAQM STATION	2.4	3.9	25	43	29	BDL
		ADMIN BUILDING	2.1	3.4	18	48	28	BDL
		UREA BAGGING	3.0	4.4	32	49	31	BDL
		OFFICER'S CLUB	1.8	3.3	15	45	20	BDL
		JVP SHED	1.7	3.0	22	42	23	BDL
		AUTO SS	2.1	3.2	21	34	21	BDL
		AGRI CLINIC	1.5	2.8	32	28	22	BDL
		INST CHANGE ROOM	2.0	3.3	48	49	22	BDL
SAFETY DEPARTMENT	2.4	3.8	31	44	24	BDL		
25.01.2024	SW	AAQM STATION	3.0	4.6	34	47	27	BDL
		ADMIN BUILDING	2.5	5.0	30	45	24	BDL
		UREA BAGGING	2.8	4.6	85	54	30	BDL
		OFFICER'S CLUB	2.0	4.6	28	30	21	BDL
		JVP SHED	1.7	4.5	24	50	31	BDL
		AUTO SS	1.9	4.7	60	47	25	BDL
		AGRI CLINIC	1.3	4.1	18	27	20	BDL
		INST CHANGE ROOM	2.9	4.6	86	48	22	BDL
SAFETY DEPARTMENT	3.1	4.8	52	53	33	BDL		
30.01.2024	SW	AAQM STATION	2.5	3.4	42	49	24	BDL
		ADMIN BUILDING	2.3	3.2	40	45	24	BDL
		UREA BAGGING	2.2	3.9	91	53	30	BDL
		OFFICER'S CLUB	2.0	3.8	25	38	23	BDL
		JVP SHED	2.2	4.0	22	52	30	BDL
		AUTO SS	2.5	3.9	56	40	18	BDL
		AGRI CLINIC	1.7	3.8	21	48	24	BDL
		INST CHANGE ROOM	3.0	4.8	42	58	32	BDL
SAFETY DEPARTMENT	3.2	5.0	49	52	29	BDL		



## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

AMBIENT AIR QUALITY MONITORINGMONTH: FEBURARY 2024

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
02.02.2024	SW	AAQM STATION	7.8	6.7	40	42	25	BDL
		ADMIN BUILDING	7.0	6.0	25	35	21	BDL
		UREA BAGGING	7.4	6.5	68	50	35	BDL
		OFFICER'S CLUB	5.3	4.5	16	25	17	BDL
		JVP SHED	5.0	4.1	23	53	34	BDL
		AUTO SS	4.8	3.9	30	46	24	BDL
		AGRI CLINIC	3.7	2.9	14	34	21	BDL
		INST CHANGE ROOM	7.3	6.5	40	55	30	BDL
SAFETY DEPATMENT	7.8	6.9	46	50	29	BDL		
05.02.2024	SW	AAQM STATION	7.7	6.2	44	38	22	BDL
		ADMIN BUILDING	6.8	5.7	21	44	26	BDL
		UREA BAGGING	7.2	6.2	57	55	32	BDL
		OFFICER'S CLUB	5.7	4.6	14	26	15	BDL
		JVP SHED	5.3	4.5	20	55	31	BDL
		AUTO SS	4.6	3.7	24	43	24	BDL
		AGRI CLINIC	3.5	2.9	21	25	15	BDL
		INST CHANGE ROOM	7.0	5.8	36	60	31	BDL
SAFETY DEPATMENT	7.5	6.3	42	53	26	BDL		
08.02.2024	SW	AAQM STATION	7.3	6.1	35	51	26	BDL
		ADMIN BUILDING	6.2	5.4	23	52	27	BDL
		UREA BAGGING	7.1	6.2	59	59	31	BDL
		OFFICER'S CLUB	5.1	4.3	14	28	18	BDL
		JVP SHED	4.4	3.1	24	50	29	BDL
		AUTO SS	4.3	3.5	35	37	21	BDL
		AGRI CLINIC	3.2	2.1	18	18	15	BDL
		INST CHANGE ROOM	7.0	5.5	68	54	33	BDL
SAFETY DEPATMENT	7.4	5.8	35	57	30	BDL		
12.02.2024	SW	AAQM STATION	6.5	6.0	43	40	22	BDL
		ADMIN BUILDING	4.5	5.1	29	44	21	BDL
		UREA BAGGING	6.3	5.9	51	54	34	BDL
		OFFICER'S CLUB	4.1	4.3	23	25	15	BDL
		JVP SHED	4.6	3.8	27	30	18	BDL
		AUTO SS	4.1	3.5	39	31	17	BDL
		AGRI CLINIC	4.5	3.8	22	22	16	BDL
		INST CHANGE ROOM	6.8	5.9	55	53	32	BDL
SAFETY DEPATMENT	6.2	5.4	29	45	21	BDL		

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
15.02.2024	SW	AAQM STATION	5.8	6.2	27	34	25	BDL
		ADMIN BUILDING	5.5	4.3	30	48	27	BDL
		UREA BAGGING	6.1	6.4	53	54	31	BDL
		OFFICER'S CLUB	4.1	3.1	16	28	23	BDL
		JVP SHED	4.5	4.1	20	50	27	BDL
		AUTO SS	3.8	3.2	27	39	23	BDL
		AGRI CLINIC	2.9	2.4	14	21	15	BDL
		INST CHANGE ROOM	5.5	5.9	43	55	34	BDL
		SAFETY DEPATMENT	5.2	5.4	30	56	32	BDL
19.02.2024	SW	AAQM STATION	4.9	5.1	30	40	25	BDL
		ADMIN BUILDING	4.7	5.0	25	42	24	BDL
		UREA BAGGING	5.2	6.9	93	57	34	BDL
		OFFICER'S CLUB	3.7	3.5	18	41	24	BDL
		JVP SHED	4.1	3.5	26	45	27	BDL
		AUTO SS	3.0	3.0	30	53	27	BDL
		AGRI CLINIC	2.4	3.1	14	32	26	BDL
		INST CHANGE ROOM	3.9	5.6	47	54	30	BDL
		SAFETY DEPATMENT	4.7	6.0	42	48	30	BDL
23.02.2024	SW	AAQM STATION	5.8	4.1	49	42	23	BDL
		ADMIN BUILDING	4.8	4.0	40	48	26	BDL
		UREA BAGGING	6.1	5.5	56	56	32	BDL
		OFFICER'S CLUB	3.8	2.4	18	24	16	BDL
		JVP SHED	4.3	2.2	16	56	29	BDL
		AUTO SS	4.5	2.3	29	42	23	BDL
		AGRI CLINIC	2.4	1.6	15	14	10	BDL
		INST CHANGE ROOM	6.9	4.9	50	40	25	BDL
		SAFETY DEPATMENT	7.1	5.1	34	58	23	BDL
27.02.2024	SW	AAQM STATION	5.1	3.2	37	42	21	BDL
		ADMIN BUILDING	4.2	2.9	35	48	22	BDL
		UREA BAGGING	5.5	3.5	48	60	34	BDL
		OFFICER'S CLUB	3.8	2.8	21	40	25	BDL
		JVP SHED	2.5	2.0	18	37	20	BDL
		AUTO SS	2.8	1.8	38	45	27	BDL
		AGRI CLINIC	2.0	1.4	15	48	25	BDL
		INST CHANGE ROOM	6.2	5.0	42	58	30	BDL
		SAFETY DEPATMENT	6.4	5.3	51	47	23	BDL

