

CHAMBAL FERTILISERS AND CHEMICALS LIMITED, GADEPAN
MOEF ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT [PHASE- I]
(Period April 2022-September 2022)
Letter No.J-11011 / 8 / 87-IA DT.15.11.88

EC-Conditions:

	Description	Status as on Date																																																												
01.	The Project Proponent must submit this Ministry a rapid Environmental Impact Assessment Report in Six-month and a comprehensive environmental impact assessment report within 18 months for scrutiny and approval.	Complied with. Rapid EIA was submitted to MOEF, New Delhi vide our letter No.110627 dt.27.06.89. Comprehensive EIA was submitted to MOEF, New Delhi vide letter No. CFCL/GEN/VM/01A dt.15.11.90.																																																												
02.	The entire quantity of liquid effluents generated within the various process operations will have to be recycled either as process water or for afforestation in the plant premises. If any liquid effluents are coming out of the plant premises, it should strictly confirm to be standards prescribed by the Government or the Central/State Pollution Control Board.	Effluent generated in Urea & Ammonia Plants (Urea Process Condensate & Ammonia Process Condensate) are treated wastewater is recycled & used as boiler feed water after minor treatment in DM Plant. Steam Condensate & Turbine Condensates are also recycled and reused as boiler feed water. Boiler Blow downs are recycled as cooling tower make up Cooling tower blow downs, DM plant regeneration effluent etc. after treatment are used for green belt development only after meeting the norms as prescribed by the RSPCB / CPCB, within the premises during non-rainy season. During rainy season, treated effluent is discharged into Kali Sindh River only after meeting the norms as prescribed by the RSPCB / CPCB. Part of Phase-I & II effluent is also treated in RO-ZLD Plant along with Phase-III effluent. STP outlet water is also used for various horticulture purposes within the premises. Treated liquid effluent analysis data for the period from Period April 2022- September 2022 have been shown as under. <p style="text-align: center;">Treated Liquid Effluent Analysis</p> <table border="1" data-bbox="646 1129 1502 1476"> <thead> <tr> <th></th> <th>Unit</th> <th>Max</th> <th>Min</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td></td> <td>8.10</td> <td>7.4</td> <td>7.78</td> </tr> <tr> <td>TSS</td> <td>Mg/l</td> <td>89.0</td> <td>59</td> <td>71.8</td> </tr> <tr> <td>FRC</td> <td>Mg/l</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> <tr> <td>Nitrate Nitrogen</td> <td>Mg/l</td> <td>8.2</td> <td>5.2</td> <td>6.9</td> </tr> <tr> <td>Phosphate</td> <td>Mg/l</td> <td>1.3</td> <td>1.0</td> <td>1.2</td> </tr> <tr> <td>Ammonical Nitrogen as N</td> <td>Mg/l</td> <td>31.3</td> <td>3.7</td> <td>15.2</td> </tr> <tr> <td>Free Ammonical Nitrogen</td> <td>Mg/l</td> <td>1.25</td> <td>0.15</td> <td>0.61</td> </tr> <tr> <td>TKN as N</td> <td>Mg/l</td> <td>28.7</td> <td>19.7</td> <td>24.0</td> </tr> <tr> <td>COD</td> <td>Mg/l</td> <td>76.1</td> <td>51.2</td> <td>64.6</td> </tr> <tr> <td>BOD</td> <td>Mg/l</td> <td>9.6</td> <td>7.4</td> <td>8.7</td> </tr> <tr> <td>OIL AND GREASE</td> <td>Mg/l</td> <td>4.7</td> <td>2.2</td> <td>3.3</td> </tr> </tbody> </table> <p>Remark: Heavy metals like Arsenic, Cyanide and Vanadium not detectable.</p> Real time and Online Continuous Effluent Monitoring System installed at outlet of final treated effluent and data is being transferred to CPCB and RSPCB.		Unit	Max	Min	Avg	pH		8.10	7.4	7.78	TSS	Mg/l	89.0	59	71.8	FRC	Mg/l	NT	NT	NT	Nitrate Nitrogen	Mg/l	8.2	5.2	6.9	Phosphate	Mg/l	1.3	1.0	1.2	Ammonical Nitrogen as N	Mg/l	31.3	3.7	15.2	Free Ammonical Nitrogen	Mg/l	1.25	0.15	0.61	TKN as N	Mg/l	28.7	19.7	24.0	COD	Mg/l	76.1	51.2	64.6	BOD	Mg/l	9.6	7.4	8.7	OIL AND GREASE	Mg/l	4.7	2.2	3.3
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03.	The emissions from various process units should confirm to the standards prescribed by the Government or the Central / State Pollution Control Board. At no time the emission levels should go beyond the stipulated standards in the event of failure of any pollution control systems adopted	Emissions from various process units are strictly conforming to the standards prescribed by RSPCB (Rajasthan State Pollution Control Board) Adequate engineering controls are in place to keep the emissions level well within the limit. Analysis data for the period from Period April 2022- September 2022 have been shown as under. Bagging Plant Emissions																																																												

