



రామగుండమ ఫర్టిలాఇజర్స్ ఎండ్ కోమికల్స్ లిమిటెడ్

# Ramagundam Fertilizers And Chemicals Limited

## రామగుండమ ఫర్టిలాఇజర్స్ ఎండ్ కోమికల్స్ లిమిటెడ్

(A Joint Venture Company)

Site Office : Fertilizers City, Ramagundam - 505 210, Dist. Peddapalli, Telangana.

Website: [www.rfcl.co.in](http://www.rfcl.co.in), E-mail: [rfcl.ramagundam@rfcl.co.in](mailto:rfcl.ramagundam@rfcl.co.in)

GSTIN : 36AAHCR2335P1ZY, CIN : U24100DL2015PLC276753

RFCL/TS/EMC/FY 24-25/21/4103

Dated: 10.12.2024

To,  
Director,  
Regional Office,  
Ministry of Environment, Forest and Climate Change,  
1<sup>st</sup> and 2<sup>nd</sup> Floor, HEPC Building,  
No:34, Cathedral Garden Road,  
Nungambakkam,  
Chennai-600034

Sub : Submission of Half Yearly Environmental Clearance (EC) Compliance Report for RFCL  
Ramagundam, Telangana for the period of April' 2024 - September' 2024.

Ref : F No.- J-11011/371/2013-IA II (I) dated 16<sup>th</sup> October, 2015.

Respected Sir,

Half-yearly Environmental Clearance Compliance Report along with the Environment monitoring data  
for the period of April'2024 - September'2024 is enclosed herewith.

Trust that you find the above information in order.

Yours Sincerely

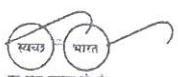
D. Satyanarayana  
(AGM TS)

Enclosure: As above.

Copy to:

- Joint Chief Environmental Engineer (TSPCB), Hyderabad, Telangana.
- Zonal Office, CPCB, Bengaluru, Karnataka.
- Environmental Engineer, Ramagundam, Telangana.
- Chief Conservator of Forests (C), Regional Office (WZ), Bhopal-462016.
- Chief Conservator of Forests (C), Regional Office (EZ), Bhubneswar-751023.
- Sub Office, Ministry of Environment Forest and Climate Change, Hyderabad-500004.

*meul*  
Office of the 11/12/2024  
Environmental Engineer  
Telangana Pollution Control Board  
Regional Office, Ramagundam,  
H. No. Special C-3, NTPC, TTS  
Near Zilla Parishad High School  
JYOTHINAGAR - 505 215  
Dist Peddapalli (TG)



Corporate Office: 4th Floor, Wing-A, Kribhco Bhawan, Sector-1, Noida, Uttar Pradesh; Pin Code- 201301  
Registered Office: Scope Complex, Core No. III, 7, Institutional Area, Lodhi Road, New Delhi-110003

**RAMAGUNDAM FERTILIZERS AND CHEMICALS LIMITED, RAMAGUNDAM**

Ammonia (2200 MTPD) / Urea (3850 MTPD) Fertilizer Complex

**Sub:** Six monthly compliance report of Environmental Clearance. ( Period : April' 2024-September' 2024)

**Ref:** MoEF&CC letter No: J-11011/371/2013-IA II (I) dated 16<sup>th</sup> October, 2015.

**A. SPECIFIC CONDITIONS**

S.NO	DESCRIPTION	COMPLIANCE STATUS
i)	The gaseous emissions (SO <sub>2</sub> , NOx, NH <sub>3</sub> , HC and Urea Dust) and Particulate matter from various process units shall conform to the norms prescribed by CPCB/ SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored continuously (24 x 7) as per CPCB guideline.	The Particulate matter and gaseous emissions from various process units conform to the norms prescribed by CPCB/ SPCB from time to time. Process stack emissions are being monitored continuously as per the CPCB guidelines. Details of Process Emissions (Stack Emission) are enclosed. (Doc No.: RFCL-TS-EMC-Report-05)
ii)	Adequate stack height shall be provided to Ammonia Plant Reformer, Heat Recovery Steam Generator (HRSG), NG/RLNG fired Gas Turbine and Prilling Tower. Low NOx burners shall be provided to control NOx emissions.	Stack heights of Ammonia Plant Primary Reformer, Heat Recovery Steam Generator (HRSG), Utility Boiler & NG/RLNG fired Gas Turbine and Prilling Tower are as per the CPCB guidelines. Low NOx burners have been installed in Primary reformer, HRSG & Utility Boiler to mitigate the NOx emission.
iii)	In Urea Plant, particulate emissions shall not exceed 50 mg/Nm <sup>3</sup> . Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.	Urea dust from the Prilling tower remains well below the prescribed limit as specified by CPCB (less than 50 mg/Nm <sup>3</sup> ).
iv)	As proposed, Fertilizer plant shall be designed for Specific Energy Consumption of 5.0 Gcal/MT of Urea.	Urea Plant has been designed with Specific Energy Consumption of < 5.0 GCal/MT of Urea.
v)	Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R No. 826(E) dated 16th September, 2009 . The levels of PM <sub>10</sub> (Urea Dust), SO <sub>2</sub> , NOx, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The Company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to Regional Office of MoEF, the respective Zonal office of CPCB and the Telangana State Pollution Control Board (TSPCB).	Continuous Ambient Air quality monitoring stations have been provided at three locations within the factory premises. Six Monthly Environmental Compliance report along with results of monitored data has been uploaded in the company website and same will be updated periodically. PM <sub>10</sub> , PM <sub>2.5</sub> , Ammonia, SO <sub>2</sub> , Ozone, HC & NOx readings are being displayed at Factory Main Gate, Material Entry Gate and Technical Building Entrance. It is also connected to the TGPCB website. Environmental reports are being submitted to Regional office, Ramagundam on monthly basis. Details of Ambient Air quality are enclosed. (Doc No.: RFCL-TS-EMC-Report-04)
vi)	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/ materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw material storage area etc shall be regularly monitored. The emissions should conform to the limits stipulated by the TSPCB.	Ammonia & Urea plants are Natural Gas based plants. For both feed & fuel, Natural gas is used. Urea dust collection and recovery systems ( De-dusting System) are inline to control dust emission during product handling. Work place monitoring is carried out at regular interval, which helps to maintain emission level within the prescribed limit. Gas sensors are provided at potential points to monitor and control the fugitive emissions.
vii)	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG set to mitigate the noise pollution.	Stack height of DG set is as per CPCB standards. Acoustic enclosure has been provided to the DG set to mitigate the noise pollution.
viii)	Fresh water requirement from Yellampalli Barrage should not exceed 30500M <sup>3</sup> /day. Prior permission shall be obtained from Competent Authority and a copy submitted to the Ministry's Regional office at Bangalore. Efforts shall be made to bring down the water consumption upto 6 m <sup>3</sup> /MT urea production or as per CPCB guideline.	Fresh water drawn is below 30500 m <sup>3</sup> /day from Yellampalli Barrage. Continuous efforts are being done for water conservation. Process Condensate & Turbine Condensate are reused in Process.

*(A)*

S.NO	DESCRIPTION	COMPLIANCE STATUS
ix)	<p>Industrial wastewater shall be treated in the ETP.</p> <p>As proposed, Urea plant process condensate shall be treated in a deep hydrolyser followed by stripping. Ammonia Plant process condensate(APC) shall be stripped with steam followed by activated carbon and demineralisation. Treated condensate shall be recycled/reused in the process.</p> <p>Utilities waste water shall be treated in the ETP and treated effluent shall be recycled/reused.</p> <p>Treated effluent shall be monitored for Ammonical Nitrogen, Nitrate, Fluoride, pH etc.</p> <p>No process effluent shall be discharged in and around the Project Site. Sewage shall be treated in STP.</p>	<ul style="list-style-type: none"> <li>Urea plant process condensate is treated in a deep hydrolyser followed by stripping.</li> <li>Ammonia Plant process condensate is stripped with steam followed by activated carbon. Total process condensate is converted into DM water and reused in the process.</li> <li>Utility waste water is treated in ETP and treated water collected in guard ponds (02 Nos).</li> <li>Online Monitoring system has been provided for the treated effluent parameters Ammoniacal Nitrogen, Flow &amp; pH and same has been connected to the CPCB &amp; TGPCB servers. Apart that BOD,COD &amp;TSS also connected to the TGPCB server as per the directions from Task force. Details of Treated Effluent water Quality are enclosed. (Doc No.: RFCL-TS-EMC-Report 02)</li> <li>Sewage generated inside the plant premises being treated in Plant STP.</li> <li>Sewage Treatment Plant (STP) with a capacity of 240 KLD * 2 nos for the township was commissioned in Feb'23 and treated water is being utilized for development of Green belt area. Details of STP outlet Quality are enclosed. (Doc No.: RFCL-TS-EMC-Report-06)</li> </ul>
x)	<p>The treated effluent (not more than 250 M<sup>3</sup>/Hr) shall be discharged in to the River Godavari after conforming to the standards prescribed for the effluent discharge and after obtaining permission from the State Pollution Control Board/CPCB.</p> <p>Treated effluent shall be passed through guard pond/holding pond before discharging outside the plant premises and Automatic/ online monitoring system (24 x 7 monitoring devices) for flow and relevant pollutants (i.e. pH, Ammonical Nitrogen, nitrate nitrogen etc) shall be provided with high level alarm system.</p> <p>The data to be made available to the respective SPCB and in the Company's website.</p>	<p>The treated effluent conforms to the specified standards before discharging to River Godavari. Consent For Operation received from TSPCB dated 07.06.2021 ( Consent Order No: 21053004209).</p> <p>Automatic/ online monitoring system (24 x 7) for flow and relevant pollutants (pH, Ammonical Nitrogen etc) has been provided with high level alarm system and same is connected to TGPCB &amp; CPCB server. Apart that BOD,COD &amp; TSS also connected to the TGPCB server as per the directions from Task force team.</p> <p>Treated effluent discharge to River Godavari always remains less than 250 m<sup>3</sup>/hr.</p>
xii)	<p>Regular monitoring of ground water by installing piezometric wells around the guard ponds and sludge disposal sites shall be periodically monitored and reports shall be submitted to the concerned Regional office of the Ministry, CPCB and SPCB.</p>	<p>Ground water quality is being monitored at eight different locations around the plant site &amp; near by villages. Analysis reports are being submitted to RO, Ramagundam on monthly basis.</p> <p>Details of Ground water quality are enclosed. (Doc No.: RFCL-TS-EMC-Report-03)</p>
xiii)	<p>The company shall construct the garland drain all around the project site to prevent runoff of any chemical containing waste in to the nearby waterbodies.</p> <p>Effluent shall be properly treated and treated effluent shall conform to CPCB standards.</p>	<p>Garland drains have been provided around project site. Storm water drains, effluent drains &amp; oily water collection pits are constructed separately to avoid mixing of effluent with storm water.</p>
xiv)	Spent Catalysts and used oil shall be sold to authorised recyclers/re-processors only.	Being Complied.
xv)	<p>The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules 1989 as amended time to time .</p> <p>All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA) 1989.</p>	<p>RFCL strictly complies with the rules and regulations regarding Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules 1989 as amended time to time and transportation of Spent catalyst/ Used oil as per the Motor Vehicle Act (MVA) 1989.</p>