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

AMBIENT AIR QUALITY MONITORINGMONTH: MARCH 2024

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /m <sup>3</sup>					
			SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO / HC
04.03.2024	E	AAQM STATION	6.6	6.9	85	47	28	BDL
		ADMIN BUILDING	5.5	6.3	40	56	30	BDL
		UREA BAGGING	6.8	5.9	85	64	33	BDL
		OFFICER'S CLUB	4.2	3.5	34	30	21	BDL
		JVP SHED	5.0	4.3	28	60	36	BDL
		AUTO SS	4.5	3.7	54	44	27	BDL
		AGRI CLINIC	3.5	3.0	34	32	25	BDL
		INST CHANGE ROOM	6.5	6.9	36	60	33	BDL
		SAFETY DEPARTMENT	6.6	6.2	38	56	32	BDL
07.03.2024	E	AAQM STATION	7.1	6.5	6.5	42	26	BDL
		ADMIN BUILDING	6.4	5.4	36	53	28	BDL
		UREA BAGGING	6.5	6.0	89	70	38	BDL
		OFFICER'S CLUB	5.4	4.7	58	36	22	BDL
		JVP SHED	4.2	5.0	40	60	35	BDL
		AUTO SS	4.4	3.5	33	49	27	BDL
		AGRI CLINIC	3.8	3.2	70	32	20	BDL
		INST CHANGE ROOM	6.4	7.2	96	68	36	BDL
		SAFETY DEPARTMENT	6.9	6.0	70	56	29	BDL
12.03.2024	E	AAQM STATION	6.5	5.5	69	58	31	BDL
		ADMIN BUILDING	5.9	3.4	50	60	33	BDL
		UREA BAGGING	6.1	7.4	78	74	38	BDL
		OFFICER'S CLUB	4.7	2.9	28	34	21	BDL
		JVP SHED	5.5	4.2	34	54	32	BDL
		AUTO SS	4.6	3.1	38	43	24	BDL
		AGRI CLINIC	2.9	1.8	24	26	18	BDL
		INST CHANGE ROOM	6.7	7.5	38	60	36	BDL
		SAFETY DEPARTMENT	7.0	6.1	60	66	35	BDL
15.03.2024	E	AAQM STATION	6.7	5.8	53	55	29	BDL
		ADMIN BUILDING	4.8	4.5	42	60	30	BDL
		UREA BAGGING	6.1	6.9	74	64	32	BDL
		OFFICER'S CLUB	4.5	4.0	40	42	25	BDL
		JVP SHED	4.6	4.1	36	58	32	BDL
		AUTO SS	4.1	3.2	60	45	24	BDL
		AGRI CLINIC	4.5	3.9	37	38	26	BDL
		INST CHANGE ROOM	6.8	7.1	75	73	35	BDL
		SAFETY DEPARTMENT	6.2	5.6	35	62	34	BDL

DATE	WIND DIRECTION TOWARDS	LOCATION	CONCENTRATION : Micrograms /Nm3					
			SO2	NO2	NH3	PM 10	PM 2.5	CO / HC
19.03.2024	E	AAQM STATION	6.0	6.4	74	42	23	BDL
		ADMIN BUILDING	5.1	4.8	61	54	30	BDL
		UREA BAGGING	6.5	7.3	70	64	34	BDL
		OFFICER'S CLUB	4.6	3.5	34	33	19	BDL
		JVP SHED	5.1	4.6	39	55	25	BDL
		AUTO SS	4.4	3.5	64	47	24	BDL
		AGRI CLINIC	3.5	2.7	34	29	13	BDL
		INST CHANGE ROOM	6.1	5.6	89	62	30	BDL
SAFETY DEPARTMENT	6.3	5.6	60	67	34	BDL		
21.03.2024	E	AAQM STATION	5.6	6.2	74	58	28	BDL
		ADMIN BUILDING	5.0	5.8	47	52	25	BDL
		UREA BAGGING	6.8	8.0	86	72	35	BDL
		OFFICER'S CLUB	4.1	3.9	29	34	19	BDL
		JVP SHED	4.8	6.0	41	56	29	BDL
		AUTO SS	4.0	5.2	38	55	29	BDL
		AGRI CLINIC	2.6	2.1	26	30	18	BDL
		INST CHANGE ROOM	7.1	7.9	77	65	33	BDL
SAFETY DEPARTMENT	7.4	8.3	74	63	34	BDL		
26.03.2024	E	AAQM STATION	5.7	6.0	65	47	25	BDL
		ADMIN BUILDING	5.1	4.8	54	45	24	BDL
		UREA BAGGING	6.4	7.7	90	70	35	BDL
		OFFICER'S CLUB	3.4	2.1	26	30	21	BDL
		JVP SHED	5.8	2.5	30	52	28	BDL
		AUTO SS	5.9	3.0	39	44	25	BDL
		AGRI CLINIC	2.6	1.9	26	26	19	BDL
		INST CHANGE ROOM	6.2	6.8	78	48	27	BDL
SAFETY DEPARTMENT	6.7	5.4	69	55	25	BDL		
29.03.2024	E	AAQM STATION	5.8	3.9	48	55	26	BDL
		ADMIN BUILDING	4.5	3.9	52	53	26	BDL
		UREA BAGGING	6.2	4.0	82	72	35	BDL
		OFFICER'S CLUB	4.0	3.5	40	46	27	BDL
		JVP SHED	3.1	2.4	32	48	23	BDL
		AUTO SS	3.7	2.5	47	52	27	BDL
		AGRI CLINIC	2.7	2.0	29	44	24	BDL
		INST CHANGE ROOM	7.0	6.1	85	75	35	BDL
SAFETY DEPARTMENT	7.4	6.4	67	45	25	BDL		