<p>by the units the respective units shall be put out of operation immediately and should not be restarted until the control systems are rectified to achieve the desired efficiency.</p>		<table border="1"> <thead> <tr> <th>Parameters →</th> <th colspan="3">Dust (mg/nm3)</th> <th colspan="3">Ammonia (mg/nm3)</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Scrubber Screen House</td> <td>24.4</td> <td>13.6</td> <td>18.6</td> <td>28.4</td> <td>16.3</td> <td>22.0</td> </tr> <tr> <td>Scrubber Packing Plant-I</td> <td>26.7</td> <td>12.2</td> <td>17.7</td> <td>29.1</td> <td>13.1</td> <td>21.4</td> </tr> <tr> <td>Scrubber Packing Plant-II</td> <td>19.4</td> <td>13.2</td> <td>16.7</td> <td>26.7</td> <td>14.8</td> <td>22.9</td> </tr> </tbody> </table>	Parameters →	Dust (mg/nm3)			Ammonia (mg/nm3)			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Scrubber Screen House	24.4	13.6	18.6	28.4	16.3	22.0	Scrubber Packing Plant-I	26.7	12.2	17.7	29.1	13.1	21.4	Scrubber Packing Plant-II	19.4	13.2	16.7	26.7	14.8	22.9												
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<p>CFCL is using only natural gas as a fuel. All the pollution control systems form the integral part of the process and controlled by process itself. With any process failure, plants go to a safe shutdown condition; plant is restarted only after rectification. Adequate engineering controls are in place to keep the emissions level well within the limit.</p>																																																	
<p>04.</p>	<p>The emissions from the Urea Prilling towers will conform to the standards prescribed for Urea dust.</p>	<p>CFCL is having natural draft Prilling towers. Emissions from Prilling towers are within prescribed norms. Analysis data for the period from Period April 2022- September 2022) have been shown as under:</p> <table border="1"> <thead> <tr> <th>Parameters →</th> <th colspan="3">Dust (mg/nm3)</th> <th colspan="3">Ammonia (mg/nm3)</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Prilling Tower-I</td> <td>46.6</td> <td>40.1</td> <td>43.9</td> <td>76.6</td> <td>57.4</td> <td>65.8</td> </tr> <tr> <td>Prilling Tower-II</td> <td>46.7</td> <td>41.8</td> <td>44.3</td> <td>73.3</td> <td>57.4</td> <td>65.9</td> </tr> </tbody> </table>	Parameters →	Dust (mg/nm3)			Ammonia (mg/nm3)			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Prilling Tower-I	46.6	40.1	43.9	76.6	57.4	65.8	Prilling Tower-II	46.7	41.8	44.3	73.3	57.4	65.9																			
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<p>05.</p>	<p>The Project authorities should prepare a plan for implementation of disposal of solid wastes generated during various process operations or in the treatment plants provided. The Plan for disposal should be submitted to the competent authorities for scrutiny and approval.</p>	<p>A proper approved plan for disposal of solid waste generated during various process operations is followed. Sludge from raw water treatment plant and STP is used as manure within CFCL premises. Spent catalyst generated from process is sold/ disposed to authorized recycler/ re processors/ CTDF (Udaipur). Used oil is sold out to the authorized parties for recovery / reuse/ reprocessing of the oil. Discarded containers are disposed to Rajasthan waste management project, CTDF Udaipur. Plastic waste is collected by established recycler. Used batteries are handed over to authorized dealers/recyclers only.</p>																																															

06.	<p>A minimum number of 05 air quality monitoring stations will be set up at different locations of the plant and in the nearby areas especially towards Sorsan and the air quality will be monitored as per the standard procedures on a weekly interval basis. Stack emissions levels will be recorded and submitted to the State Pollution Control Board once in three months.</p>	<p>05 Ambient Air Quality Monitoring Stations are functioning within the factory premises; these stations have been installed in consultation with R.O. RSPCB Kota. Ambient Air Quality Monitoring at all the five stations is being carried out as per the standard procedures on twice in a week basis and data is regularly submitted to RSPCB & MoEF's Regional Office. Analysis data for the period from Period April 2022- September 2022 have been shown as under.</p> <table border="1" data-bbox="646 380 1503 1108"> <thead> <tr> <th colspan="8">AAQM STATION AT NORTH SIDE OF HOLDING POND</th> </tr> <tr> <th></th> <th>PM 10</th> <th>PM<2.5</th> <th>NH3</th> <th>NOx</th> <th>SOx</th> <th>CO</th> <th>HC</th> </tr> <tr> <th colspan="8">µg/m3</th> </tr> </thead> <tbody> <tr> <td>Max</td> <td>68.0</td> <td>34.3</td> <td>56.7</td> <td>7.9</td> <td>4.9</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>27.3</td> <td>20.1</td> <td>23.1</td> <td>4.4</td> <td>2.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>42.9</td> <td>25.0</td> <td>37.1</td> <td>6.4</td> <td>3.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT LAB TECH</th> </tr> <tr> <td>Max</td> <td>67.7</td> <td>36.5</td> <td>66.6</td> <td>7.7</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>24.9</td> <td>18.2</td> <td>24.4</td> <td>4.1</td> <td>2.1</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>44.1</td> <td>26.7</td> <td>41.5</td> <td>6.2</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II</th> </tr> <tr> <td>Max</td> <td>66.3</td> <td>36.7</td> <td>59.9</td> <td>7.9</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>16.6</td> <td>20.5</td> <td>4.6</td> <td>2.2</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>41.5</td> <td>26.0</td> <td>37.0</td> <td>6.2</td> <td>3.4</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT RAW WATER RESERVOIR</th> </tr> <tr> <td>Max</td> <td>69.9</td> <td>35.9</td> <td>67.9</td> <td>7.3</td> <td>4.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>17.2</td> <td>21.4</td> <td>3.2</td> <td>2.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>40.5</td> <td>25.4</td> <td>36.6</td> <td>6.0</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION IN COLONY</th> </tr> <tr> <td>Max</td> <td>72.7</td> <td>38.3</td> <td>59.7</td> <td>7.8</td> <td>4.5</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>25.9</td> <td>17.5</td> <td>25.4</td> <td>4.2</td> <td>2.1</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>44.6</td> <td>26.3</td> <td>41.0</td> <td>6.3</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> </tbody> </table> <p>Regular monitoring of each stack is being carried out and data are being submitted to RSPCB on Quarterly basis. Analysis data for the period from (Period April 2022- September 2022) have been shown as above (Please refer reply of EC Condition No.03 & 04).</p>	AAQM STATION AT NORTH SIDE OF HOLDING POND									PM 10	PM<2.5	NH3	NOx	SOx	CO	HC	µg/m3								Max	68.0	34.3	56.7	7.9	4.9	<1.0	ND	Min	27.3	20.1	23.1	4.4	2.6	<1.0	ND	Avg	42.9	25.0	37.1	6.4	3.6	<1.0	ND	AAQM STATION AT LAB TECH								Max	67.7	36.5	66.6	7.7	4.7	<1.0	ND	Min	24.9	18.2	24.4	4.1	2.1	<1.0	ND	Avg	44.1	26.7	41.5	6.2	3.3	<1.0	ND	AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II								Max	66.3	36.7	59.9	7.9	4.7	<1.0	ND	Min	23.3	16.6	20.5	4.6	2.2	<1.0	ND	Avg	41.5	26.0	37.0	6.2	3.4	<1.0	ND	AAQM STATION AT RAW WATER RESERVOIR								Max	69.9	35.9	67.9	7.3	4.6	<1.0	ND	Min	23.3	17.2	21.4	3.2	2.3	<1.0	ND	Avg	40.5	25.4	36.6	6.0	3.3	<1.0	ND	AAQM STATION IN COLONY								Max	72.7	38.3	59.7	7.8	4.5	<1.0	ND	Min	25.9	17.5	25.4	4.2	2.1	<1.0	ND	Avg	44.6	26.3	41.0	6.3	3.3	<1.0	ND
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07.	<p>The liquid effluent quality will be measured daily, and records should be kept. Adequate number of water quality monitoring stations must be set up. If the effluent quality exceeds the standards prescribed at any time, the corresponding units of the Plant which are contributing to the excessive pollutant loads shall be stopped from operation till the quantity of pollutants discharged from those units are brought down to the required level.</p>	<p>Complied with. Effluent quality is being measured on daily basis and records are kept. Quality of Treated effluent (process condensates) from Ammonia & Urea plant is monitored regularly. Quality of Cooling water blow downs, Boiler Blow downs, Oil separator Inlet/Outlet, Neutralization Pits of DM Plant and ETP outlet is being measured daily basis. All efforts are made to keep the effluent quality well within the specified limits. All the pollution control systems form the integral part of the process and controlled by process itself. With any process failure, plants go to a safe shutdown condition plant is restarted only after rectification. Real time and Online Continuous Effluent Monitoring System installed at outlet of final treated effluent and data is being transferred to CPCB and RSPCB.</p>																																																																																																																																																																																