S.NO	DESCRIPTION	COMPLIANCE STATUS
xvi)	Remote Operated valve placed on NH <sub>3</sub> line to avoid leakage/equipment check shall be performed to ensure that remote operated valve (ROV) is all time functional.	Remote Operated valves are placed on NH <sub>3</sub> line to avoid leakage. Performance of the remote operated valve (ROV) is checked periodically for its all time functionality.
xvii)	The company shall strictly follow all the recommendations mentioned in the Chapter on Corporate Responsibility for Environment Protection (CREP).	Being Complied.
xviii)	All the commitments made during the Public Hearing / Public Consultation meeting held on 11th March, 2015 shall be satisfactorily implemented and adequate budget provisions shall be made accordingly.	Being Complied, as applicable.
xix)	Sufficient funds shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial & physical breakup/ details shall be prepared & submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured in a time bound manner.	Noted and complied with.
xx)	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance system is in place and records are being maintained as per the Factory Act.
xxi)	As proposed, green belt over 46 Hectares area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the Project Area in downward direction and along roadsides etc. Selection of plant species shall be as per CPCB guidelines in consultation with the DFO.	Green Belt Development under progress in a phased manner.
xxii)	Provision shall be made for the housing of the Construction labour within the site with all necessary infrastructure & facilities. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	Complied during, Construction phase.

#### B. GENERAL CONDITIONS

(i)	The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), State Government and any other statutory authority	All the conditions stipulated in CFE & CFO issued by TGPCB as well as conditions imposed by state authorities are complied with.
(ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assesses the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted.
(iii)	The locations of ambient air quality monitoring stations shall be decided in consultation with the SPCB and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Three Continuous Ambient Air Quality Monitoring Stations (AAQMS) are installed one each in the upwind, downwind and crosswind directions at the following locations. 1. Technical Building 2. Material Gate 3. Fire Water Pump House All these monitoring stations are in operation. Real time data of Ambient air quality being transmitted to TGPCB website. As per the Task Force directions (SPCB), 3rd CAAQMS station has been installed in crosswind direction and same is connected online to the TGPCB server on 19.10.2024.

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S.NO	DESCRIPTION	COMPLIANCE STATUS
(iv)	The overall noise level in and around the plant area shall be kept within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise level shall conform to Environmental (Protection) Act , 1986 Rules 1989 viz. 75 dBA (day time) and 70 dBA (night time).	<p>The selection of plant equipment have been done with the specifications of low noise levels.</p> <p>Adequate measure are being followed to control noise levels in the work environment and keep the noise levels below the prescribed limit.</p> <p>Persons working near the noisy machines like Ammonia plant compressor area, Urea Plant compressor area, GT etc. have been provided with well designed ear muffs / plugs.</p> <p>Emergency DG sets are equipped with acoustic enclosure.</p> <p>The ambient noise levels are being monitored at different locations and strictly conforming to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.</p> <p>Details of Ambient Noise levels are enclosed.</p> <p>(Doc No.: RFCL-TS-EMC-Report-01)</p>
(v)	The company shall harvest rainwater from the roof-tops of buildings and stormwater drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	RFCL has adopted roof top rain water harvesting measures to harvest the run off water to recharge the ground water.
(vi)	During transfer of materials, Spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste water and storm water drains.	Garland drains have been constructed to avoid mixing of accidental spillages with domestic waste and storm drains.
(vii)	Usage of Personnel Protection Equipment by all employees/ workers shall be ensured	Necessary PPEs are made available for the plant personnel and being used.
(viii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Training being provided for employees on safety and health aspects of chemical handling on regular basis. Periodic medical check-up of the working staff is being carried out.
(ix)	The company shall also comply with all the environmental protection measures and safeguards proposed in the project report submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.	Being Complied, as applicable.
(x)	The company shall undertake CSR activities and all relevant measures for improving the socio-economic conditions of the surrounding area.	Noted.
(xi)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Being complied.
(xii)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be setup to carry out the Environmental Management and Monitoring functions.	Environmental Management Cell equipped with full fledged laboratory facilities to carry out the Environmental Management and Monitoring functions is in place and operational.
(xiii)	The company shall earmark sufficient funds for recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	<p>Noted and complied with.</p> <p>The funds earmarked for the environmental protection measures are not allowed to divert for other purpose.</p>



S.NO	DESCRIPTION	COMPLIANCE STATUS
(xiv)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/representations, if any, were received while processing the proposal.	Complied.
(xv)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the State Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	Being complied.
(xvi)	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-'V' as is mandated shall be submitted to the WB 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 Bhubaneshwar Regional Offices of MoEF by e-mail.	The environmental statement for the financial year ending 31 <sup>st</sup> March 2024 in Form-'V' was submitted on 27.08.2024.
(xvii)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that 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.	Complied.
xviii)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project	Commercial Operation of Urea has been started on 22.03.2021 & same as intimated to the Regional Office and the Ministry.
8.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
9.0	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.	Noted
10.0	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Air/ Water and HWA Consent order obtained on 07.06.2021 and valid for a period up to 31 <sup>st</sup> March 2026. Public Liability Insurance policy is renewed and valid till 09.02.2025.

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## Ambient Noise Monitoring Report

Doc No: RFCL-TS-EMC-Report-01

Month

: April'2024

Ambient Noise Monitored by

: Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		05.04.2024	13.04.2024	20.04.2024	27.04.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	56	58	50	60
2	Cooling Towers	73	71	68	73
3	Main Stores	45	47	47	46
4	UB/HRSG (near Boundary Wall)	69	67	65	70
5	Captive Power Plant (CPP)	70	70	69	71
6	Urea plant	69	68	67	68
7	Bagging building	63	63	58	58
8	IA/PA plant (Near wall side)	73	72	69	71
9	Near DG set	60	57	53	58
10	Raw water pump house	69	68	61	66

Note: 1. Noise level limits (as per CFO) : Day Time (6AM -10PM) - 75 dB (A)  
Night Time (10PM -6AM) - 70 dB (A)

2. Morning shift Time : 6AM - 2PM

3. Afternoon shift Time : 2PM - 10PM

4. Night shift Time : 10PM - 6AM

Month : May'2024

Ambient Noise Monitored by : Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		02.05.2024	09.05.2024	16.05.2024	27.05.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	55	59	56	55
2	Cooling Towers	72	71	69	71
3	Main Stores	48	50	47	48
4	UB/HRSG (near Boundary Wall)	68	71	69	70
5	Captive Power Plant (CPP)	72	72	68	72
6	Urea plant	69	69	69	68
7	Bagging building	58	56	57	56
8	IA/PA plant (Near wall side)	72	72	69	72
9	Near DG set	60	58	57	56
10	Raw water pump house	69	68	66	67

Month : June'2024

Ambient Noise Monitored by : Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		07.06.2024	13.06.2024	19.06.2024	25.06.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	55	56	55	53
2	Cooling Towers	72	73	69	72
3	Main Stores	48	50	48	49
4	UB/HRSG (near Boundary Wall)	64	62	63	63
5	Captive Power Plant (CPP)	72	73	69	72
6	Urea plant	69	68	69	67
7	Bagging building	57	54	56	54
8	IA/PA plant (Near wall side)	70	67	69	69
9	Near DG set	58	56	57	55
10	Raw water pump house	69	65	68	65

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## Ambient Noise Monitoring Report

Doc No: RFCL-TS-EMC-Report-01

Month

Ambient Noise Monitored by

: July'2024

: Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		04.07.2024	12.07.2024	22.07.2024	31.07.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	57	56	55	56
2	Cooling Towers	72	74	67	72
3	Main Stores	50	51	49	49
4	UB/HRSG (near Boundary Wall)	73	71	68	69
5	Captive Power Plant (CPP)	72	73	69	72
6	Urea plant	69	72	68	69
7	Bagging building	62	63	60	60
8	IA/PA plant (Near wall side)	70	72	68	71
9	Near DG set	60	59	58	60
10	Raw water pump house	65	68	67	67

Month

Ambient Noise Monitored by

: August'2024

: Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		03.08.2024	13.08.2024	22.08.2024	31.08.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	56	55	56	55
2	Cooling Towers	73	74	69	71
3	Main Stores	47	48	47	48
4	UB/HRSG (near Boundary Wall)	71	72	68	71
5	Captive Power Plant (CPP)	72	73	69	71
6	Urea plant	72	73	69	71
7	Bagging building	63	63	62	64
8	IA/PA plant (Near wall side)	70	72	68	71
9	Near DG set	59	58	58	59
10	Raw water pump house	65	64	65	66

Month

Ambient Noise Monitored by

: September'2024

: Environmental Monitoring Cell (EMC)

S. No	Location	Noise level- dB (A)			
		06.09.2024	13.09.2024	18.09.2024	26.09.2024
		Morning shift	Afternoon shift	Night shift	Morning shift
1	Technical building	56	57	56	57
2	Cooling Towers	73	72	68	72
3	Main Stores	47	49	48	49
4	UB/HRSG (near Boundary Wall)	72	70	68	70
5	Captive Power Plant (CPP)	73	72	69	74
6	Urea plant	73	72	69	70
7	Bagging building	63	61	63	60
8	IA/PA plant (Near wall side)	70	73	68	67
9	Near DG set	59	60	57	60
10	Raw water pump house	65	70	67	65

AO



## Treated Effluent Water Quality Monitoring Results

**Month**

: April'2024

**Nature of Sampling**

: Treated Effluent Water

**Sample collected and tested by**

: In- House Laboratory

**Date of Sample Collection**

: 01.04.2024

Doc No: RFCL-TS-EMC-Report-02

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.35	8.03	7.30	7.88	8.20
2	Ammonical Nitrogen	mg/l as N	< 50	9.52	1.58	12.01	19.06	0.18
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.09	0.10	0.12	0.85	0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	30.30	8.85	44.30	36.80	26.00
5	Nitrate nitrogen	mg/l as N	< 10	0.23	1.14	0.20	0.25	2.10
6	Phosphate	mg/l as P	< 5	0.47	0.19	0.47	1.52	0.15
7	Suspended Solids	mg/l	< 100	19.00	26.00	18.00	23.00	7.00
8	BOD	mg/l	< 30	13.00	7.00	12.60	14.50	0.70
9	COD	mg/l	< 250	56.00	63.00	59.00	67.00	8.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection**