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORINGMONTH: OCTOBER 2023

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>						
		SO <sub>2</sub>	NO <sub>x</sub> as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST	STANDARDS
17.10.23	SA: FAT Exit	227 mg/nm <sup>3</sup> 0.4 Kg/Ton	--	--	--	--	5.64	Mist: 10 SO <sub>2</sub> : 1 Kg/Ton
08.10.23	PA: TCA-3 Exit	--	--	--	--	2.13	--	F: 20
18.10.23	PA: RG House Exit	--	--	48	--	1.8	--	PM: 125
26.10.23	DAP-I Dust Scrubber Exit	--	--	43	43	0.15	--	NH <sub>3</sub> : 300 PM : 150 F : <10
26.10.23	DAP-II Dust Scrubber Exit	--	--	42	44	0.4	--	NH <sub>3</sub> : 300 PM : 150 F : <10
13.10.23	AlF <sub>3</sub> Waste Gas Stack Exit	--	--	48	--	--	--	--
13.10.23	AlF <sub>3</sub> Calciner Chimney	322	12	--	--	--	--	--
25.10.23	SSP PLANT	--	--	44	--	1.7	--	PM : 125 F : 20
08.10.23	PA: HH Off gas stack	--	--	--	--	3.07	--	F: 20

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORINGMONTH: NOVEMBER 2023

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>							STANDARDS
		SO <sub>2</sub>	NO <sub>x</sub> as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST		
15.11.23	SA: FAT Exit	275 mg/nm <sup>3</sup> 0.44 Kg/Ton	--	--	--	--	5.06	Mist: 10 SO <sub>2</sub> : 1 Kg/Ton	
02.11.23	PA: TCA-3 Exit	--	--	--	--	0.9	--	F: 20	
22.11.23	PA: RG House Exit	--	--	47	--	0.3	--	PM: 125	
16.11.23	DAP-I Dust Scrubber Exit	--	--	36	47	0.25	--	NH <sub>3</sub> : 300 PM : 150 F : <10	
17.11.23	DAP-II Dust Scrubber Exit	--	--	43	44	0.2	--	NH <sub>3</sub> : 300 PM : 150 F : <10	
09.11.23	AlF <sub>3</sub> Waste Gas Stack Exit	--	--	47	--	--	--	--	
09.11.23	AlF <sub>3</sub> Calciner Chimney	342	14	--	--	--	--	--	
	SSP PLANT	Shut down							PM : 125 F : 20
02.11.23	PA: HH Off gas stack	--	--	--	--	3.5	--	F: 20	



## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORINGMONTH: DECEMBER 2023

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>						
		SO <sub>2</sub>	NO <sub>x</sub> as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST	STANDARDS
15.12.23	SA: FAT Exit	294 mg/nm <sup>3</sup> 0.44 Kg/Ton	--	--	--	--	6.2	Mist: 10 SO <sub>2</sub> : 1 Kg/Ton
02.12.23	PA: TCA-3 Exit	--	--	--	--	0.89	--	F: 20
04.12.23	PA: RG House Exit	--	--	49	--	0.41	--	PM: 125
12.12.23	DAP-I Dust Scrubber Exit	--	--	32	45	0.16	--	NH <sub>3</sub> : 300 PM : 150 F : <10
04.12.23	DAP-II Dust Scrubber Exit	--	--	48	46	0.8	--	NH <sub>3</sub> : 300 PM : 150 F : <10
15.12.23	AlF <sub>3</sub> Waste Gas Stack Exit	--	--	44	--	--	--	--
15.12.23	AlF <sub>3</sub> Calciner Chimney	368	10	--	--	--	--	--
04.12.23	GSSP PLANT	--	--	46	--	1.41	--	PM : 125 F : 20
02.12.23	PA: HH Off gas stack	--	--	--	--	2.9	--	F: 20

GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORING

MONTH: JANUARY 2024

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>							
		SO <sub>2</sub>	NO <sub>x</sub> as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST	STANDARDS	
	SA: FAT Exit	UNDER SHUTDOWN DUE TO FLOOD							Mist: 10 SO <sub>2</sub> : 1 Kg/Ton
	PA: TCA-3 Exit								F: 20
	PA: RG House Exit								PM: 125
	DAP-I Dust Scrubber Exit								NH <sub>3</sub> : 300 PM : 150 F : <10
	DAP-II Dust Scrubber Exit								NH <sub>3</sub> : 300 PM : 150 F : <10
	AlF <sub>3</sub> Waste Gas Stack Exit								--
	AlF <sub>3</sub> Calciner Chimney								--
	GSSP PLANT								PM : 125 F : 20
	PA: HH Off gas stack								F: 20

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORINGMONTH: FEBURARY 2024

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>							STANDARDS
		SO <sub>2</sub>	NOx as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST		
28.02.24	SA: FAT Exit	294 mg/nm3 0.44 Kg/Ton	--	--	--	--	6.2	Mist: 10 SO <sub>2</sub> : 1 Kg/Ton	
02.02.24	PA: TCA-3 Exit	--	--	--	--	0.6	--	F: 20	
26.02.24	PA: RG House Exit	--	--	48	--	2.1	--	PM: 125	
14.02.24	DAP-I Dust Scrubber Exit	--	--	48	47	0.1	--	NH <sub>3</sub> : 300 PM : 150 F : <10	
14.02.24	DAP-II Dust Scrubber Exit	--	--	47	46	0.15	--	NH <sub>3</sub> : 300 PM : 150 F : <10	
22.02.24	AlF <sub>3</sub> Waste Gas Stack Exit	--	--	48	--	--	--	--	
22.02.24	AlF <sub>3</sub> Calciner Chimney	393	13	--	--	--	--	--	
26.02.24	SSP PLANT	--	--	48	--	2.0	--	PM : 125 F : 20	
04.02.24	GSSP PLANT	--	--	49	--	4.5	--	PM : 125	
02.02.24	PA: HH Off gas stack	--	--	--	--	5.4	--	F: 20	