08.	The Project authorities will establish the air and water quality monitoring stations immediately and start collecting the base line data of air and water quality in the region available at present, during the construction stage before start of the operation of the plant and continuous later when the plant goes on stream.	Complied with. Air and water quality monitoring was carried out from Feb'89 to Jan '90 and base line data was collected by Consultant M/s AIC Watson. Data was presented in Comprehensive EIA Report referred in Item-01 above. Thereafter CFCL established their own laboratory and air & water quality monitoring was started from Feb'93. The Construction of the Project was over in Dec'93. Regular monitoring is carried out from the beginning and data is regularly submitted to RSPCB and MOEF.																																																																																																																														
09.	The ground water quality of this area will be measured at a few locations near the plant site and later once in a month at the same points.	Ground water quality is being monitored at 08 locations around the plant site up to the radius of 10 Kms. Analysis data for the period from Period April 2022-Septmebr 2022 have been shown as under. GROUND WATER ANALYSIS REPORT <table border="1" data-bbox="646 573 1531 1087"> <thead> <tr> <th>Locations</th> <th>PH</th> <th>TDS</th> <th>TH</th> <th>T.Aik</th> <th>Cl</th> <th>SO4</th> <th>NO3</th> <th>PO4</th> </tr> <tr> <td></td> <td></td> <td></td> <td>as CaCO3</td> <td>as CaCO3</td> <td>as Cl</td> <td>as SO4</td> <td>as NO3</td> <td>as PO4</td> </tr> </thead> <tbody> <tr> <td colspan="9">North Direction</td> </tr> <tr> <td>Darbiji</td> <td>7.5</td> <td>734</td> <td>1257</td> <td>537</td> <td>317</td> <td>765</td> <td>6.1</td> <td>ND</td> </tr> <tr> <td>Surela</td> <td>7.5</td> <td>836</td> <td>1265</td> <td>576</td> <td>329</td> <td>668</td> <td>6.9</td> <td>ND</td> </tr> <tr> <td colspan="9">West Direction</td> </tr> <tr> <td>Simaliya</td> <td>7.5</td> <td>680</td> <td>1052</td> <td>445</td> <td>414</td> <td>1013</td> <td>6.3</td> <td>ND</td> </tr> <tr> <td>Polai Kalan</td> <td>7.5</td> <td>915</td> <td>1141</td> <td>423</td> <td>602</td> <td>992</td> <td>6.9</td> <td>ND</td> </tr> <tr> <td colspan="9">South Direction</td> </tr> <tr> <td>Gurla</td> <td>7.3</td> <td>797</td> <td>1452</td> <td>530</td> <td>521</td> <td>843</td> <td>6.8</td> <td>ND</td> </tr> <tr> <td>Mandita</td> <td>7.5</td> <td>714</td> <td>869</td> <td>918</td> <td>393</td> <td>724</td> <td>6.9</td> <td>ND</td> </tr> <tr> <td colspan="9">East Direction</td> </tr> <tr> <td>Palaita</td> <td>7.4</td> <td>789</td> <td>812</td> <td>312</td> <td>290</td> <td>732</td> <td>7.4</td> <td>ND</td> </tr> <tr> <td>Bamori</td> <td>7.5</td> <td>326</td> <td>757</td> <td>622</td> <td>264</td> <td>476</td> <td>6.5</td> <td>ND</td> </tr> </tbody> </table>	Locations	PH	TDS	TH	T.Aik	Cl	SO4	NO3	PO4				as CaCO3	as CaCO3	as Cl	as SO4	as NO3	as PO4	North Direction									Darbiji	7.5	734	1257	537	317	765	6.1	ND	Surela	7.5	836	1265	576	329	668	6.9	ND	West Direction									Simaliya	7.5	680	1052	445	414	1013	6.3	ND	Polai Kalan	7.5	915	1141	423	602	992	6.9	ND	South Direction									Gurla	7.3	797	1452	530	521	843	6.8	ND	Mandita	7.5	714	869	918	393	724	6.9	ND	East Direction									Palaita	7.4	789	812	312	290	732	7.4	ND	Bamori	7.5	326	757	622	264	476	6.5	ND
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10.	A Disaster Management Plan duly approved by the nodal agency should be submitted before the commissioning of the Plant.	Complied with. Disaster Management plan has been prepared and submitted to all concerned. The same is being reviewed and updated regularly. Revised/ updated copy has been submitted to all concerned.																																																																																																																														
11.	The cultivators who are likely to be affected due to the acquisition of their land shall be settled and rehabilitated as per norms laid down by this Ministry.	Complied with. All issues related to land acquisition have been settled long back.																																																																																																																														
12.	Additional area under the control of the company, which is not being used for the plant utilities, may be afforested and funds for this purpose should be suitably provided.	Complied with. In CFCL Gadepan 34.1 % of the total land area of the complex is covered under the green belt. The green belt is being properly maintained and regular tree plantation is carried out. Adequate funds are provided for greenbelt. A dedicated team headed by Horticulturist is taking care of the maintenance of green belt.																																																																																																																														
13.	A separate Environmental Management Cell with suitably qualified people to carry out various functions related to Environmental Management should be set up under the control of senior technical personnel which will report direct to the head of the organization.	Complied with. A separate Environment Management cell with suitably qualified people to carry out various functions is already operational under control of Senior Executive, who reports directly to the Head of the organization.																																																																																																																														

14	Adequate financial provisions (capital and recurring expenditure) should be made for implementation of all the conditions stipulated herein and the finance so provided will not be diverted for any other purpose.	Complied with. All the jobs related to compliance of stipulated condition have been completed with adequate fund provision. Further regular system of financial budget exist and adequate financial provisions are being made for capital and recurring expenditure for maintaining and improving the environment systems; the allocated funds are only utilized for environment management and are not diverted for other purposes.