: 08.04.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.76	7.97	7.72	7.75	6.87
2	Ammonical Nitrogen	mg/l as N	< 50	13.33	2.00	14.61	44.80	2.92
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.39	0.09	0.43	1.46	-
4	Total kjeldahl Nitrogen	mg/l as N	< 75	32.00	11.40	31.00	59.70	58.00
5	Nitrate nitrogen	mg/l as N	< 10	0.48	0.42	0.29	0.10	0.42
6	Phosphate	mg/l as P	< 5	0.12	0.22	0.10	1.50	0.12
7	Suspended Solids	mg/l	< 100	24.00	18.00	20.00	12.00	8.00
8	BOD	mg/l	< 30	16.40	18.40	17.00	12.50	1.60
9	COD	mg/l	< 250	61.00	77.00	69.00	39.00	20.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

Month : April'2024  
Nature of Sampling : Treated Effluent Water  
Sample collected and tested by : In-House Laboratory

Date of Sample Collection : 15.04.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.61	7.67	7.64	8.03	6.61
2	Ammonical Nitrogen	mg/l as N	< 50	29.10	14.90	35.40	17.60	5.88
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.73	0.45	0.89	1.06	-
4	Total kjeldahl Nitrogen	mg/l as N	< 75	36.90	28.40	45.50	34.10	14.20
5	Nitrate nitrogen	mg/l as N	< 10	1.70	0.86	1.55	0.63	0.92
6	Phosphate	mg/l as P	< 5	0.20	0.16	0.13	1.53	0.71
7	Suspended Solids	mg/l	< 100	25.00	20.00	20.00	21.00	26.00
8	BOD	mg/l	< 30	5.10	5.60	2.60	10.80	0.70
9	COD	mg/l	< 250	26.00	38.00	19.00	35.00	10.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

Date of Sample Collection : 22.04.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.45	8.14	8.02	7.85	8.17
2	Ammonical Nitrogen	mg/l as N	< 50	2.72	7.89	3.08	40.14	0.46
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.36	0.57	0.15	1.61	0.03
4	Total kjeldahl Nitrogen	mg/l as N	< 75	8.50	14.20	11.40	54.00	5.70
5	Nitrate nitrogen	mg/l as N	< 10	0.63	0.18	0.62	0.62	0.37
6	Phosphate	mg/l as P	< 5	0.60	0.37	0.77	1.08	0.62
7	Suspended Solids	mg/l	< 100	25.00	28.00	32.00	27.00	17.00
8	BOD	mg/l	< 30	6.40	9.60	8.40	14.50	0.80
9	COD	mg/l	< 250	29.00	45.00	35.00	58.00	10.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

Month

: April'2024

Nature of Sampling

: Treated Effluent Water

Sample collected and tested by

: In- House Laboratory

Date of Sample Collection

: 29.04.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2.	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.17	8.08	7.67	7.84	8.29
2	Ammonical Nitrogen	mg/l as N	< 50	11.69	12.55	11.83	28.69	0.27
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.94	0.82	0.35	1.15	0.03
4	Total kjeldahl Nitrogen	mg/l as N	< 75	19.90	22.80	19.90	42.70	5.70
5	Nitrate nitrogen	mg/l as N	< 10	0.64	0.44	0.61	0.41	1.00
6	Phosphate	mg/l as P	< 5	0.16	0.24	0.21	3.51	0.13
7	Suspended Solids	mg/l	< 100	30.00	34.00	32.00	10.00	20.00
8	BOD	mg/l	< 30	8.40	7.60	7.10	13.60	1.60
9	COD	mg/l	< 250	32.00	29.00	22.00	58.00	19.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND



## Treated Effluent Water Quality Monitoring Results

**Month**

: May'2024

Doc No: RFCL-TS-EMC-Report-02

**Nature of Sampling**

: Treated Effluent Water

**Sample collected and tested by**

: In-House Laboratory

**Date of Sample Collection**

: 07.05.2024

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.26	8.22	8.06	8.15	8.12
2	Ammonical Nitrogen	mg/l as N	< 50	8.17	16.70	10.69	22.08	0.07
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.74	1.42	0.64	1.60	<0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	22.80	28.40	22.80	34.10	5.70
5	Nitrate nitrogen	mg/l as N	< 10	1.21	1.30	1.28	0.43	1.05
6	Phosphate	mg/l as P	< 5	0.30	0.19	0.32	1.25	0.18
7	Suspended Solids	mg/l	< 100	26.00	42.00	33.00	25.00	16.00
8	BOD	mg/l	< 30	4.60	6.60	5.70	18.80	2.30
9	COD	mg/l	< 250	45.00	54.00	42.00	76.00	18.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection**

: 14.05.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.02	8.06	7.98	8.31	8.34
2	Ammonical Nitrogen	mg/l as N	< 50	29.50	23.70	29.68	16.34	0.07
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.62	1.42	1.48	1.63	<0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	39.80	34.10	37.00	31.30	11.40
5	Nitrate nitrogen	mg/l as N	< 10	0.45	1.08	0.69	0.72	1.14
6	Phosphate	mg/l as P	< 5	0.34	0.27	0.34	1.35	0.19
7	Suspended Solids	mg/l	< 100	40.00	28.00	28.00	31.00	16.00
8	BOD	mg/l	< 30	4.40	7.00	6.70	6.00	1.50
9	COD	mg/l	< 250	46.00	51.00	55.00	36.00	12.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : May'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 22.05.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.26	6.91	6.70	8.07	6.70
2	Ammonical Nitrogen	mg/l as N	< 50	18.78	19.36	22.51	23.08	22.51
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.69	-	-	1.50	-
4	Total kjeldahl Nitrogen	mg/l as N	< 75	34.10	37.00	39.80	34.10	39.80
5	Nitrate nitrogen	mg/l as N	< 10	0.23	1.79	1.32	1.30	1.32
6	Phosphate	mg/l as P	< 5	0.13	0.12	0.08	1.56	0.08
7	Suspended Solids	mg/l	< 100	32.00	21.00	27.00	26.00	27.00
8	BOD	mg/l	< 30	16.60	2.90	3.30	4.50	3.30
9	COD	mg/l	< 250	69.00	20.00	20.00	43.00	20.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 29.05.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.05	7.40	7.16	7.09	7.72
2	Ammonical Nitrogen	mg/l as N	< 50	29.11	16.92	22.94	15.05	1.40
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.75	0.25	0.23	<0.01	0.04
4	Total kjeldahl Nitrogen	mg/l as N	< 75	45.50	34.10	39.80	28.40	8.53
5	Nitrate nitrogen	mg/l as N	< 10	0.25	1.66	1.55	0.51	2.02
6	Phosphate	mg/l as P	< 5	0.17	0.15	0.13	1.49	0.14
7	Suspended Solids	mg/l	< 100	14.00	10.00	24.00	46.00	15.00
8	BOD	mg/l	< 30	24.00	8.50	8.50	15.60	2.50
9	COD	mg/l	< 250	84.00	45.00	46.00	78.00	10.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND



## Treated Effluent Water Quality Monitoring Results

Month : June'2024  
 Nature of Sampling : Treated Effluent Water  
 Sample collected and tested by : In- House Laboratory  
 Date of Sample Collection : 03.06.2024

Doc No: RFCL-TS-EMC-Report-02

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.95	8.00	7.90	Low Level	8.12
2	Ammonical Nitrogen	mg/l as N	< 50	31.24	35.84	31.68		0.07
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.47	1.79	1.42		<0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	46.70	49.40	46.70		5.70
5	Nitrate nitrogen	mg/l as N	< 10	0.10	1.60	1.70		1.10
6	Phosphate	mg/l as P	< 5	0.33	0.52	0.44		0.18
7	Suspended Solids	mg/l	< 100	26.00	21.00	20.00		16.00
8	BOD	mg/l	< 30	10.20	4.00	5.60		2.30
9	COD	mg/l	< 250	58.00	30.00	31.00		18.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10		<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND		ND

Date of Sample Collection : 10.06.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.82	7.89	8.08	Low Level	8.34
2	Ammonical Nitrogen	mg/l as N	< 50	17.49	23.94	18.93		0.07
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.61	1.08	1.23		<0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	19.90	36.90	31.30		11.40
5	Nitrate nitrogen	mg/l as N	< 10	2.80	1.40	3.00		1.10
6	Phosphate	mg/l as P	< 5	0.63	0.44	0.66		0.19
7	Suspended Solids	mg/l	< 100	38.00	20.00	28.00		16.00
8	BOD	mg/l	< 30	8.70	9.20	7.70		1.50
9	COD	mg/l	< 250	53.00	53.00	51.00		12.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10		<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND		ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : June'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 17.06.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.13	8.21	8.17	Low Level	8.04
2	Ammonical Nitrogen	mg/l as N	< 50	20.21	18.78	24.52		0.06
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.47	1.50	1.96		<0.01
4	Total kjeldahl Nitrogen	mg/l as N	< 75	28.40	34.10	31.30		5.70
5	Nitrate nitrogen	mg/l as N	< 10	1.70	1.60	1.20		1.40
6	Phosphate	mg/l as P	< 5	0.37	0.36	0.35		0.08
7	Suspended Solids	mg/l	< 100	22.00	22.00	28.00		27.00
8	BOD	mg/l	< 30	11.80	10.70	10.10		2.80
9	COD	mg/l	< 250	46.00	44.00	39.00		16.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10		<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND		ND

**Date of Sample Collection** : 24.06.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.21	8.36	8.22	7.86	7.72
2	Ammonical Nitrogen	mg/l as N	< 50	16.48	15.62	18.34	25.24	1.40
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.32	1.76	1.65	1.00	0.04
4	Total kjeldahl Nitrogen	mg/l as N	< 75	22.00	32.90	22.00	46.00	8.50
5	Nitrate nitrogen	mg/l as N	< 10	1.40	1.20	1.40	4.90	2.00
6	Phosphate	mg/l as P	< 5	0.32	0.49	0.54	1.26	0.14
7	Suspended Solids	mg/l	< 100	30.00	34.00	20.00	48.00	15.00
8	BOD	mg/l	< 30	6.00	15.40	5.80	24.00	2.50
9	COD	mg/l	< 250	28.00	69.00	28.00	87.00	10.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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# Treated Effluent Water Quality Monitoring Results

**Month** : July'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In-House Laboratory  
**Date of Sample Collection** : 01.07.2024