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

STACK EMISSION MONITORINGMONTH: MARCH 2024

DATE	SOURCE	CONCENTRATION: Milligrams/Nm <sup>3</sup>						
		SO <sub>2</sub>	NO <sub>x</sub> as NO <sub>2</sub>	PM	NH <sub>3</sub>	F	ACID MIST	STANDARDS
06.03.24	SA: FAT Exit	265 mg/nm <sup>3</sup> 0.39 Kg/Ton	--	--	--	--	6.1	Mist: 10 SO <sub>2</sub> : 1 Kg/Ton
06.03.24	PA: TCA-3 Exit	--	--	--	--	0.3	--	F: 20
15.03.24	PA: RG House Exit	--	--	46	--	2.5	--	PM: 125
05.03.24	DAP-I Dust Scrubber Exit	--	--	43	35	0.5	--	NH <sub>3</sub> : 300 PM : 150 F : <10
01.03.24	DAP-II Dust Scrubber Exit	--	--	44	46	0.2	--	NH <sub>3</sub> : 300 PM : 150 F : <10
02.03.24	AlF <sub>3</sub> Waste Gas Stack Exit	--	--	43	--	--	--	--
02.03.24	AlF <sub>3</sub> Calciner Chimney	279	15	--	--	--	--	--
13.03.24	SSP PLANT	--	--	42	--	2.1	--	PM : 125 F : 20
06.03.24	PA: HH Off gas stack	--	--	--	--	1.8	--	F: 20

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

WELL WATER ANALYSISMONTH: OCTOBER 2023

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	6.1	BDL	BDL	0.4	0.4	BDL	BDL	910
Gypsum Dyke - N	7.4	BDL	BDL	0.5	0.3	BDL	BDL	900
Gypsum Dyke - NW	8.1	BDL	BDL	0.3	0.2	BDL	BDL	560
Gypsum Dyke - W	8.4	BDL	BDL	1.1	0.3	BDL	BDL	850
Gypsum Dyke - SW	7.8	BDL	BDL	BDL	0.1	BDL	BDL	860
Gypsum Dyke - S	6.7	BDL	BDL	0.9	0.4	BDL	BDL	870
Sagar Sadan	7.3	BDL	BDL	0.4	0.4	BDL	BDL	600
Rajiv Nagar	7.7	BDL	BDL	0.2	0.2	BDL	BDL	520

MONTH: NOVEMBER 2023

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	7.3	BDL	BDL	0.4	0.2	BDL	BDL	800
Gypsum Dyke - N	7.1	BDL	BDL	0.3	0.3	BDL	BDL	960
Gypsum Dyke - NW	7.4	BDL	BDL	0.2	0.4	BDL	BDL	830
Gypsum Dyke - W	8.3	BDL	BDL	0.3	0.2	BDL	BDL	920
Gypsum Dyke - SW	7.5	BDL	BDL	0.5	0.3	BDL	BDL	860
Gypsum Dyke - S	6.6	BDL	BDL	0.6	0.4	BDL	BDL	910
Sagar Sadan	7.4	BDL	BDL	0.4	0.2	BDL	BDL	830
Rajiv Nagar	7.8	BDL	BDL	0.2	0.1	BDL	BDL	540

MONTH: DECEMBER 2023

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	7.1	BDL	BDL	0.5	0.2	BDL	BDL	890
Gypsum Dyke - N	6.9	BDL	BDL	0.4	0.4	BDL	BDL	800
Gypsum Dyke - NW	7.1	BDL	BDL	0.3	0.2	BDL	BDL	845
Gypsum Dyke - W	8	BDL	BDL	0.2	0.1	BDL	BDL	815
Gypsum Dyke - SW	7.4	BDL	BDL	0.8	0.3	BDL	BDL	860
Gypsum Dyke - S	6.8	BDL	BDL	0.7	0.1	BDL	BDL	820
Sagar Sadan	7.7	BDL	BDL	0.5	0.1	BDL	BDL	800
Rajiv Nagar	7.5	BDL	BDL	0.2	0.2	BDL	BDL	840

MONTH: JANUARY 2024

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	6.1	BDL	BDL	0.5	0.5	BDL	BDL	600
Gypsum Dyke - N	6.8	BDL	BDL	0.4	0.1	BDL	BDL	720
Gypsum Dyke - NW	7.1	BDL	BDL	0.4	0.3	BDL	BDL	700
Gypsum Dyke - W	7.4	BDL	BDL	0.3	0.4	BDL	BDL	900
Gypsum Dyke - SW	7.8	BDL	BDL	0.1	0.5	BDL	BDL	940
Gypsum Dyke - S	7.6	BDL	BDL	0.7	0.2	BDL	BDL	860
Sagar Sadan	7.7	BDL	BDL	0.3	0.3	BDL	BDL	980
Rajiv Nagar	8.0	BDL	BDL	0.6	0.4	BDL	BDL	900



MONTH: FEBURARY 2024

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	6.5	BDL	BDL	0.5	0.1	BDL	BDL	920
Gypsum Dyke - N	6.9	BDL	BDL	0.9	0.2	BDL	BDL	930
Gypsum Dyke - NW	7.2	BDL	BDL	0.1	0.3	BDL	BDL	820
Gypsum Dyke - W	7.3	BDL	BDL	0.1	0.2	BDL	BDL	920
Gypsum Dyke - SW	7.6	BDL	BDL	0.4	0.3	BDL	BDL	975
Gypsum Dyke - S	7.6	BDL	BDL	0.3	0.4	BDL	BDL	860
Sagar Sadan	8	BDL	BDL	0.7	0.1	BDL	BDL	935
Rajiv Nagar	7.7	BDL	BDL	0.6	0.1	BDL	BDL	925