**CHAMBAL FERTILISERS AND CHEMICALS LIMITED, GADEPAN
MOEF ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT [PHASE- II]**

(Period April 2022-September 2022)
Letter No. J-11011 / 2 / 96-IA. II (I) DT.24.07.96

EC Conditions:

	Description	Status as on Date																																																																																																															
01	The project authorities must adhere to the stipulations made by the Rajasthan pollution Control Board and the State Govt	CFCL strictly adheres to the stipulations made by the Rajasthan State Pollution Control Board (RSPCB) and the State Government																																																																																																															
02.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment & Forests.	Noted																																																																																																															
03.	The particulate matter and gaseous emissions (SO ₂ , NO _x , NH ₃ and HC) from various process/units should conform the standards prescribed by the concerned authorities, from time to time. Urea dust from the Prilling tower to be commissioned under the expansion proposal should not exceed 50 mg/Nm ³ or 0.5 kg/ Ton of product. At no time, the emission should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit would be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency.	<p>The particulate matter and gaseous emissions from various process/units conform the standards prescribed by the concerned authorities, from time to time. Urea dust from the Prilling tower is well below the prescribed limit of 50 mg/Nm³ or 0.5 Kg/Ton of product.</p> <p>Analysis data for the period from Period April 2022-September 2022 have been shown as under.</p> <table border="1" data-bbox="634 1045 1484 1262"> <thead> <tr> <th>Parameters →</th> <th colspan="3">Dust (mg/nm3)</th> <th colspan="3">Ammonia (mg/nm3)</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Prilling Tower-I</td> <td>46.6</td> <td>40.1</td> <td>43.9</td> <td>76.6</td> <td>57.4</td> <td>65.8</td> </tr> <tr> <td>Prilling Tower-II</td> <td>46.7</td> <td>41.8</td> <td>44.3</td> <td>73.3</td> <td>57.4</td> <td>65.9</td> </tr> </tbody> </table> <p>BAGGING PLANT EMISSIONS</p> <table border="1" data-bbox="634 1304 1484 1503"> <thead> <tr> <th>Parameters →</th> <th colspan="3">Dust mg/nm3</th> <th colspan="3">Ammonia mg/nm3</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Scrubber Screen House</td> <td>24.4</td> <td>13.6</td> <td>18.6</td> <td>28.4</td> <td>16.3</td> <td>22.0</td> </tr> <tr> <td>Scrubber Packing Plant-I</td> <td>26.7</td> <td>12.2</td> <td>17.7</td> <td>29.1</td> <td>13.1</td> <td>21.4</td> </tr> <tr> <td>Scrubber Packing Plant-II</td> <td>19.4</td> <td>13.2</td> <td>16.7</td> <td>26.7</td> <td>14.8</td> <td>22.9</td> </tr> </tbody> </table> <p>Steam, Power Generation & Ammonia Plants Emissions</p> <table border="1" data-bbox="634 1545 1484 1843"> <thead> <tr> <th colspan="8">NO_x (ppm)</th> </tr> <tr> <th colspan="3">Auxiliary Boiler</th> <th colspan="2">Heat Recovery Steam Generation Boiler</th> <th colspan="3">Ammonia Plant Reformer</th> </tr> <tr> <th></th> <th>AB-I</th> <th>AB-II</th> <th>AB-III</th> <th>HRSG-I</th> <th>HRSG-II</th> <th>AMM-I</th> <th>AMM-II</th> </tr> </thead> <tbody> <tr> <td>Max</td> <td>44.1</td> <td>46.6</td> <td>43.0</td> <td>50.0</td> <td>48.8</td> <td>143.0</td> <td>87.0</td> </tr> <tr> <td>Min</td> <td>42.2</td> <td>42.2</td> <td>31.8</td> <td>46.6</td> <td>47.9</td> <td>113.1</td> <td>68.5</td> </tr> <tr> <td>Avg</td> <td>43.2</td> <td>44.3</td> <td>36.6</td> <td>48.4</td> <td>48.4</td> <td>113.0</td> <td>70.8</td> </tr> </tbody> </table>	Parameters →	Dust (mg/nm3)			Ammonia (mg/nm3)			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Prilling Tower-I	46.6	40.1	43.9	76.6	57.4	65.8	Prilling Tower-II	46.7	41.8	44.3	73.3	57.4	65.9	Parameters →	Dust mg/nm3			Ammonia mg/nm3			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Scrubber Screen House	24.4	13.6	18.6	28.4	16.3	22.0	Scrubber Packing Plant-I	26.7	12.2	17.7	29.1	13.1	21.4	Scrubber Packing Plant-II	19.4	13.2	16.7	26.7	14.8	22.9	NO _x (ppm)								Auxiliary Boiler			Heat Recovery Steam Generation Boiler		Ammonia Plant Reformer				AB-I	AB-II	AB-III	HRSG-I	HRSG-II	AMM-I	AMM-II	Max	44.1	46.6	43.0	50.0	48.8	143.0	87.0	Min	42.2	42.2	31.8	46.6	47.9	113.1	68.5	Avg	43.2	44.3	36.6	48.4	48.4	113.0	70.8
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All the pollution control measures form the integral part of the process controlling the pollution by itself. With any process failures plants go to a safe shutdown and are not restarted until the control measures are rectified to achieve the desired efficiency.

04. At least 05 ambient air quality monitoring stations should be set in the down wind direction, as well as where max. Ground level concentration of NO_x, NH₃ & HC is anticipated in the consultation with the State Pollution Control Board. The air quality monitoring stations should be selected on the basis of mathematical modeling to represent short-term ground level concentrations, human settlement, sensitive targets etc. Portholes and sampling facilities should be provided for the stacks as per the Central Pollution Control Board Guidelines. Stack emissions should be monitored in consultation with the State Pollution Control Board. Data on ambient air quality and stack emissions should be submitted to this Ministry once in six months and the State Pollution Control Boards once in three months along with the statistical analysis and interpretation.