Doc No: RFCL-TS-EMC-Report-02

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.18	8.29	7.34	7.95	8.14
2	Ammonical Nitrogen	mg/l as N	< 50	20.07	8.17	22.79	35.75	10.32
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.20	0.82	0.23	1.68	0.75
4	Total kjeldahl Nitrogen	mg/l as N	< 75	32.90	16.40	32.90	49.40	13.70
5	Nitrate nitrogen	mg/l as N	< 10	0.10	0.70	0.10	2.76	0.82
6	Phosphate	mg/l as P	< 5	0.32	0.20	0.38	1.44	0.23
7	Suspended Solids	mg/l	< 100	14.00	38.00	32.00	86.00	21.00
8	BOD	mg/l	< 30	10.10	19.00	9.70	23.50	2.70
9	COD	mg/l	< 250	31.00	67.00	32.00	105.00	16.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 08.07.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.34	8.12	7.07	8.10	8.09
2	Ammonical Nitrogen	mg/l as N	< 50	9.46	9.46	10.32	22.70	1.39
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.09	0.64	<0.01	1.48	0.09
4	Total kjeldahl Nitrogen	mg/l as N	< 75	19.60	30.90	19.60	42.40	14.10
5	Nitrate nitrogen	mg/l as N	< 10	0.20	0.17	0.23	5.24	5.78
6	Phosphate	mg/l as P	< 5	0.38	0.22	0.36	0.80	0.50
7	Suspended Solids	mg/l	< 100	45.00	38.00	48.00	62.00	31.00
8	BOD	mg/l	< 30	7.80	15.00	12.00	19.00	5.40
9	COD	mg/l	< 250	50.00	61.00	44.00	75.00	33.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : July'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 15.07.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.63	7.91	7.54	8.04	8.10
2	Ammonical Nitrogen	mg/l as N	< 50	10.54	20.43	13.48	23.12	2.58
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.26	0.92	0.27	1.39	0.17
4	Total kjeldahl Nitrogen	mg/l as N	< 75	21.20	35.00	28.00	42.00	14.00
5	Nitrate nitrogen	mg/l as N	< 10	1.20	0.10	0.65	3.94	4.53
6	Phosphate	mg/l as P	< 5	0.30	0.36	0.29	1.27	0.20
7	Suspended Solids	mg/l	< 100	30.00	35.00	38.00	40.00	32.00
8	BOD	mg/l	< 30	8.20	13.60	9.20	16.50	3.60
9	COD	mg/l	< 250	37.00	52.00	38.00	72.00	17.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 22.07.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.67	7.78	7.07	7.81	8.13
2	Ammonical Nitrogen	mg/l as N	< 50	36.70	14.91	32.97	36.70	5.84
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.10	0.52	0.01	1.28	0.35
4	Total kjeldahl Nitrogen	mg/l as N	< 75	56.00	56.50	56.00	63.00	14.00
5	Nitrate nitrogen	mg/l as N	< 10	0.36	0.15	0.22	4.97	3.15
6	Phosphate	mg/l as P	< 5	0.40	0.53	0.41	2.66	0.24
7	Suspended Solids	mg/l	< 100	24.00	12.00	12.00	64.00	22.00
8	BOD	mg/l	< 30	7.40	7.40	7.40	21.40	4.50
9	COD	mg/l	< 250	37.00	28.00	28.00	102.00	29.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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# Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

Month : July'2024  
Nature of Sampling : Treated Effluent Water  
Sample collected and tested by : In- House Laboratory

Date of Sample Collection : 30.07.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.06	7.77	7.92	7.87	7.83
2	Ammonical Nitrogen	mg/l as N	< 50	27.38	31.25	28.38	16.12	2.63
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.64	1.09	1.30	0.69	0.11
4	Total kjeldahl Nitrogen	mg/l as N	< 75	35.00	42.00	42.00	56.00	7.00
5	Nitrate nitrogen	mg/l as N	< 10	0.34	0.24	0.23	6.00	3.67
6	Phosphate	mg/l as P	< 5	0.11	0.19	0.15	0.93	0.17
7	Suspended Solids	mg/l	< 100	36.00	20.00	8.00	99.00	25.00
8	BOD	mg/l	< 30	5.50	7.80	8.00	14.50	3.50
9	COD	mg/l	< 250	21.00	30.00	35.00	51.00	16.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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# Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : August'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In-House Laboratory  
**Date of Sample Collection** : 05.08.2024

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.12	8.30	8.08	7.65	8.20
2	Ammonical Nitrogen	mg/l as N	< 50	27.81	18.20	28.38	35.55	2.86
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.81	1.82	1.84	0.98	0.23
4	Total kjeldahl Nitrogen	mg/l as N	< 75	39.20	30.80	44.80	53.20	8.40
5	Nitrate nitrogen	mg/l as N	< 10	0.16	0.25	0.22	2.54	1.04
6	Phosphate	mg/l as P	< 5	0.41	0.39	0.46	1.25	0.37
7	Suspended Solids	mg/l	< 100	35.00	30.00	16.00	66.00	38.00
8	BOD	mg/l	< 30	11.60	10.20	12.50	15.50	8.40
9	COD	mg/l	< 250	58.00	56.00	60.00	66.00	38.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 13.08.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.06	7.16	7.20	8.09	7.75
2	Ammonical Nitrogen	mg/l as N	< 50	27.24	34.69	27.67	16.29	1.90
3	Free Ammonical Nitrogen	mg/l as N	< 2	-	0.34	0.27	1.06	0.06
4	Total kjeldahl Nitrogen	mg/l as N	< 75	36.40	53.20	36.40	33.60	14.00
5	Nitrate nitrogen	mg/l as N	< 10	0.10	0.91	0.84	4.56	3.36
6	Phosphate	mg/l as P	< 5	0.48	0.32	0.32	0.94	0.09
7	Suspended Solids	mg/l	< 100	44.00	40.00	35.00	56.00	34.00
8	BOD	mg/l	< 30	12.80	12.90	9.70	8.50	8.20
9	COD	mg/l	< 250	68.00	69.00	68.00	40.00	34.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : August'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 19.08.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.09	6.83	6.96	7.95	7.78
2	Ammonical Nitrogen	mg/l as N	< 50	17.78	20.79	20.43	27.72	1.18
3	Free Ammonical Nitrogen	mg/l as N	< 2	-	-	-	1.30	0.04
4	Total kjeldahl Nitrogen	mg/l as N	< 75	33.60	36.40	36.40	47.60	8.40
5	Nitrate nitrogen	mg/l as N	< 10	0.11	0.58	0.61	3.56	1.05
6	Phosphate	mg/l as P	< 5	0.33	0.35	0.34	1.16	0.10
7	Suspended Solids	mg/l	< 100	52.00	50.00	28.00	50.00	16.00
8	BOD	mg/l	< 30	7.40	6.40	10.50	8.20	9.40
9	COD	mg/l	< 250	37.00	30.00	52.00	39.00	42.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 27.08.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.29	7.24	7.28	7.84	7.69
2	Ammonical Nitrogen	mg/l as N	< 50	32.11	23.94	25.95	24.23	2.98
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.32	0.24	0.26	0.97	0.18
4	Total kjeldahl Nitrogen	mg/l as N	< 75	47.60	36.40	36.40	39.20	11.20
5	Nitrate nitrogen	mg/l as N	< 10	0.12	0.93	0.91	3.48	3.18
6	Phosphate	mg/l as P	< 5	0.37	0.28	0.19	0.85	0.29
7	Suspended Solids	mg/l	< 100	30.00	56.00	27.00	35.00	16.00
8	BOD	mg/l	< 30	9.20	3.60	7.50	7.80	3.40
9	COD	mg/l	< 250	43.00	21.00	35.00	36.00	19.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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# Treated Effluent Water Quality Monitoring Results

**Month**

: September'2024

Doc No: RFCL-TS-EMC-Report-02

**Nature of Sampling**

: Treated Effluent Water

**Sample collected and tested by**

: In- House Laboratory

**Date of Sample Collection**

: 02.09.2024

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.54	7.12	7.11	7.95	8.23
2	Ammonical Nitrogen	mg/l as N	< 50	27.81	33.83	35.12	33.20	5.59
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.63	0.02	0.02	1.56	0.50
4	Total kjeldahl Nitrogen	mg/l as N	< 75	37.50	46.40	45.30	46.40	13.30
5	Nitrate nitrogen	mg/l as N	< 10	0.15	0.25	0.18	3.03	1.18
6	Phosphate	mg/l as P	< 5	0.11	0.10	0.12	0.10	0.04
7	Suspended Solids	mg/l	< 100	26.00	16.00	30.00	33.00	12.00
8	BOD	mg/l	< 30	5.20	8.50	8.10	15.50	2.60
9	COD	mg/l	< 250	24.00	41.00	36.00	66.00	14.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 10.09.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.64	7.28	8.04	8.11	8.41
2	Ammonical Nitrogen	mg/l as N	< 50	31.54	29.96	31.39	26.82	5.39
3	Free Ammonical Nitrogen	mg/l as N	< 2	0.87	0.30	1.88	1.74	0.67
4	Total kjeldahl Nitrogen	mg/l as N	< 75	42.70	41.60	42.70	46.00	9.90
5	Nitrate nitrogen	mg/l as N	< 10	0.19	0.25	0.33	3.25	1.42
6	Phosphate	mg/l as P	< 5	0.26	0.18	0.24	1.76	2.80
7	Suspended Solids	mg/l	< 100	20.00	16.00	27.00	30.00	21.00
8	BOD	mg/l	< 30	8.10	14.80	10.00	15.80	1.60
9	COD	mg/l	< 250	36.00	75.00	60.00	90.00	12.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : September'2024

**Nature of Sampling** : Treated Effluent Water

**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 16.09.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.05	8.10	8.06	8.01	7.69
2	Ammonical Nitrogen	mg/l as N	< 50	27.24	29.24	27.95	30.00	4.01
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.63	1.90	1.68	1.50	0.12
4	Total kjeldahl Nitrogen	mg/l as N	< 75	36.10	38.30	36.10	44.90	8.75
5	Nitrate nitrogen	mg/l as N	< 10	0.30	0.18	0.19	1.62	0.93
6	Phosphate	mg/l as P	< 5	0.30	0.15	0.18	2.48	0.05
7	Suspended Solids	mg/l	< 100	23.00	17.00	18.00	28.00	10.00
8	BOD	mg/l	< 30	5.80	7.50	6.50	8.50	8.40
9	COD	mg/l	< 250	26.00	36.00	30.00	40.00	45.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