MONTH: MARCH 2024

Location of wells And Salt Pans	pH	AN	UN	PO <sub>4</sub>	F <sup>(-)</sup>	NO <sub>3</sub> -N	As	TDS
Gypsum Dyke - NE	6.6	BDL	BDL	0.4	0.1	BDL	BDL	600
Gypsum Dyke - N	6.8	BDL	BDL	0.1	0.3	BDL	BDL	730
Gypsum Dyke - NW	7.2	BDL	BDL	0.7	0.2	BDL	BDL	740
Gypsum Dyke - W	7.1	BDL	BDL	0.6	0.4	BDL	BDL	975
Gypsum Dyke - SW	7.4	BDL	BDL	0.2	0.2	BDL	BDL	920
Gypsum Dyke - S	7.8	BDL	BDL	0.9	0.3	BDL	BDL	980
Sagar Sadan	8.0	BDL	BDL	0.1	0.2	BDL	BDL	810
Rajiv Nagar	7.6	BDL	BDL	0.2	0.4	BDL	BDL	780

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

FUGITIVE EMISSION ANALYSIS AT WORK PLACE**1. AIF3 Bagging Plant:**

Parameters	UOM	Date:06.12.2023
NH3	µgm/ m3	77
SO2	µgm/ m3	4.9
NO2	µgm/ m3	3.8
PM 10	µgm/ m3	58
PM 2.5	µgm/ m3	40

**2. DAP Bagging Plant:**

Parameters	UOM	Date:06.12.2023
NH3	µgm/ m3	89
SO2	µgm/ m3	5.1
NO2	µgm/ m3	3.9
PM 10	µgm/ m3	56
PM 2.5	µgm/ m3	34

## GREENSTAR FERTILIZERS LIMITED, SPIC NAGAR, TUTICORIN-628 005

FUGITIVE EMISSION ANALYSIS AT WORK PLACE**1. AIF3 Bagging Plant:**

Parameters	UOM	Date:25.03.24
NH3	µgm/ m3	72
SO2	µgm/ m3	5.3
NO2	µgm/ m3	4.9
PM 10	µgm/ m3	59
PM 2.5	µgm/ m3	37

**2. DAP Bagging Plant:**

Parameters	UOM	Date: 25.03.24
NH3	µgm/ m3	95
SO2	µgm/ m3	5.5
NO2	µgm/ m3	6
PM 10	µgm/ m3	58
PM 2.5	µgm/ m3	38



# Glens Innovation Labs Pvt Ltd.

NABL Accredited as per ISO17025:2017, Certified as per ISO 9001:2015 & ISO 45001:2018



## TEST REPORT

ULR NO:TC85822400002592F

Report No. : EN24040091

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Ambient Air Quality Sampling From : 02-Apr-2024 04:45 AM  
 Sample Description : Ambient Air Quality Sampling To : 03-Apr-2024 04:45 AM  
 Sampling Location : JVP Shed Received Date : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Commenced On : 04-Apr-2024  
 Sample Condition : Good Completed On : 16-Apr-2024  
 Humidity : 34% Report Date : 21-Apr-2024  
 Temperature : 33°C Sampling Plan and Method : IS 5182 Part V & XIV



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Requirement as per NAAQS Specification
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	15.4	IS 5182 (Part 2): 2017	Max 80
2	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	24.1	IS 5182 (Part 6): 2006	Max 80
3	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	59.4	IS 5182 (Part 23): 2006	Max 100
4	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	28.2	GL/EN/SOP/062	Max 60
5	Ozone as O <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	IS 5182 (Part 9): 1974	Max 100
6	Lead as Pb	µg/m <sup>3</sup>	BLQ(LOQ : 0.002)	IS 5182 (Part 22): 2014	Max 1.0
7	Carbon Monoxide as CO	mg/m <sup>3</sup>	BLQ(LOQ : 1.14)	IS 5182 (Part 10): 1999	Max 4.0
8	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	GL/EN/SOP/057	Max 400
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BLQ(LOQ : 4.0)	GL/EN/SOP/08	NA
10	Benzo (a) Pyrene (Particulate Phase)	ng/m <sup>3</sup>	BLQ(LOQ : 0.03)	GL/EN-INS/SOP/009	NA
11	Arsenic as As	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA
12	Nickel as Ni	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

**Remarks :** The above Sample complies as per NAAQS limit which is provided in the environmental protection Rule 3 (3B) Nov.2009, against the above tested parameter./ NAAQS: National Ambient Air Quality Standard

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

Verified By

Authorized Signature

**E. PRITHIVIRAJAN**  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #E/1,1 St Floor, Sri Jothi Complex Murugasan Street, Bolavinajagar Nagar, Arumbakkam Chennai: 600106

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# Glens Innovation Labs Pvt Ltd.

NABL Accredited as per ISO17025:2017, Certified as per ISO 9001:2015 & ISO 45001:2018

## TEST REPORT



ULR NO:TC858224000002593F

Report No. : EN24040092

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Ambient Air Quality Sampling From : 02-Apr-2024 05:00 AM  
 Sample Description : Ambient Air Quality Sampling To : 03-Apr-2024 05:00 AM  
 Sampling Location : Auto Substation Received Date : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Commenced On : 04-Apr-2024  
 Sample Condition : Good Completed On : 16-Apr-2024  
 Humidity : 34% Report Date : 21-Apr-2024  
 Temperature : 33°C Sampling Plan and Method : IS 5182 Part V & XIV



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Requirement as per NAAQS Specification
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	15.1	IS 5182 (Part 2): 2017	Max 80
2	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	21.3	IS 5182 (Part 6): 2006	Max 80
3	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	54.6	IS 5182 (Part 23): 2006	Max 100
4	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	23.5	GL/EN/SOP/062	Max 60
5	Ozone as O <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	IS 5182 (Part 9): 1974	Max 100
6	Lead as Pb	µg/m <sup>3</sup>	BLQ(LOQ : 0.002)	IS 5182 (Part 22): 2014	Max 1.0
7	Carbon Monoxide as CO	mg/m <sup>3</sup>	BLQ(LOQ : 1.14)	IS 5182 (Part 10): 1999	Max 4.0
8	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	GL/EN/SOP/057	Max 400
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BLQ(LOQ : 4.0)	GL/EN/SOP/08	NA
10	Benzo (a) Pyrene (Particulate Phase)	ng/m <sup>3</sup>	BLQ(LOQ : 0.03)	GL/EN-INS/SOP/009	NA
11	Arsenic as As	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA
12	Nickel as Ni	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22) : 2014	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