05 ambient air quality monitoring stations are already functioning within the factory premises. These stations have been installed in consultation with R.O. RSPCB Kota; considering short term ground level concentration, human settlement, sensitive targets as per comprehensive EIA report. Ambient Air Quality Monitoring at all the five stations is being carried out as per the standard procedure on twice in a week basis and data is regularly submitted to RSPCB & MoEF's Regional Office. Portholes and sampling facilities have been provided for the stacks as per the Central Pollution Control Board Guidelines. Stack emissions are monitored in consultation with the Rajasthan State Pollution Control Board for various defined parameters as per consent conditions. Data of ambient air quality and Stack emissions submitted to MoEF once in six months and to Rajasthan State Pollution Control Board on Quarterly bases. Ambient Air Quality data for the period from Period April 2022- September 2022 have been shown as under.

AAQM STATION AT NORTH SIDE OF HOLDING POND							
	PM ₁₀	PM _{<2.5}	NH ₃	NO _x	Sox	CO	HC
Unit-µg/m ³							
Max	68.0	34.3	56.7	7.9	4.9	<1.0	ND
Min	27.3	20.1	23.1	4.4	2.6	<1.0	ND
Avg	42.9	25.0	37.1	6.4	3.6	<1.0	ND
AAQM STATION AT LAB TECH							
Max	67.7	36.5	66.6	7.7	4.7	<1.0	ND
Min	24.9	18.2	24.4	4.1	2.1	<1.0	ND
Avg	44.1	26.7	41.5	6.2	3.3	<1.0	ND
AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II							
Max	66.3	36.7	59.9	7.9	4.7	<1.0	ND
Min	23.3	16.6	20.5	4.6	2.2	<1.0	ND
Avg	41.5	26.0	37.0	6.2	3.4	<1.0	ND
AAQM STATION AT RAW WATER RESERVOIR							
Max	69.9	35.9	67.9	7.3	4.6	<1.0	ND
Min	23.3	17.2	21.4	3.2	2.3	<1.0	ND
Avg	40.5	25.4	36.6	6.0	3.3	<1.0	ND
AAQM STATION IN COLONY							
Max	72.7	38.3	59.7	7.8	4.5	<1.0	ND
Min	25.9	17.5	25.4	4.2	2.1	<1.0	ND
Avg	44.6	26.3	41.0	6.3	3.3	<1.0	ND

05. Storage of ammonia should not exceed the present level. One storage tank should be kept empty for emergency use.

It is general practice to keep the quantity of liquid ammonia in the storage tanks at the minimum level. A minimum quantity of 500 MT is required in each tank for pumping.