**Date of Sample Collection** : 23.09.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	8.09	8.02	7.78	8.00	7.94
2	Ammonical Nitrogen	mg/l as N	< 50	17.78	23.94	28.10	32.33	4.96
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.16	1.19	1.00	1.62	0.23
4	Total kjeldahl Nitrogen	mg/l as N	< 75	28.50	33.90	36.11	48.20	12.03
5	Nitrate nitrogen	mg/l as N	< 10	0.10	0.10	0.24	2.54	1.27
6	Phosphate	mg/l as P	< 5	0.36	0.31	0.20	0.96	0.10
7	Suspended Solids	mg/l	< 100	18.00	18.00	16.00	16.00	14.00
8	BOD	mg/l	< 30	10.60	5.20	6.20	8.20	3.80
9	COD	mg/l	< 250	39.00	23.00	34.00	39.00	18.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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# Treated Effluent Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-02

**Month** : September'2024  
**Nature of Sampling** : Treated Effluent Water  
**Sample collected and tested by** : In- House Laboratory

**Date of Sample Collection** : 30.09.2024

S.No	Parameters	Unit	Limiting Standards	Guard Pond 1	Guard Pond 2	Treated Effluent Pump Discharge	Strom water Pit	Material Gate Trench
1	pH.		6.5-8.5	7.94	8.17	8.19	7.84	7.03
2	Ammonical Nitrogen	mg/l as N	< 50	32.11	13.26	12.90	33.00	4.73
3	Free Ammonical Nitrogen	mg/l as N	< 2	1.51	1.06	1.03	1.32	-
4	Total kjeldahl Nitrogen	mg/l as N	< 75	47.10	24.10	24.10	46.00	10.90
5	Nitrate nitrogen	mg/l as N	< 10	0.22	0.19	0.24	2.20	1.62
6	Phosphate	mg/l as P	< 5	0.29	0.16	0.15	0.85	0.10
7	Suspended Solids	mg/l	< 100	28.00	18.00	15.00	35.00	17.00
8	BOD	mg/l	< 30	7.50	6.10	7.40	7.80	6.00
9	COD	mg/l	< 250	31.00	26.00	22.00	36.00	25.00
10	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
11	Vanadium	mg/l as V	< 0.2	ND	ND	ND	ND	ND

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## Ground Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-03

Month : April'2024  
Nature of Sampling : Ground Water  
Sample collected and tested by : In-House Laboratory  
Date of Sample Collection : 01.04.2024

### TEST RESULTS

S.No	Parameters	Limiting Standards	Factory Premises					Nearby Villages		
			Central Workshop	Near Guard Pond	Technical Building	Guest House	Inside Township	Veerlapalli	Gouthami Nagar	Elkalapalli
1	Temperature	30 degC	29.50	28.50	28.50	29.50	29.00	28.50	29.00	28.50
2	pH	6.5-8.5	7.07	7.40	8.12	7.45	6.85	7.24	7.62	6.95
3	Conductivity	< 2600 uS/cm	1606.00	1582.00	500.00	1055.00	765.00	1680.00	985.00	1425.00
4	BOD	< 2.0 mg/L	1.10	1.40	0.80	0.75	1.20	1.40	1.40	1.20
5	Nitrate as N	< 45 mg/L	0.33	0.19	0.24	1.57	0.35	31.30	2.66	10.42
6	Chloride	<250 mg/L	89.30	87.40	47.60	47.60	68.00	127.20	66.00	139.90
7	Dissolved Oxygen	>6 mg/L	6.10	6.10	6.40	6.50	6.25	6.05	6.30	6.10
8	Ammonia as N	<0.5 mg/L	<0.1	0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Total coliform (MNP/100ml)	<50	NT	NT	NT	NT	NT	NT	NT	NT

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## **Ground Water Quality Monitoring Results**

Doc No: RFCL-TS-EMC-Report-03

**Month** : May'2024  
**Nature of Sampling** : Ground Water  
**Sample collected and tested by** : In-House Laboratory  
**Date of Sample Collection** : 06.05.2024

## TEST RESULTS



## Ground Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-03

**Month** : June'2024  
**Nature of Sampling** : Ground Water  
**Sample collected and tested by** : In- House Laboratory  
**Date of Sample Collection** : 03.06.2024

### TEST RESULTS

S.No	Parameters	Limiting Standards	Factory Premises					Nearby Villages		
			Central Workshop	Near Guard Pond	Technical Building	Guest House	Inside Township	Veerlapalli	Gouthami Nagar	Elkalapalli
1	Temperature	30 degC	26.00	26.00	26.00	26.50	28.00	28.50	28.00	28.50
2	pH	6.5-8.5	7.17	7.72	8.32	7.35	7.05	7.16	7.60	7.16
3	Conductivity	< 2600 uS/cm	1600.00	1520.00	565.00	965.00	685.00	1694.00	898.00	1447.00
4	BOD	< 2.0 mg/L	<2	<2	<2	<2	<2	<2	<2	<2
5	Nitrate as N	< 45 mg/L	0.47	0.82	0.32	0.26	1.10	35.60	0.72	7.67
6	Chloride	<250 mg/L	79.50	92.10	57.20	48.20	54.20	146.00	65.40	138.60
7	Dissolved Oxygen	>6 mg/L	6.15	6.10	6.45	6.20	6.25	6.20	6.15	6.15
8	Ammonia as N	<0.5 mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9	Total coliform (MNP/100ml)	< 50	NT	NT	NT	NT	NT	NT	NT	NT

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## Ground Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-03

Month : July'2024  
Nature of Sampling : Ground Water  
Sample collected and tested by : In- House Laboratory  
Date of Sample Collection : 01.07.2024

### TEST RESULTS

S.No	Parameters	Limiting Standards	Factory Premises					Nearby Villages		
			Central Workshop	Near Guard Pond	Technical Building	Guest House	Inside Township	Veerlapalli	Gouthami Nagar	Elkalapalli
1	Temperature	30 degC	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
2	pH	6.5-8.5	7.14	7.56	8.10	8.09	7.10	7.17	7.47	6.88
3	Conductivity	< 2600 uS/cm	1545.00	1625.00	580.00	537.00	720.00	1635.00	871.00	1564.00
4	BOD	< 2.0 mg/L	<2	<2	<2	<2	<2	<2	<2	<2
5	Nitrate as N	< 45 mg/L	0.52	0.94	0.28	0.34	0.86	27.82	0.85	7.57
6	Chloride	<250 mg/L	84.60	94.80	51.40	51.40	64.50	179.40	71.70	190.00
7	Dissolved Oxygen	>6 mg/L	6.05	6.10	6.25	6.20	6.20	6.10	6.20	6.10
8	Ammonia as N	<0.5 mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9	Total coliform (MNP/100ml)	< 50	NT	NT	NT	NT	NT	NT	NT	NT

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## Ground Water Quality Monitoring Results

**Month** : August'24  
**Nature of Sampling** : Ground Water  
**Sample collected and tested by** : In- House Laboratory  
**Date of Sample Collection** : 05.08.2024

Doc No: RFCL-TS-EMC-Report-03

### TEST RESULTS

S.No	Parameters	Limiting Standards	Factory Premises					Nearby Villages		
			Central Workshop	Near Guard Pond	Technical Building	Guest House	Inside Township	Veerlapalli	Gouthami Nagar	Elkalapalli
1	Temperature	30 degC	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
2	pH	6.5-8.5	7.02	7.38	7.92	8.29	6.85	7.20	7.25	6.88
3	Conductivity	< 2600 uS/cm	1486.00	1620.00	620.00	507.00	615.00	1492.00	1242.00	1425.00
4	BOD	< 2.0 mg/L	<2	<2	<2	<2	<2	<2	<2	<2
5	Nitrate as N	< 45 mg/L	0.64	1.20	0.34	0.53	0.82	24.64	8.53	13.06
6	Chloride	<250 mg/L	92.40	104.50	54.50	48.10	48.10	104.50	131.50	126.20
7	Dissolved Oxygen	>6 mg/L	6.10	6.20	6.20	6.50	6.10	6.05	6.10	6.00
8	Ammonia as N	<0.5 mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9	Total coliform (MNP/100ml)	< 50	NT	NT	NT	NT	NT	NT	NT	NT

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## Ground Water Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-03

**Month** : September'2024  
**Nature of Sampling** : Ground Water  
**Sample collected and tested by** : In- House Laboratory  
**Date of Sample Collection** : 03.09.2024

### TEST RESULTS

S.No	Parameters	Limiting Standards	Factory Premises					Nearby Villages		
			Central Workshop	Near Guard Pond	Technical Building	Guest House	Inside Township	Veerlapalli	Gouthami Nagar	Elkalapalli
1	Temperature	30 degC	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
2	pH	6.5-8.5	7.11	7.21	7.75	8.07	6.80	7.29	7.28	6.97
3	Conductivity	< 2600 uS/cm	1420.00	1705.00	680.00	530.00	595.00	1418.00	1343.00	1363.00
4	BOD	< 2.0 mg/L	<2	<2	<2	<2	<2	<2	<2	<2
5	Nitrate as N	< 45 mg/L	0.72	1.36	0.36	0.28	0.82	20.10	9.15	12.67
6	Chloride	<250 mg/L	98.50	94.20	52.40	48.10	48.10	94.20	140.30	131.50
7	Dissolved Oxygen	>6 mg/L	6.10	6.15	6.15	6.05	6.20	6.10	6.05	6.05
8	Ammonia as N	<0.5 mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9	Total coliform (MNP/100ml)	<50	NT	NT	NT	NT	NT	NT	NT	NT

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## Ambient Air Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-04

**Month** : April'2024

**Nature of Sampling** : Ambient Air

**Sample collected and tested by** : In- House Laboratory

### TEST RESULTS

**Location** : Technical Building Station-1

S.No	Parameters	Unit	Permissible limits (NAAQS)	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	85.00	102.00	144.00	155.00	194.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	49.00	46.00	23.00	35.00	51.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.90	1.30	0.60	0.60	0.70
4	NOx	$\mu\text{g}/\text{m}^3$	80	4.20	11.80	4.40	6.50	6.10
5	NH3	$\mu\text{g}/\text{m}^3$	400	58.00	22.00	17.00	33.00	1.00

**Location** : Bagging Section Station-2

S.No.	Parameters	Unit	Permissible limits (NAAQS)	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	71.00	84.00	107.00	158.00	142.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	24.00	37.00	44.00	36.00	46.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.30	0.50	3.00	1.70	1.20
4	NOx	$\mu\text{g}/\text{m}^3$	80	7.80	14.20	6.70	8.00	7.40
5	NH3	$\mu\text{g}/\text{m}^3$	400	90.00	71.00	23.00	31.00	54.00

**Location** : VIP Guest House Station-3

S.No.	Parameters	Unit	Permissible limits (NAAQS)	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	74.00	68.00	62.00	81.00	78.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	35.00	37.00	23.00	46.00	32.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.10	1.60	1.20	0.60	1.50
4	NOx	$\mu\text{g}/\text{m}^3$	80	3.50	6.40	4.50	5.10	4.80
5	NH3	$\mu\text{g}/\text{m}^3$	400	35.00	12.00	3.00	25.00	4.00