**Remarks :** The above Sample complies as per NAAQS limit which is provided in the environmental protection Rule 3 (3B) Nov.2009, against the above tested parameter./ NAAQS: National Ambient Air Quality Standard

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

*S. Sog*  
Verified By

*E. Prithvirajan*  
Authorized Signature

E. PRITHVIRAJAN  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #5/1, 1 St Floor, Sri Jothi Complex Munirajagan Street, Balovina Nagar, Arumbakkam Chennai 600105

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## TEST REPORT



ULR NO:TC858224000002594F

Report No. : EN24040093

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Ambient Air Quality Sampling From : 02-Apr-2024 04:20 AM  
 Sample Description : Ambient Air Quality Sampling To : 03-Apr-2024 04:20 AM  
 Sampling Location : Officers Club Received Date : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Commenced On : 04-Apr-2024  
 Sample Condition : Good Completed On : 16-Apr-2024  
 Humidity : 34% Report Date : 21-Apr-2024  
 Temperature : 33°C Sampling Plan and Method : IS 5182 Part V & XIV



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Requirement as per NAAQS Specification
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	16.5	IS 5182 (Part 2): 2017	Max 80
2	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	25.2	IS 5182 (Part 6): 2006	Max 80
3	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	56.6	IS 5182 (Part 23): 2006	Max 100
4	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	25.2	GL/EN/SOP/062	Max 60
5	Ozone as O <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	IS 5182 (Part 9): 1974	Max 100
6	Lead as Pb	µg/m <sup>3</sup>	BLQ(LOQ : 0.002)	IS 5182 (Part 22): 2014	Max 1.0
7	Carbon Monoxide as CO	mg/m <sup>3</sup>	BLQ(LOQ : 1.14)	IS 5182 (Part 10): 1999	Max 4.0
8	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	GL/EN/SOP/057	Max 400
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BLQ(LOQ : 4.0)	GL/EN/SOP/08	NA
10	Benzo (a) Pyrene (Particulate Phase)	ng/m <sup>3</sup>	BLQ(LOQ : 0.03)	GL/EN-INS/SOP/009	NA
11	Arsenic as As	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA
12	Nickel as Ni	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

Remarks : The above Sample complies as per NAAQS limit which is provided in the environmental protection Rule 3 (3B) Nov.2009, against the above tested parameter./ NAAQS: National Ambient Air Quality Standard

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

2.5  
Verified By

Authorized Signature

E. PRITHVIRAJAN  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #6/1, 1 St Floor, Sri Juthi Complex, Munigan Street, Balavanayagar Nagar, Arumbi Mem Chennai 600125

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## TEST REPORT

ULR NO:TC85822400002595F

Report No. : EN24040094

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Ambient Air Quality Sampling From : 02-Apr-2024 04:30 AM  
 Sample Description : Ambient Air Quality Sampling To : 03-Apr-2024 04:30 AM  
 Sampling Location : Agri Clinic Received Date : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Commenced On : 04-Apr-2024  
 Sample Condition : Good Completed On : 16-Apr-2024  
 Humidity : 34% Report Date : 21-Apr-2024  
 Temperature : 33°C Sampling Plan and Method : IS 5182 Part V & XIV



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Requirement as per NAAQS Specification
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	13.5	IS 5182 (Part 2): 2017	Max 80
2	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	26.4	IS 5182 (Part 6): 2006	Max 80
3	Particulate Matter (PM10)	µg/m <sup>3</sup>	55.8	IS 5182 (Part 23): 2006	Max 100
4	Particulate Matter (PM2.5)	µg/m <sup>3</sup>	27.5	GL/EN/SOP/062	Max 60
5	Ozone as O <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	IS 5182 (Part 9): 1974	Max 100
6	Lead as Pb	µg/m <sup>3</sup>	BLQ(LOQ : 0.002)	IS 5182 (Part 22) :2014	Max 1.0
7	Carbon Monoxide as CO	mg/m <sup>3</sup>	BLQ(LOQ : 1.14)	IS 5182 (Part 10): 1999	Max 4.0
8	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	GL/EN/SOP/057	Max 400
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BLQ(LOQ : 4.0)	GL/EN/SOP/08	NA
10	Benzo (a) Pyrene (Particulate Phase)	ng/m <sup>3</sup>	BLQ(LOQ : 0.03)	GL/EN-INS/SOP/009	NA
11	Arsenic as As	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA
12	Nickel as Ni	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 ( Part 22) : 2014	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

**Remarks :** The above Sample complies as per NAAQS limit which is provided in the environmental protection Rule 3 (3B) Nov.2009, against the above tested parameter./ NAAQS: National Ambient Air Quality Standard

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

  
Verified By

  
Authorized Signature  
E. PRITHIVIRAJAN  
LAB MANAGER

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## TEST REPORT

ULR NO:TC85822400002596F

Report No. : EN24040095

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar,Tutucorin,628005  
 Sample Name : Ambient Air Quality Sampling From : 02-Apr-2024 04:00 AM  
 Sample Description : Ambient Air Quality Sampling To : 02-Apr-2024 06:30 PM  
 Sampling Location : Near AAQM Station Received Date : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Commenced On : 04-Apr-2024  
 Sample Condition : Good Completed On : 16-Apr-2024  
 Humidity : 34% Report Date : 21-Apr-2024  
 Temperature : 33°C Sampling Plan and Method : IS 5182 Part V & XIV