06.	Ammonia should be recycled to the extent possible in the ammonia plant before passing it through stack(s).	Ammonia is recycled to the extent possible in the Ammonia/Urea plant for manufacturing Urea product and it does not pass through stack.																																								
07.	<p>Ammonia gas leakage from storage and loading points should be efficiently controlled or collected and scrubbed or may be sent to incinerator for flaring.</p> <p>Adequate precautions for handling ammonia vapors in case of emergency situation arising due to closure of the plant should be taken.</p>	<p>Ammonia gas leakage from storage and loading points is efficiently controlled. It can be isolated immediately, and fault can be attended. There is also a provision to incinerate the emissions through flaring.</p> <p>Adequate precautions have already been taken at the design stage itself for handling ammonia bearing vapors and non-ammonia bearing process gases which are sent for flaring during emergency situation including startups & shutdowns.</p>																																								
08.	Fugitive emissions should be controlled, regularly monitored and data recorded. Automatic monitors for ammonia should be provided at appropriate places in the plant.	<p>Immediate actions are taken to control fugitive emissions. Regular monitoring is carried out at various points and data are recorded. Automatic monitors for ammonia, Carbon monoxide & Hydrocarbon have been provided at appropriate places in the Urea and Ammonia plants. Analysis data for the period from Period April 2022-September 2022 have been shown as under.</p> <table border="1" data-bbox="634 978 1528 1430"> <thead> <tr> <th>Parameters</th> <th>Locations</th> <th>Phase-I</th> <th>Phase-II</th> <th>Phase-III</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Ammonia (PPM)</td> <td>Carbamate Pump Section / HP section</td> <td>5.0~7.5</td> <td>5.0~7.5</td> <td>7.5~10</td> </tr> <tr> <td>Reformer</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> </tr> <tr> <td>Platform in bagging plant</td> <td colspan="3">2.8 ~ 8.0</td> </tr> <tr> <td>Packing area in bagging plant</td> <td colspan="3">8.8 ~ 12.6</td> </tr> <tr> <td>Operator cabin</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> </tr> <tr> <td rowspan="2">PM (Dust) (mg/Nm³)</td> <td>Platform in bagging plant</td> <td colspan="3">1.0 ~ 5.0</td> </tr> <tr> <td>Packing area in bagging plant</td> <td colspan="3">2.7~3.5</td> </tr> <tr> <td>CO (mg/Nm³)</td> <td>Near Reformer, Near HTS & LTS areas</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> </tbody> </table>	Parameters	Locations	Phase-I	Phase-II	Phase-III	Ammonia (PPM)	Carbamate Pump Section / HP section	5.0~7.5	5.0~7.5	7.5~10	Reformer	<5.0	<5.0	<5.0	Platform in bagging plant	2.8 ~ 8.0			Packing area in bagging plant	8.8 ~ 12.6			Operator cabin	<5.0	<5.0	<5.0	PM (Dust) (mg/Nm ³)	Platform in bagging plant	1.0 ~ 5.0			Packing area in bagging plant	2.7~3.5			CO (mg/Nm ³)	Near Reformer, Near HTS & LTS areas	NT	NT	NT
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09.	Low NOx burners should be used to limit NOx emissions to ensure compliance with the standards.	<p>Low NOx burners have been used to control NOx emissions to ensure compliance with the standards.</p> <table border="1" data-bbox="634 1524 1528 1787"> <thead> <tr> <th rowspan="3"></th> <th colspan="5">NOx (ppm)</th> </tr> <tr> <th colspan="3">Auxiliary Boiler</th> <th colspan="2">Heat Recovery Steam Generation Boiler</th> </tr> <tr> <th>AB-I</th> <th>AB-II</th> <th>AB-III</th> <th>HRSG-I</th> <th>HRSG-II</th> </tr> </thead> <tbody> <tr> <td>Max</td> <td>44.1</td> <td>46.6</td> <td>43.0</td> <td>50.0</td> <td>48.8</td> </tr> <tr> <td>Min</td> <td>42.2</td> <td>42.2</td> <td>31.8</td> <td>46.6</td> <td>47.9</td> </tr> <tr> <td>Avg</td> <td>43.2</td> <td>44.3</td> <td>36.6</td> <td>48.4</td> <td>48.4</td> </tr> </tbody> </table>		NOx (ppm)					Auxiliary Boiler			Heat Recovery Steam Generation Boiler		AB-I	AB-II	AB-III	HRSG-I	HRSG-II	Max	44.1	46.6	43.0	50.0	48.8	Min	42.2	42.2	31.8	46.6	47.9	Avg	43.2	44.3	36.6	48.4	48.4						
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10.	<p>Industry should provide separate outlets for storm Water, waste waters and process effluents. Wastewaters from the raw water treatment plant, DM Plant and the boiler blow down should not be allowed to mix up with the ammonia and urea plant effluents. Proper Segregation of different effluents should be done.</p>	<p>The separate outlets for storm water, Waste waters and process effluents have been provided. Wastewater from the Water Pre-treatment plant is recycled back to the Raw Water reservoir and the Boiler blow down is used for Cooling Water makeup. Other wastewaters like Cooling towers blow down & backwash waste are sent to Holding Ponds. DM Plant waste is sent to ETP. These are not allowed to mix up with the Ammonia and Urea plant effluents. The effluent from Ammonia & Urea Plant is treated in the plant itself and sent to DM plant to reuse as Boiler feed water after polishing. Thus, proper segregation of different effluents is being done.</p>																																																																																
11.	<p>Oil-bearing wastewater should be treated for removal of oily matter before discharge and oil traps should be properly maintained.</p>	<p>Oil bearing waste from running machineries get collected in separate pits in all the plants which is sent to the Oil separator at ETP where oil is recovered into the drums and effluent is transferred to ETP. Recovered oil is handed over to authorized recyclers.</p>																																																																																
12.	<p>Final treatment effluent should conform to the following standard:</p> <table border="1" data-bbox="168 898 605 1186"> <tr><td>pH</td><td>6.5 – 8.5</td></tr> <tr><td>Ammonical Nitrogen</td><td>50 mg/l</td></tr> <tr><td>Total Kjeldahl Nitrogen</td><td>75 mg/l</td></tr> <tr><td>Free Ammonical Nitrogen</td><td>2 mg/l</td></tr> <tr><td>Nitrate Nitrogen</td><td>10 mg/l</td></tr> <tr><td>Cyanide as CN</td><td>0.1 mg/l</td></tr> <tr><td>Vanadium as V</td><td>0.2 mg/l</td></tr> <tr><td>Arsenic as As</td><td>0.2 mg/l</td></tr> <tr><td>Suspended Solids</td><td>100 mg/l</td></tr> <tr><td>Oil and Grease</td><td>10 mg/l</td></tr> </table> <p>The wastewater should be recycled to the extent possible, and efforts should be made to practice zero discharge from the fertilizer complex.</p>	pH	6.5 – 8.5	Ammonical Nitrogen	50 mg/l	Total Kjeldahl Nitrogen	75 mg/l	Free Ammonical Nitrogen	2 mg/l	Nitrate Nitrogen	10 mg/l	Cyanide as CN	0.1 mg/l	Vanadium as V	0.2 mg/l	Arsenic as As	0.2 mg/l	Suspended Solids	100 mg/l	Oil and Grease	10 mg/l	<p>Treated effluent of Holding Pond achieves the standards as given. Analysis data for the period from Period April 2022-September 2022 have been shown as under.</p> <table border="1" data-bbox="634 898 1503 1276"> <thead> <tr> <th></th> <th>Unit</th> <th>Max</th> <th>Min</th> <th>Avg</th> </tr> </thead> <tbody> <tr><td>pH</td><td></td><td>8.10</td><td>7.4</td><td>7.78</td></tr> <tr><td>TSS</td><td>Mg/l</td><td>89.0</td><td>59</td><td>71.8</td></tr> <tr><td>FRC</td><td>Mg/l</td><td>NT</td><td>NT</td><td>NT</td></tr> <tr><td>Nitrate Nitrogen</td><td>Mg/l</td><td>8.2</td><td>5.2</td><td>6.9</td></tr> <tr><td>Phosphate</td><td>Mg/l</td><td>1.3</td><td>1.0</td><td>1.2</td></tr> <tr><td>Ammonical Nitrogen as N</td><td>Mg/l</td><td>31.3</td><td>3.7</td><td>15.2</td></tr> <tr><td>Free Ammonical Nitrogen</td><td>Mg/l</td><td>1.25</td><td>0.15</td><td>0.61</td></tr> <tr><td>TKN as N</td><td>Mg/l</td><td>28.7</td><td>19.7</td><td>24.0</td></tr> <tr><td>COD</td><td>Mg/l</td><td>76.1</td><td>51.2</td><td>64.6</td></tr> <tr><td>BOD</td><td>Mg/l</td><td>9.6</td><td>7.4</td><td>8.7</td></tr> <tr><td>Oil And Grease</td><td>Mg/l</td><td>4.7</td><td>2.2</td><td>3.3</td></tr> </tbody> </table> <p>Remark: Heavy metals like Arsenic, Cyanide and Vanadium not detectable.</p> <p>Cyanide and Arsenic containing compounds/chemicals are not used in any process of our plant.</p> <p>All efforts are being made to recycle the wastewater to the maximum extent. All the condensates including Ammonia Process Condensates, Urea Process condensates, and Turbine Condensates and Steam condensates are recycled back as a boiler feed water. Effluent from DM Plant and Cooling tower blow down is treated in ETP.</p> <p>Final treated effluent is used for green belt development only after meeting the norms as prescribed by the RSPCB/CPCB; within the premises during non-rainy season. During rainy season, treated effluent is discharged into Kalisindh river only after meeting the norms as prescribed by the RSPCB/CPCB. Part of Phase-I&II effluent is also treated in RO-ZLD Plant along with Phase-III effluent. Permeate is recycled back as cooling water makeup. Cyanide and Arsenic containing compounds/chemicals are not used in any process of our plant.</p>		Unit	Max	Min	Avg	pH		8.10	7.4	7.78	TSS	Mg/l	89.0	59	71.8	FRC	Mg/l	NT	NT	NT	Nitrate Nitrogen	Mg/l	8.2	5.2	6.9	Phosphate	Mg/l	1.3	1.0	1.2	Ammonical Nitrogen as N	Mg/l	31.3	3.7	15.2	Free Ammonical Nitrogen	Mg/l	1.25	0.15	0.61	TKN as N	Mg/l	28.7	19.7	24.0	COD	Mg/l	76.1	51.2	64.6	BOD	Mg/l	9.6	7.4	8.7	Oil And Grease	Mg/l	4.7	2.2	3.3
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<p>13.</p>	<p>Guard Pond(s) of sufficient holding capacity should be provided to cope up with the effluents discharged during the process disturbances. The contributing units should be immediately shut down and should not be restarted without bringing the system back to normalcy.</p> <p>Structural stability of the Guard Pond with respect to leakage / cracks and other factors should be ensured.</p> <p>Monitoring of surrounding area ponds and ground water quality (wells) for relevant parameters should be carried out on a regular basis. Nitrate levels in the ground water particularly dug wells; bore wells etc. should especially be monitored to detect NO₃ contamination in the area.</p>	<p>The Guard ponds have sufficient capacity of 10800 M³ to store wastewater. All the pollution control systems from the integral part of the process and controlled by process itself. With any process failure; plant go to a safe shutdown condition; plant is restarted only after rectification.</p> <p>The ponds are regularly inspected and maintained to ensure their structural stability.</p> <p>Piezometer wells have been provided to monitor the ground water quality around Guard ponds and Holding Ponds and the ground water is being analysed to check its Nitrate quality. Analysis reports of Piezometer wells are enclosed. Ground water quality is being monitored at 08 locations around the plant site up to the radius of 10 kms. Analysis data for the period from Period April 2022- September 2022 have been shown as under</p> <table border="1" data-bbox="634 701 1503 1094"> <thead> <tr> <th rowspan="3">Piezometer Well Nos</th> <th colspan="3">Around Guard Pond</th> <th colspan="3">Around Holding Pond</th> </tr> <tr> <th colspan="6">Nitrate (mg/l)</th> </tr> <tr> <th>Max</th> <th>Min</th> <th>Avg</th> <th>Max</th> <th>Min</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7.8</td> <td>5.7</td> <td>6.8</td> <td>8.3</td> <td>6.3</td> <td>7.3</td> </tr> <tr> <td>2</td> <td>7.4</td> <td>4.9</td> <td>6.2</td> <td>7.7</td> <td>4.5</td> <td>6.2</td> </tr> <tr> <td>3</td> <td>5.9</td> <td>3.7</td> <td>5.1</td> <td>7.6</td> <td>5.3</td> <td>6.4</td> </tr> <tr> <td>4</td> <td>8.7</td> <td>5.6</td> <td>6.9</td> <td>8.7</td> <td>4.9</td> <td>6.5</td> </tr> <tr> <td>5</td> <td>6.6</td> <td>5.9</td> <td>6.3</td> <td>7.9</td> <td>3.3</td> <td>5.8</td> </tr> <tr> <td>6</td> <td>7.6</td> <td>5.3</td> <td>6.4</td> <td>7.3</td> <td>5.9</td> <td>6.7</td> </tr> <tr> <td>7</td> <td>7.7</td> <td>4.9</td> <td>6.2</td> <td>7.5</td> <td>5.9</td> <td>6.6</td> </tr> <tr> <td>8</td> <td>8.6</td> <td>4.8</td> <td>6.2</td> <td>8.3</td> <td>4.9</td> <td>7.0</td> </tr> </tbody> </table>	Piezometer Well Nos	Around Guard Pond			Around Holding Pond			Nitrate (mg/l)						Max	Min	Avg	Max	Min	Avg	1	7.8	5.7	6.8	8.3	6.3	7.3	2	7.4	4.9	6.2	7.7	4.5	6.2	3	5.9	3.7	5.1	7.6	5.3	6.4	4	8.7	5.6	6.9	8.7	4.9	6.5	5	6.6	5.9	6.3	7.9	3.3	5.8	6	7.6	5.3	6.4	7.3	5.9	6.7	7	7.7	4.9	6.2	7.5	5.9	6.6	8	8.6	4.8	6.2	8.3	4.9	7.0																																																		
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<p>14.</p>	<p>Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the State Pollution Control Board. Regular monitoring should be carried out for relevant parameters. Routine toxicity test of effluent with fish should also be regularly done.</p>	<p>Regular monitoring of river Kalisindh before and after the confluence point of discharge for various relevant parameters is being done regularly. Reports are being submitted to MoEF & RSPCB as per guidelines. Treated effluent is discharged only during rainy season only. Bioassay test is carried out during discharge of effluent in Kalisindh. Real time and Online Continuous Effluent Monitoring System installed at outlet of final treated effluent and data is being transferred to CPCB and RSPCB.</p>																																																																																																																													