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## Ambient Air Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-04

**Month** : May'2024

**Nature of Sampling** : Ambient Air

**Sample collected and tested by** : In-House Laboratory

### TEST RESULTS

**Location** : Technical Building Station-1

S.No	Parameters	Unit	Permissible limits (NAAQS)	06.05.2024	13.05.2024	20.05.2024	27.05.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	166.00	154.00	112.00	176.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	37.00	29.00	31.00	24.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.10	4.20	1.40	1.20
4	NOx	$\mu\text{g}/\text{m}^3$	80	5.30	3.70	8.60	8.00
5	NH3	$\mu\text{g}/\text{m}^3$	400	17.00	38.00	62.00	88.00

**Location** : Bagging Section Station-2

S.No.	Parameters	Unit	Permissible limits (NAAQS)	06.05.2024	13.05.2024	20.05.2024	27.05.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	164.00	116.00	157.00	114.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	45.00	24.00	30.00	28.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.80	6.10	4.00	0.60
4	NOx	$\mu\text{g}/\text{m}^3$	80	9.20	9.50	19.40	4.20
5	NH3	$\mu\text{g}/\text{m}^3$	400	59.00	56.00	164.00	65.00

**Location** : VIP Guest House Station-3

S.No.	Parameters	Unit	Permissible limits (NAAQS)	06.05.2024	13.05.2024	20.05.2024	27.05.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	78.00	64.00	71.00	81.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	37.00	37.00	14.00	42.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.10	1.20	1.50	0.60
4	NOx	$\mu\text{g}/\text{m}^3$	80	6.50	5.80	7.00	6.00
5	NH3	$\mu\text{g}/\text{m}^3$	400	10.00	5.00	10.00	8.00



## Ambient Air Quality Monitoring Results

Month

: June'2024

Nature of Sampling

: Ambient Air

Sample collected and tested by

: In- House Laboratory

Doc No: RFCL-TS-EMC-Report-04

### TEST RESULTS

Location

: Technical Building Station-1

S.No	Parameters	Unit	Permissible limits (NAAQS)	03.06.2024	10.06.2024	17.06.2024	24.06.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	192.00	91.00	70.00	53.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	39.00	52.00	48.00	14.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	2.20	3.60	2.60	1.40
4	NOx	$\mu\text{g}/\text{m}^3$	80	12.90	6.40	7.80	13.90
5	NH3	$\mu\text{g}/\text{m}^3$	400	210.00	51.00	228.00	31.00

Location

: Bagging Section Station-2

S.No.	Parameters	Unit	Permissible limits (NAAQS)	03.06.2024	10.06.2024	17.06.2024	24.06.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	106.00	64.00	52.00	39.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	32.00	19.00	24.00	18.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	4.80	3.60	3.00	2.80
4	NOx	$\mu\text{g}/\text{m}^3$	80	15.00	9.30	9.30	8.40
5	NH3	$\mu\text{g}/\text{m}^3$	400	85.00	70.00	82.00	32.00

Location

: VIP Guest House Station-3

S.No.	Parameters	Unit	Permissible limits (NAAQS)	03.06.2024	10.06.2024	17.06.2024	24.06.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	43.00	58.00	35.00	27.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	24.00	14.00	14.00	23.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.20	0.80	1.00	1.40
4	NOx	$\mu\text{g}/\text{m}^3$	80	12.10	6.80	11.60	1.20
5	NH3	$\mu\text{g}/\text{m}^3$	400	6.00	1.00	15.00	11.00

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## Ambient Air Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-04

**Month** : July'2024

**Nature of Sampling** : Ambient Air

**Sample collected and tested by** : In-House Laboratory

### TEST RESULTS

**Location** : Technical Building Station-1

S.No	Parameters	Unit	Permissible limits (NAAQS)	01.07.2024	08.07.2024	15.07.2024	22.07.2024	29.07.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	53.00	38.00	50.00	50.00	51.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	9.00	16.00	24.00	14.00	9.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.50	0.90	1.40	0.50	0.40
4	NOx	$\mu\text{g}/\text{m}^3$	80	3.70	4.00	6.50	2.40	3.70
5	NH3	$\mu\text{g}/\text{m}^3$	400	13.00	76.00	50.00	50.00	4.00

**Location** : Bagging Section Station-2

S.No.	Parameters	Unit	Permissible limits (NAAQS)	01.07.2024	08.07.2024	15.07.2024	22.07.2024	29.07.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	24.00	46.00	50.00	55.00	61.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	5.00	11.00	14.00	16.00	19.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.60	0.80	1.20	1.00	0.60
4	NOx	$\mu\text{g}/\text{m}^3$	80	6.70	5.40	6.00	5.80	6.10
5	NH3	$\mu\text{g}/\text{m}^3$	400	82.00	68.00	52.00	40.00	25.00

**Location** : VIP Guest House Station-3

S.No.	Parameters	Unit	Permissible limits (NAAQS)	01.07.2024	08.07.2024	15.07.2024	22.07.2024	29.07.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	31.00	44.00	85.00	24.00	18.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	5.00	19.00	24.00	15.00	6.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.90	1.70	3.00	0.40	3.70
4	NOx	$\mu\text{g}/\text{m}^3$	80	3.00	3.10	11.50	1.50	8.80
5	NH3	$\mu\text{g}/\text{m}^3$	400	3.00	5.00	16.00	24.00	14.00

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# Ambient Air Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-04

**Month** : August'2024

**Nature of Sampling** : Ambient Air

**Sample collected and tested by** : In- House Laboratory

## TEST RESULTS

**Location** : Technical Building Station-1

S.No	Parameters	Unit	Permissible limits (NAAQS)	05.08.2024	12.08.2024	19.08.2024	26.08.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	57.00	40.00	46.00	54.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	5.00	12.00	18.00	12.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.60	1.20	1.00	1.40
4	NOx	$\mu\text{g}/\text{m}^3$	80	2.00	3.80	4.60	4.20
5	NH3	$\mu\text{g}/\text{m}^3$	400	64.00	84.00	105.00	68.00

**Location** : Bagging Section Station-2

S.No.	Parameters	Unit	Permissible limits (NAAQS)	05.08.2024	12.08.2024	19.08.2024	26.08.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	46.00	51.00	42.00	54.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	10.00	14.00	12.00	16.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.10	1.60	1.30	1.50
4	NOx	$\mu\text{g}/\text{m}^3$	80	6.10	8.40	6.80	7.60
5	NH3	$\mu\text{g}/\text{m}^3$	400	55.00	76.00	80.00	38.00

**Location** : VIP Guest House Station-3

S.No.	Parameters	Unit	Permissible limits (NAAQS)	05.08.2024	12.08.2024	19.08.2024	26.08.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	54.00	32.00	46.00	26.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	16.00	8.00	12.00	8.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	2.40	3.20	2.10	1.60
4	NOx	$\mu\text{g}/\text{m}^3$	80	5.70	6.40	3.80	4.80
5	NH3	$\mu\text{g}/\text{m}^3$	400	19.00	12.00	14.00	26.00

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# Ambient Air Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-04

**Month** : September'2024

**Nature of Sampling** : Ambient Air

**Sample collected and tested by** : In-House Laboratory

## TEST RESULTS

**Location** : Technical Building

S.No	Parameters	Unit	Permissible limits (NAAQS)	05.09.2024	12.09.2024	20.09.2024	27.09.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	99.00	87.00	51.00	39.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	28.00	46.00	46.00	47.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	2.60	0.10	0.30	0.60
4	NOx	$\mu\text{g}/\text{m}^3$	80	12.30	2.40	7.00	5.50
5	NH3	$\mu\text{g}/\text{m}^3$	400	44.00	20.00	87.00	26.00

**Location** : Material Gate

S.No.	Parameters	Unit	Permissible limits (NAAQS)	05.09.2024	12.09.2024	20.09.2024	27.09.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	78.00	52.00	89.00	76.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	41.00	26.00	51.00	36.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	1.40	0.20	0.10	0.10
4	NOx	$\mu\text{g}/\text{m}^3$	80	11.80	4.80	4.80	10.20
5	NH3	$\mu\text{g}/\text{m}^3$	400	277.00	55.00	49.00	161.00

**Location** : VIP Guest House

S.No.	Parameters	Unit	Permissible limits (NAAQS)	05.09.2024	12.09.2024	20.09.2024	27.09.2024
1	PM10	$\mu\text{g}/\text{m}^3$	100	17.00	22.00	24.00	51.00
2	PM2.5	$\mu\text{g}/\text{m}^3$	60	19.00	23.00	19.00	31.00
3	SOx	$\mu\text{g}/\text{m}^3$	80	0.90	0.20	0.10	0.20
4	NOx	$\mu\text{g}/\text{m}^3$	80	4.80	2.30	3.20	1.90
5	NH3	$\mu\text{g}/\text{m}^3$	400	43.00	24.00	12.00	26.00

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## Stack Emission Monitoring Reading

Month

: April'2024

Nature of Sampling

: Stack Emission

Sample collected and tested by

: In- house Laboratory

Doc No: RFCL-TS-EMC-Report-05

### TEST RESULTS

Location :-

Primary Reformer Stack

S.No	Parameters	Permissible limits	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	42.00	36.00	38.00	36.00	40.00

Location :-

Utility Boiler Stack

S.No	Parameters	Permissible limits	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	74.00	68.00	76.00	78.00	81.00

Location :-

HRSG Stack

S.No	Parameters	Permissible limits	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	116.00	108.00	112.00	120.00	125.00

Location :-

Prilling Tower

S.No	Parameters	Permissible limits	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	Particulate Matter	50 mg/Nm <sup>3</sup>	43.00	38.00	40.00	42.00	37.00
2	NH <sub>3</sub>	150 mg/Nm <sup>3</sup>	65.00	60.00	44.00	87.00	92.00

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## Stack Emission Monitoring Reading

Doc No: RFCL-TS-EMC-Report-05

Month : May'2024

Nature of Sampling : Stack Emission

Sample collected and tested by : In- house Laboratory

### TEST RESULTS

Location :- Primary Reformer Stack

S.No	Parameters	Permissible limits	04.05.2024	11.05.2024	18.05.2024	22.05.2024	28.05.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	46.00	45.00	49.00	58.00	48.00

Location :- Utility Boiler Stack

S.No	Parameters	Permissible limits	04.05.2024	11.05.2024	18.05.2024	22.05.2024	28.05.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	72.00	84.00	93.00	92.00	95.00

Location :- HRSG Stack

S.No	Parameters	Permissible limits	04.05.2024	11.05.2024	18.05.2024	22.05.2024	28.05.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	108.00	120.00	114.00	120.00	118.00