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Requirement as per NAAQS Specification
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	13.3	IS 5182 (Part 2): 2017	Max 80
2	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	20.5	IS 5182 (Part 6): 2006	Max 80
3	Particulate Matter (PM10)	µg/m <sup>3</sup>	52.2	IS 5182 (Part 23): 2006	Max 100
4	Particulate Matter (PM2.5)	µg/m <sup>3</sup>	26.7	GL/EN/SOP/062	Max 60
5	Ozone as O <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	IS 5182 (Part 9): 1974	Max 100
6	Lead as Pb	µg/m <sup>3</sup>	BLQ(LOQ : 0.002)	IS 5182 (Part 22): 2014	Max 1.0
7	Carbon Monoxide as CO	mg/m <sup>3</sup>	BLQ(LOQ : 1.14)	IS 5182 (Part 10): 1999	Max 4.0
8	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	GL/EN/SOP/057	Max 400
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BLQ(LOQ : 4.0)	GL/EN/SOP/08	NA
10	Benzo (a) Pyrene (Particulate Phase)	ng/m <sup>3</sup>	BLQ(LOQ : 0.03)	GL/EN-INS:SOP/009	NA
11	Arsenic as As	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA
12	Nickel as Ni	ng/m <sup>3</sup>	BLQ(LOQ : 2.0)	IS 5182 (Part 22): 2014	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

**Remarks :** The above Sample complies as per NAAQS limit which is provided in the environmental protection Rule 3 (3B) Nov.2009, against the above tested parameter./ NAAQS: National Ambient Air Quality Standard

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

Verified By

Authorized Signature

E. PRITHIVIRAJAN  
LAB MANAGER

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## TEST REPORT



Report No. : EN24040096

ULR NO:TC858224000002597F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
Address of the Client : Spic Nagar, Tutucorin, 628005  
Sample Name : Fugitive Emission Sampling Date : 30-Mar-2024  
Sample Description : Fugitive Emission Received Date : 04-Apr-2024  
Sampling Location : ALF 3 Bagging Plant Commenced On : 04-Apr-2024  
Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
Sample Condition : Good Report Date : 21-Apr-2024  
Sampling Plan and Method : GL/EN/SOP/161



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method
<b>Discipline: Chemical</b>				
<b>Group: Atmospheric Pollution</b>				
1	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	23.2	IS 5182 (Part 6): 2006
2	Particulate Matter (PM10)	µg/m <sup>3</sup>	51.2	IS 5182 (Part 23): 2006
3	Particulate Matter (PM2.5)	µg/m <sup>3</sup>	24.8	GL/EN/SOP/062
4	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	14.1	IS 5182 (Part 2): 2017
5	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	NIOSH - 6015

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

Verified By

Authorized Signature

E. PRITHIVIRAJAN  
LAB MANAGER

Page 1 of 1

GLENS INNOVATION LABS Pvt Ltd, #6/1, 1st Floor, Sri Jothi Complex Murugasan Street, Belwinayagar Nagar, Arumbakkam Chennai 600005

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## TEST REPORT

ULR NO:TC858224000002598F

Report No. : EN24040097

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Fugitive Emission Sampling Date : 30-Mar-2024  
 Sample Description : Fugitive Emission Received Date : 04-Apr-2024  
 Sampling Location : DAP Bagging Plant Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/161



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method
<b>Discipline: Chemical</b>				
<b>Group: Atmospheric Pollution</b>				
1	Nitrogen dioxide as NO <sub>2</sub>	µg/m <sup>3</sup>	24.3	IS 5182 (Part 6): 2006
2	Particulate Matter (PM10)	µg/m <sup>3</sup>	49.1	IS 5182 (Part 23): 2006
3	Particulate Matter (PM2.5)	µg/m <sup>3</sup>	23.8	GL/EN/SOP/062
4	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	14.6	IS 5182 (Part 2): 2017
5	Ammonia as NH <sub>3</sub>	µg/m <sup>3</sup>	BLQ(LOQ : 20)	NIOSH - 6015

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification

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

Verified By

Authorized Signature

E. PRITHIVIRAJAN  
LAB MANAGER

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## TEST REPORT

Report No. : EN24040098

ULR NO:TC858224000002599F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutuacorin, 628005  
 Sample Name : Stack Emission Sampling Date : 03-Apr-2024  
 Sample Description : Stack Emission Received Date : 04-Apr-2024  
 Sampling Location : DAP-II Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Ammonia as NH <sub>3</sub>	mg/m <sup>3</sup>	41.30	IS 11255 (Part 6): 2014	NA
2	Total Fluorides as F	mg/m <sup>3</sup>	1.60	EPA method 13 B	NA
3	Particulate Matter	mg/Nm <sup>3</sup>	11.60	GL/EN/SOP/113	150

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

*S. Sanyal*  
Verified By

*E. Prithvirajan*  
Authorized Signature  
E. PRITHVIRAJAN  
LAB MANAGER

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## TEST REPORT

Report No. : EN24040099

ULR NO:TC858224000002600F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
Address of the Client : Spic Nagar, Tutuacorin, 628005  
Sample Name : Stack Emission Sampling Date : 03-Apr-2024  
Sample Description : Stack Emission Received Date : 04-Apr-2024  
Sampling Location : PA HH off Gas Stack Commenced On : 04-Apr-2024  
Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
Sample Condition : Good Report Date : 21-Apr-2024  
Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method
<b>Discipline: Chemical</b>				
<b>Group: Atmospheric Pollution</b>				
1	Total Fluorides as F	mg/m <sup>3</sup>	2.69	EPA method 13 B

Note: - BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

Verified By

Authorized Signature

E. PRITHIVIRAJAN  
LAB MANAGER

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## TEST REPORT

Report No. : EN24040100

ULR NO:TC858224000002601F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Stack Emission Sampling Date : 03-Apr-2024  
 Sample Description : Stack Emission Received Date : 04-Apr-2024  
 Sampling Location : PA TCA- 3 Exit Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method
<b>Discipline: Chemical</b>				
<b>Group: Atmospheric Pollution</b>				
1	Total Fluorides as F	mg/m <sup>3</sup>	2.53	EPA method 13 B

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

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Authorized Signature

E. PRITHVIRAJAN  
LAB MANAGER

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## TEST REPORT

Report No. : EN24040101

ULR NO:TC858224000002602F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
Address of the Client : Spie Nagar, Tutucorin,628005  
Sample Name : Stack Emission Sampling Date : 03-Apr-2024  
Sample Description : Stack Emission Received Date : 04-Apr-2024  
Sampling Location : ALF- 3 Calciner Commenced On : 04-Apr-2024  
Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
Sample Condition : Good Report Date : 21-Apr-2024  
Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method
<b>Discipline: Chemical</b>				
<b>Group: Atmospheric Pollution</b>				
1	Carbon Monoxide as CO	mg/Nm3	6.87	GL/EN/SOP/149
2	Carbon Dioxide as CO <sub>2</sub>	mg/Nm3	1.1	GL/EN/SOP/149
3	Oxygen as O <sub>2</sub>	%	12.10	GL/EN/SOP/149
4	Oxides Of Nitrogen as NO <sub>2</sub>	mg/Nm3	18.60	GL/EN/SOP/149
5	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm3	79.0	EPA Method 6