	<p>Monitored data along with statistical analysis and interpretation in the form of a report should be submitted to this Ministry once in six months and the State Pollution Control Board once in three months.</p>	<p>Kalisindh river analysis data for the period from April 2022- September 2022 have been shown as under.</p> <table border="1" data-bbox="634 241 1515 699"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Unit</th> <th colspan="3">KS River (Upstream)</th> <th colspan="3">KS River (Down Stream)</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td></td> <td>8.5</td> <td>8.7</td> <td>8.6</td> <td>8.1</td> <td>8.3</td> <td>8.2</td> </tr> <tr> <td>TSS</td> <td rowspan="10">Mg/l</td> <td>63.5</td> <td>88.5</td> <td>76.3</td> <td>54.5</td> <td>70.0</td> <td>62.7</td> </tr> <tr> <td>FRC</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> <tr> <td>Nitrate Nitrogen</td> <td>3.5</td> <td>4.1</td> <td>3.7</td> <td>3.0</td> <td>3.3</td> <td>3.2</td> </tr> <tr> <td>Phosphate</td> <td>BDL</td> <td>BDL</td> <td>BDL</td> <td>BDL</td> <td>BDL</td> <td>BDL</td> </tr> <tr> <td>Ammonical Nitrogen as N</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> <tr> <td>Free Ammonical Nitrogen</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> <tr> <td>TKN as N</td> <td>8.1</td> <td>10.0</td> <td>9.0</td> <td>7.4</td> <td>8.4</td> <td>7.9</td> </tr> <tr> <td>COD</td> <td>8.9</td> <td>11.4</td> <td>10.1</td> <td>7.2</td> <td>8.3</td> <td>7.8</td> </tr> <tr> <td>BOD</td> <td>3.0</td> <td>3.4</td> <td>3.2</td> <td>2.1</td> <td>2.8</td> <td>2.5</td> </tr> </tbody> </table>		Unit	KS River (Upstream)			KS River (Down Stream)			Min	Max	Avg	Min	Max	Avg	pH		8.5	8.7	8.6	8.1	8.3	8.2	TSS	Mg/l	63.5	88.5	76.3	54.5	70.0	62.7	FRC	NT	NT	NT	NT	NT	NT	Nitrate Nitrogen	3.5	4.1	3.7	3.0	3.3	3.2	Phosphate	BDL	BDL	BDL	BDL	BDL	BDL	Ammonical Nitrogen as N	NT	NT	NT	NT	NT	NT	Free Ammonical Nitrogen	NT	NT	NT	NT	NT	NT	TKN as N	8.1	10.0	9.0	7.4	8.4	7.9	COD	8.9	11.4	10.1	7.2	8.3	7.8	BOD	3.0	3.4	3.2	2.1	2.8	2.5
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15.		<p>The industry should provide a purge gas recovery unit for removing Ammonia, H₂ and CH₄ instead of burning in the Primary reformer.</p>	<p>Ammonia recovery unit for Purge gas is under operation. CFCL Phase-II plant's feedstock was changed from Naphtha to RLNG in 2007. Due to plant operation on lean natural gas as feedstock, there is excess of H₂ (hence ammonia) generation Therefore, the further recovery of H₂ from purge gas to produce ammonia is not feasible.</p>																																																																																					
16.	<p>The hazardous wastes should be handled as per the Hazardous Waste (Management & Handling) Rules, 1989 as amended in Oct, 1994.</p>	<p>CFCL strictly complies with the rules and regulations about handling and disposal of hazardous wastes in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules; 2016. The generated spent catalyst sold out to the authorized parties registered with the MOEF and CPCB for metal recovery / reuse after processing. In case no refiner lifts the spent catalyst same is disposed to Rajasthan waste management project, CTDF Udaipur and used oil is sold out to the authorized / reprocessing of the oil. Discarded containers are disposed to Rajasthan waste management project, CTDF Udaipur. Form-4 (Annual return for hazardous waste) and Form-10 (Hazardous waste manifest) are being submitted on regular basis to RSPCB. Form-3 is maintained by us at site.</p>																																																																																						
17.	<p>Handling, manufacture, storage and transport of hazardous chemicals should be in accordance with the Manufacture, storage and Import of Hazardous chemicals Rules, 1989 as amended in Oct, 1994</p>	<p>Handling, manufacture, storage and transport of hazardous chemicals are in accordance with the Manufacture, storage and Import of Hazardous chemicals Rules, 1989 as amended in year 1994 & 2000. Safety report is prepared and submitted to RSPCB Kota & CIFB Jaipur. Mock drills are conducted periodically. On site Emergency plan (DMP) is in place and reviewed periodically and same is submitted to RSPCB & CIFB Office. All Hazardous chemicals are adequately stored and marked.</p>																																																																																						
18.	<p>Adequate measures for the control of noise should be taken so as to keep the noise levels below 85 dB in the work environment. Persons working near the noisy machines like ammonia plant, Urea Plant, TG,</p>	<p>An adequate measure for the control of noise has been taken so as to keep the noise levels below 85 dB in the work environment. Persons working near the noisy machines like ammonia plant compressor area, Urea Plant compressor area, GT etc. have been provided with well-designed earmuffs / plugs.</p>																																																																																						