Location :- Prilling Tower

S.No	Parameters	Permissible limits	09.05.2024	17.05.2024	22.05.2024	29.05.2024
1	Particulate Matter	50 mg/Nm <sup>3</sup>	27.00	39.50	48.00	42.00
2	NH <sub>3</sub>	150 mg/Nm <sup>3</sup>	56.00	75.00	108.00	96.00



# Stack Emission Monitoring Reading

Doc No: RFCL-TS-EMC-Report-05

Month

: June'2024

Nature of Sampling

: Stack Emission

Sample collected and tested by

: In- house Laboratory

## TEST RESULTS

Location :-

Primary Reformer Stack

S.No	Parameters	Permissible limits	05.06.2024	12.06.2024	19.06.2024	26.06.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	51.00	38.00	45.00	30.00

Location :-

Utility Boiler Stack

S.No	Parameters	Permissible limits	05.06.2024	12.06.2024	19.06.2024	26.06.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	93.00	95.00	83.00	73.00

Location :-

HRSG Stack

S.No	Parameters	Permissible limits	05.06.2024	12.06.2024	19.06.2024	26.06.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	122.00	113.00	89.00	101.00

Location :-

Prilling Tower

S.No	Parameters	Permissible limits	05.06.2024	12.06.2024	19.06.2024	26.06.2024
1	Particulate Matter	50 mg/Nm <sup>3</sup>	35.00	45.00	40.00	38.00
2	NH <sub>3</sub>	150 mg/Nm <sup>3</sup>	66.00	120.00	84.00	90.00





## Stack Emission Monitoring Reading

Doc No: RFCL-TS-EMC-Report-05

Month : July'2024

Nature of Sampling : Stack Emission

Sample collected and tested by : In- house Laboratory

### TEST RESULTS

Location :- Primary Reformer Stack

S.No	Parameters	Permissible limits	03.07.2024	09.07.2024	17.07.2024	24.07.2024	31.07.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	28.00	39.00	38.00	42.00	36.00

Location :- Utility Boiler Stack

S.No	Parameters	Permissible limits	03.07.2024	09.07.2024	17.07.2024	24.07.2024	31.07.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	84.00	64.00	78.00	76.00	82.00

Location :- HRSG Stack

S.No	Parameters	Permissible limits	03.07.2024	09.07.2024	17.07.2024	24.07.2024	31.07.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	96.00	69.00	88.00	101.00	92.00

Location :- Prilling Tower

S.No	Parameters	Permissible limits	03.07.2024	09.07.2024	17.07.2024	24.07.2024	31.07.2024
1	Particulate Matter	50 mg/Nm <sup>3</sup>	38.00	42.00	36.00	38.00	30.00
2	NH <sub>3</sub>	150 mg/Nm <sup>3</sup>	101.00	116.00	102.00	100.00	128.00

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## Stack Emission Monitoring Reading

Doc No: RFCL-TS-EMC-Report-05

Month

: August'24

Nature of Sampling

: Stack Emission

Sample collected and tested by

: In- house Laboratory

### **TEST RESULTS**

Location :-

Primary Reformer Stack

S.No	Parameters	Permissible limits	07.08.2024	14.08.2024	21.08.2024	28.08.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	32.00	34.00	29.00	26.00

Location :-

Utility Boiler Stack

S.No	Parameters	Permissible limits	07.08.2024	14.08.2024	21.08.2024	28.08.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	66.00	74.00	69.00	71.00

Location :-

HRSG Stack

S.No	Parameters	Permissible limits	07.08.2024	14.08.2024	21.08.2024	28.08.2024
1	SPM	10 mg/Nm <sup>3</sup>	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm <sup>3</sup>	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm <sup>3</sup>	91.00	84.00	89.00	88.00

Location :-

Prilling Tower

S.No	Parameters	Permissible limits	07.08.2024	14.08.2024	21.08.2024	28.08.2024
1	Particulate Matter	50 mg/Nm <sup>3</sup>	34.00	38.00	42.00	40.00
2	NH3	150 mg/Nm <sup>3</sup>	60.00	80.00	44.00	102.00

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## Stack Emmision Monitoring Reading

Doc No: RFCL-TS-EMC-Report-05

Month

: September'2024

Nature of Sampling

: Stack Emission

Sample collected and tested by

: In- house Laboratory

### TEST RESULTS

Location :-

Primary Reformer Stack

S.No	Parameters	Permissible limits	07.09.2024	13.09.2024	20.09.2024	26.09.2024
1	SPM	10 mg/Nm3	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm3	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm3	30.00	29.00	14.00	32.00

Location :-

Utility Boiler Stack

S.No	Parameters	Permissible limits	07.09.2024	13.09.2024	20.09.2024	26.09.2024
1	SPM	10 mg/Nm3	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm3	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm3	87.00	85.00	74.00	71.00

Location :-

HRSG Stack

S.No	Parameters	Permissible limits	07.09.2024	13.09.2024	20.09.2024	26.09.2024
1	SPM	10 mg/Nm3	<5.0	<5.0	<5.0	<5.0
2	SOx	50 mg/Nm3	<1.0	<1.0	<1.0	<1.0
3	NOx	400 mg/Nm3	95.00	99.00	104.00	103.00

Location :-

Prilling Tower

S.No	Parameters	Permissible limits	07.09.2024	13.09.2024	20.09.2024	26.09.2024
1	Particulate Matter	50 mg/Nm3	35.00	34.00	42.00	45.00
2	NH3	150 mg/Nm3	61.00	44.00	62.00	105.00



## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

**Month** : April'2024

**Nature of Sampling** : Sewage Treated Plant Outlet

**Sample collected and tested by** : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	08.04.2024	22.04.2024
1	pH.		5.5-9.0	7.85	7.82
2	Total Suspended Solids (TSS)	mg/l	< 100	24.00	21.00
3	BOD (3 days at 27 °C)	mg/l	< 30	9.40	10.60
4	COD	mg/l	< 250	48.00	56.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	795.00	825.00

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## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : May'2024

Nature of Sampling : Sewage Treated Plant Outlet

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	07.05.2024	22.05.2024
1	pH.		5.5-9.0	7.95	8.01
2	Total Suspended Solids (TSS)	mg/l	< 100	22.00	26.00
3	BOD (3 days at 27 °C)	mg/l	< 30	11.60	13.40
4	COD	mg/l	< 250	58.00	68.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	848.00	905.00

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# Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month

: June'2024

Nature of Sampling

: Sewage Treated Plant Outlet

Sample collected and tested by

: In- House Laboratory

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	03.06.2024	17.06.2024
1	pH.		5.5-9.0	7.86	7.94
2	Total Suspended Solids (TSS)	mg/l	< 100	18.00	20.00
3	BOD (3 days at 27 °C)	mg/l	< 30	16.80	18.50
4	COD	mg/l	< 250	64.00	78.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	925.00	960.00

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## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : July'2024

Nature of Sampling : Sewage Treated Plant Outlet

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	01.07.2024	15.07.2024
1	pH.		5.5-9.0	7.65	7.54
2	Total Suspended Solids (TSS)	mg/l	< 100	36.00	46.00
3	BOD (3 days at 27 °C)	mg/l	< 30	12.40	14.20
4	COD	mg/l	< 250	56.00	68.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	845.00	880.00



## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : Aug'2024

Nature of Sampling : Sewage Treated Plant Outlet

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	05.08.2024	19.08.2024
1	pH.		5.5-9.0	8.05	7.86
2	Total Suspended Solids (TSS)	mg/l	< 100	48.00	40.00
3	BOD (3 days at 27 °C)	mg/l	< 30	10.20	12.60
4	COD	mg/l	< 250	46.00	54.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	764.00	794.00

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## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : September'2024

Nature of Sampling : Sewage Treated Plant Outlet

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	02.09.2024	16.09.2024
1	pH.		5.5-9.0	8.12	8.28
2	Total Suspended Solids (TSS)	mg/l	< 100	14.00	18.00
3	BOD (3 days at 27 °C)	mg/l	< 30	10.80	14.60
4	COD	mg/l	< 250	54.00	68.00
5	Oil & Grease	mg/l	< 10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	805.00	845.00

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## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : April'2024

Nature of Sampling : Sewage Treated Plant Analysis (Township)

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	01.04.2024	08.04.2024	15.04.2024	22.04.2024	29.04.2024
1	pH.		5.5-9.0	7.98	7.96	7.94	7.92	8.06
2	Total Suspended Solids (TSS)	mg/l	< 100	1.00	2.00	2.00	5.00	2.00
3	BOD (3 days at 27 °C)	mg/l	< 30	1.20	1.70	1.50	1.20	1.40
4	COD	mg/l	< 250	14.00	19.00	18.00	10.00	12.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	513.00	493.00	464.00	470.00	469.00

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# Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : May'2024

Nature of Sampling : Sewage Treated Plant Analysis (Township)

Sample collected and tested by : In- House Laboratory

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	07.05.2024	14.05.2024	22.05.2024	29.05.2024
1	pH.		5.5-9.0	7.86	7.93	7.83	8.10
2	Total Suspended Solids (TSS)	mg/l	< 100	3.00	4.00	2.00	3.00
3	BOD (3 days at 27 °C)	mg/l	< 30	<2.00	<2.00	<2.00	<2.00
4	COD	mg/l	< 250	18.00	10.00	8.40	10.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	468.00	552.00	564.00	575.00

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# Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : June'2024

Nature of Sampling : Sewage Treated Plant Analysis (Township)

Sample collected and tested by : In- House Laboratory

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	03.06.2024	10.06.2024	17.06.2024	24.06.2024
1	pH.		5.5-9.0	8.10	8.12	8.32	8.01
2	Total Suspended Solids (TSS)	mg/l	< 100	2.00	4.00	6.00	8.00
3	BOD (3 days at 27 °C)	mg/l	< 30	<2	2.50	2.00	<2
4	COD	mg/l	< 250	10.00	23.00	21.00	9.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	628.00	626.00	688.00	680.00

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# Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month

: July'2024

Nature of Sampling

: Sewage Treated Plant Analysis (Township)

Sample collected and tested by

: In-House Laboratory

## TEST RESULTS

S.No.	Parameters	Unit	Limiting Standards	01.07.2024	08.07.2024	15.07.2024	22.07.2024	30.07.2024
1	pH.		5.5-9.0	7.91	7.88	7.99	8.18	8.28
2	Total Suspended Solids (TSS)	mg/l	< 100	2.00	10.00	8.00	4.00	4.00
3	BOD (3 days at 27 °C)	mg/l	< 30	<2	2.80	2.60	4.50	2.80
4	COD	mg/l	< 250	11.00	21.00	17.00	26.00	12.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	605.00	610.00	624.00	552.00	596.00

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# Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month

: August'2024

Nature of Sampling

: Sewage Treated Plant Analysis (Township)