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification, NA

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

Verified By

Authorized Signature

E. PRITHVIRAJAN  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #5/1,1 St Floor, Sri Jothi Complex Munagagan Street, Balavitsyanagar Nagar, Aramboliem Chennai 600106

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## TEST REPORT



Report No. : EN24040102

ULR NO:TC858224000002603F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Stack Emission Sampling Date : 30-Mar-2024  
 Sample Description : Stack Emission Received Date : 04-Apr-2024  
 Sampling Location : ALF-3 Waste Gas Stack Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Particulate Matter	mg/Nm <sup>3</sup>	45.90	GL/EN/SOP/113	150

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

*S. Jay*  
Verified By

*E. Prithirajan*  
Authorized Signature  
E. PRITHIRAJAN  
LAB MANAGER

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## TEST REPORT

Report No. : EN24040103

ULR NO:TC858224000002604F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Stack Emission Sampling Date : 02-Apr-2024  
 Sample Description : Stack Emission Received Date : 04-Apr-2024  
 Sampling Location : SA FAT Exit Stack Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Acid mist	mg/m <sup>3</sup>	7.20	EPA method 8	NA
2	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	321.0	EPA Method 6	NA

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification

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

Verified By

Authorized Signature

**E. PRITHVIRAJAN**  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #5/1, 1 St Floor, Sri Jothi Complex Murugusan Street, Balaviriyagan Nagar, Arumbakkam Chennai 600106

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## TEST REPORT



Report No. : EN24040104

ULR NO:TC858224000002605F

Name of the Client : GREENSTAR FERTILIZERS LIMITED  
 Address of the Client : Spic Nagar, Tutucorin, 628005  
 Sample Name : Stack Emission Sampling Date : 02-Apr-2024  
 Sample Description : Stack Emission Received Date : 04-Apr-2024  
 Sampling Location : GSSP Cyclone Exit Commenced On : 04-Apr-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 15-Apr-2024  
 Sample Condition : Good Report Date : 21-Apr-2024  
 Sampling Plan and Method : GL/EN/SOP/111



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Total Fluorides as F	mg/m <sup>3</sup>	BLQ(LOQ : 0.1)	EPA method 13 B	NA
2	Particulate Matter	mg/Nm <sup>3</sup>	44.00	GL/ EN/SOP/113	150

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

Verified By

Authorized Signature  
E. PRITHVI RAJAN  
LAB MANAGER

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## TEST REPORT



Page 1 of 1

TC-4542

Report No. : EN24050744

ULR NO:TC858224000003140F

Name Of the Client : Green Star Fertilizers limited  
Address of the Client : Spic Nagar, Muthiahpuram, Thoothukudi, Tamil Nadu 628005  
Sample Name : Stack monitoring Sampling Date : 21-May-2024  
Sample Description : RG Mill Received Date : 23-May-2024  
Sampling Location : RG Mill Commenced On : 23-May-2024  
Sample Submission Type : Collected by Lab Representative Completed On : 27-May-2024  
Sample Condition : Good Report Date : 27-May-2024



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Particulate Matter	mg/Nm <sup>3</sup>	21.80	GL/EN/SOP/113	150

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

Verified By

Authorized Signature

**E. PRITHIVIRAJAN**  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #6/1, 1 St Floor, Sri Jothi Complex Murugasan Street, Balavindyanagar Nagar, Arumbakkam Chennai 600106

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## TEST REPORT

Report No. : EN24050746

ULR NO:TC858224000003142F

Name Of the Client : Green Star Fertilizers limited  
 Address of the Client : Spic Nagar, Muthiahpuram, Thoothukudi, Tamil Nadu 628005  
 Sample Name : Stack monitoring Sampling Date : 21-May-2024  
 Sample Description : SSP Received Date : 23-May-2024  
 Sampling Location : SSP Commenced On : 23-May-2024  
 Sample Submission Type : Collected by Lab Representative Completed On : 27-May-2024  
 Sample Condition : Good Report Date : 28-May-2024



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Particulate Matter	mg/Nm3	43.30	GL/EN/SOP/113	150
2	Hydrogen Fluoride	mg/Nm3	0.71	GL/EN/SOP/151	20

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

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E. PRITHIVIRAJAM  
LAB MANAGER

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## TEST REPORT

Report No. : EN24050745

Name of the

ULR NO:TC858224000003141F

Name Of the the Client : Green Star Fertilizers limited  
Address of the Client : Spic Nagar, Muthiahpuram, Thoothlukudi, Tamil Nadu 628005  
Sample Name : Stack monitoring Sampling Date : 21-May-2024  
Sample Description : DAP-1 Received Date : 23-May-2024  
Sampling Location : DAP-1 Commenced On : 23-May-2024  
Sample Submission Type : Collected by Lab Representative Completed On : 27-May-2024  
Sample Condition : Good Report Date : 28-May-2024



### Test Results

S. No.	Parameters	Units	Results Obtained	Test Method	Limit as per CPCB Standard
<b>Discipline: Chemical</b>					
<b>Group: Atmospheric Pollution</b>					
1	Ammonia as NH <sub>3</sub>	mg/m <sup>3</sup>	2.0	IS 11255 (Part 6): 2014	300
2	Particulate Matter	mg/Nm <sup>3</sup>	39.60	GL/EN/SOP/113	150
3	Hydrogen Fluoride	mg/Nm <sup>3</sup>	0.78	GL/EN/SOP/151	< 10

Note:- BLQ - Below the Limit of Quantification, LOQ - Limit of Quantification.

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

Verified By

Authorized Signature  
E. PRITHIVIRAJAN  
LAB MANAGER

GLENS INNOVATION LABS Pvt Ltd, #E/1, 1 St Floor, Sri Jothi Complex Murugesan Street, Bala Nagar, Arumbakkam Chennai 600106

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