Sample collected and tested by

: In- House Laboratory

## TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	05.08.2024	13.08.2024	19.08.2024	27.08.2024
1	pH.		5.5-9.0	8.21	8.13	8.01	8.07
2	Total Suspended Solids (TSS)	mg/l	< 100	5.00	3.00	3.00	4.00
3	BOD (3 days at 27 °C)	mg/l	< 30	3.40	2.40	2.80	3.50
4	COD	mg/l	< 250	17.00	9.00	12.00	16.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	568.00	560.00	552.00	574.00



## Sewage Treated Plant Quality Monitoring Results

Doc No: RFCL-TS-EMC-Report-06

Month : September'2024

Nature of Sampling : Sewage Treated Plant Analysis (Township)

Sample collected and tested by : In- House Laboratory

### TEST RESULTS

S.No	Parameters	Unit	Limiting Standards	02.09.2024	10.09.2024	16.09.2024	23.09.2024	30.09.2024
1	pH.		5.5-9.0	8.22	8.39	8.32	8.10	7.93
2	Total Suspended Solids (TSS)	mg/l	< 100	3.00	6.00	6.00	4.00	5.00
3	BOD (3 days at 27 °C)	mg/l	< 30	2.50	3.20	3.00	2.60	1.40
4	COD	mg/l	< 250	9.00	15.00	14.00	12.00	10.00
5	Oil & Grease	mg/l	< 10	<10	<10	<10	<10	<10
6	Total Dissolved Solids (TDS)	mg/l	<2100	570.00	562.00	545.00	568.00	535.00



## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

: April'2024

Nature of Sampling

: Ammonia Concentration

Sample collected and tested by

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)			
		03.04.2024	10.04.2024	17.04.2024	24.04.2024
1	Near Ammonia Converter -1	<1	<1	<1	<1
2	Near Ammonia Converter -2	<1	<1	<1	<1
3	Near product hydrogen sample point (CHRU)	<1	<1	<1	<1
4	Near Ammonia Chillers	2.5	2.0	2.5	2.5
5	Near Ammonia Separator	2.0	2.5	2.5	2.5
6	Near Ammonia Accumulator	1.0	1.0	1.0	2.5
7	Near C 551 sample point ( Purge gas recovery unit )	5.0	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux	2.5	2.0	2.5	2.5
9	Near 551B HP circulation pump	2.5	2.5	2.0	2.5
10	Near 503 flash vessel	5.0	5.0	5.0	5.0
11	Near Ammonia Filter	<1	<1	<1	<1
12	Near P1 pump	2.5	1.0	2.5	1.0
13	Near P2 pump	2.5	2.5	1.0	2.5
14	Near P5 pump	2.0	2.5	2.5	2.0
15	Near P9 pump	<1	1.5	2.0	2.0
16	Near battery limits (Ammonia storage section)	<1	<1	<1	<1
17	Near Ammonia pump	<1	<1	<1	<1
18	Near Ammonia transfer pump	<1	<1	<1	<1

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## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

: May'2024

Nature of Sampling

: Ammonia Concentration

Sample collected and tested by

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)					
		Location of sample collection	01.05.2024	08.05.2024	15.05.2024	22.05.2024	29.05.2024
1	Near Ammonia Converter -1		<1	<1	<1	<1	<1
2	Near Ammonia Converter -2		<1	<1	<1	<1	<1
3	Near product hydrogen sample point (CHRU)		<1	<1	<1	<1	<1
4	Near Ammonia Chillers		5.0	2.5	5.0	2.0	2.5
5	Near Ammonia Separator		5.0	2.5	4.0	2.0	2.0
6	Near Ammonia Accumulator		4.0	2.0	5.0	2.5	2.0
7	Near C 551 sample point ( Purge gas recovery unit )		5.0	2.5	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux		2.5	2.5	2.0	2.0	2.5
9	Near 551B HP circulation pump		2.0	2.0	2.5	2.0	2.5
10	Near 503 flash vessel		5.0	5.0	5.0	5.0	5.0
11	Near Ammonia Filter		<1	<1	<1	<1	<1
12	Near P1 pump		4.0	2.5	3.0	2.0	2.5
13	Near P2 pump		4.0	2.5	1.5	1.5	2.5
14	Near P5 pump		5.0	2.5	2.5	2.0	2.5
15	Near P9 pump		1.5	1.0	1.5	1.0	1.0
16	Near battery limits (Ammonia storage section)		<1	<1	<1	<1	<1
17	Near Ammonia pump		<1	<1	<1	<1	<1
18	Near Ammonia tranfer pump		<1	<1	<1	<1	<1

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## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

: June'2024

Nature of Sampling

: Ammonia Concentration

Sample collected and tested by

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)			
		05.06.2024	12.06.2024	19.06.2024	26.06.2024
1	Near Ammonia Converter -1	2.0	<1	2.5	2.0
2	Near Ammonia Converter -2	2.0	<1	2.0	2.0
3	Near product hydrogen sample point (CHRU)	<1	<1	<1	<1
4	Near Ammonia Chillers	5.0	2.0	2.5	2.5
5	Near Ammonia Separator	5.0	2.5	2.5	2.5
6	Near Ammonia Accumulator	5.0	2.5	2.5	2.5
7	Near C 551 sample point ( Purge gas recovery unit )	5.0	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux	2.0	2.5	2.5	2.5
9	Near 551B HP circulation pump	2.5	2.5	2.5	2.5
10	Near 503 flash vessel	5.0	5.0	5.0	5.0
11	Near Ammonia Filter	<1	2.0	<1	<1
12	Near P1 pump	2.5	5.0	2.5	2.5
13	Near P2 pump	2.0	5.0	2.5	2.5
14	Near P5 pump	2.5	<1	<1	2.0
15	Near P9 pump	<1	<1	<1	<1
16	Near battery limits (Ammonia storage section)	<1	<1	<1	<1
17	Near Ammonia pump	<1	<1	<1	<1
18	Near Ammonia transfer pump	<1	<1	<1	<1

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## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

: July'2024

Nature of Sampling

: Ammonia Concentration

Sample collected and tested by

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)				
		03.07.2024	10.07.2024	17.07.2024	24.07.2024	31.07.2024
1	Near Ammonia Converter -1	2.5	5.0	1.0	2.0	1.0
2	Near Ammonia Converter -2	2.5	5.0	1.0	2.0	1.0
3	Near product hydrogen sample point (CHRU)	<1	<1	<1	<1	<1
4	Near Ammonia Chillers	5.0	5.0	2.5	2.5	2.5
5	Near Ammonia Separator	5.0	5.0	2.5	2.5	2.5
6	Near Ammonia Accumulator	5.0	5.0	2.5	2.5	2.5
7	Near C 551 sample point ( Purge gas recovery unit )	5.0	5.0	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux	2.5	5.0	2.5	5.0	2.5
9	Near 551B HP circulation pump	2.5	3.0	2.0	5.0	2.5
10	Near 503 flash vessel	5.0	5.0	5.0	5.0	5.0
11	Near Ammonia Filter	<1	1.0	1.0	<1	<1
12	Near P1 pump	5.0	5.0	2.5	2.5	1.0
13	Near P2 pump	5.0	5.0	2.5	2.5	1.0
14	Near P5 pump	5.0	5.0	5.0	5.0	5.0
15	Near P9 pump	2.5	5.0	2.5	2.5	2.5
16	Near battery limits (Ammonia storage section)	<1	<1	<1	<1	<1
17	Near Ammonia pump	<1	<1	<1	<1	<1
18	Near Ammonia tranfer pump	<1	<1	<1	<1	<1

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## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

: August'2024

Nature of Sampling

: Ammonia Concentration

Sample collected and tested by

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)			
		07.08.2024	14.08.2024	21.08.2024	28.08.2024
1	Near Ammonia Converter -1	2.0	2.0	5.0	5.0
2	Near Ammonia Converter -2	2.0	2.0	5.0	5.0
3	Near product hydrogen sample point (CHRU)	<1	<1	<1	<1
4	Near Ammonia Chillers	5.0	2.5	5.0	2.5
5	Near Ammonia Separator	5.0	2.0	5.0	2.0
6	Near Ammonia Accumulator	5.0	2.5	5.0	2.5
7	Near C 551 sample point ( Purge gas recovery unit )	5.0	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux	5.0	5.0	5.0	5.0
9	Near 551B HP circulation pump	5.0	3.0	2.5	5.0
10	Near 503 flash vessel	5.0	5.0	5.0	5.0
11	Near Ammonia Filter	2.0	2.5	1.0	2.0
12	Near P1 pump	5.0	5.0	5.0	5.0
13	Near P2 pump	5.0	5.0	5.0	5.0
14	Near P5 pump	5.0	5.0	5.0	5.0
15	Near P9 pump	5.0	5.0	5.0	5.0
16	Near battery limits (Ammonia storage section)	<1	<1	<1	<1
17	Near Ammonia pump	<1	<1	<1	<1
18	Near Ammonia tranfer pump	<1	<1	<1	<1



## Ammonia in Atmosphere at Different Locations in Plant Area

Doc No: RFCL-TS-EMC-Report-07

Month

Nature of Sampling

Sample collected and tested by

: September'2024

: Ammonia Concentration

: In-House Laboratory

### TEST RESULTS

S.No	Sample collection date	Ammonia Content in ppm (Max. 25 ppm)			
	Location of sample collection	04.09.2024	11.09.2024	18.09.2024	25.09.2024
1	Near Ammonia Converter -1	5.0	2.5	2.5	5.0
2	Near Ammonia Converter -2	5.0	2.5	2.5	5.0
3	Near product hydrogen sample point (CHRU)	<1	<1	<1	<1
4	Near Ammonia Chillers	5.0	5.0	5.0	5.0
5	Near Ammonia Separator	5.0	5.0	5.0	5.0
6	Near Ammonia Accumulator	5.0	5.0	5.0	5.0
7	Near C 551 sample point ( Purge gas recovery unit )	5.0	5.0	5.0	5.0
8	Near Ammonia recovery pump reflux	5.0	5.0	5.0	5.0
9	Near 551B HP circulation pump	5.0	5.0	5.0	5.0
10	Near 503 flash vessel	5.0	5.0	5.0	5.0
11	Near Ammonia Filter	1.0	1.0	1.0	1.0
12	Near P1 pump	2.5	5.0	2.5	2.5
13	Near P2 pump	2.5	5.0	2.5	2.5
14	Near P5 pump	5.0	5.0	5.0	5.0
15	Near P9 pump	5.0	5.0	5.0	5.0
16	Near battery limits (Ammonia storage section)	1.5	1.0	<1	<1
17	Near Ammonia pump	<1	<1	<1	<1
18	Near Ammonia tranfer pump	<1	<1	<1	<1

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