	Compressor room, etc. should be provided with well-designed earmuffs / plugs.	
19.	Non-chromate system be used in all the Cooling towers, In case, zinc is also used with non-chromate dosing, its level in blow-down and sludge should be kept below prescribed Standards.	Non-chromate with low Zinc inhibitor system has been used for cooling water treatment in all cooling towers.
20.	Suitable alarm system and standards procedures for transmitting the information on the occurrence of an accident to the proper focal point should be established. Step should also be taken to ensure access to information on weather conditions prevailing at that time and weather forecast. Windsocks at appropriate locations should be provided. Graphs / monograms indicating spatial distribution of concentrations of toxic gas during day and night under different stability classes and wind conditions should be prepared and displayed at appropriate locations so as to help the designated emergency officer/team to organize rescue operations in case of accidental release of toxic gases / vapors	Suitable Alarm System and Standard Procedures for transmitting the information on occurrence of an accident or emergency are already functioning. On site DMP has been prepared. Mock Drills are organized as per schedule. Windsocks at Appropriate locations have been provided to indicate the wind direction. Online Wind Monitor has been installed to know about the Wind speed, Wind direction, Ambient Temperature etc. for better assessment. Risk analysis has been carried out indicating spatial distribution of concentrations of Hazardous chemicals stored in the premises. All relevant information is available at designated places for rescue team.
21.	Efforts should be made to increase green belt all around the fertilizer complex and the township. Native plant species should only be selected for this purpose in consultation with the local DFO/Agriculture Department.	Efforts have been made to increase green belt all around the fertilizer complex and the township. Native plant species have been selected for this purpose in consultation with the local DFO/Agriculture departments.
22.	The project authorities should set up laboratory facilities for collection and analysis of samples under supervision of competent technical personnel who will directly report to the Chief Executive.	The project authorities have set up laboratory facilities for collection and analysis of samples under supervision of competent technical personnel who directly reports to the Chief Executive.

23.	A separate Environmental Management cell with suitably qualified people to carry out various functions should be set up under the control of Senior Executive, who will report directly to the Head of the organization.	A separate Environmental Management cell with suitably qualified people to carry out various functions has been set up under the control of Senior Executive, who reports directly to the Head of the organization.
24.	Periodic medical check-up of the workers should be done and records maintained.	Periodic medical check-up of the working staff is being carried out and Medical Officer maintains the records.
25.	The funds earmarked for the environmental protection measures should not be diverted for other purpose and year-wise expenditure should be reported to this Ministry and to the state pollution Control Board under the rules prescribed for environmental audit.	The funds earmarked for the environmental protection measures are not allowed to divert for other purpose. Investment on environmental protection during the April 2022-September 2022 is Rs. 245.7 lakh for Phase-I, Phase-II and Phase-III plants.

Environmental Clearance: Letter No J-11011 / 152 / 2006-IA-II (I) Dt. 21.05.2007 and corrigendum dated 18.09.2007

For Revamping of Ammonia and Urea Plant at Gadepan, Kota; Rajasthan by M/S Chambal Fertilisers and Chemicals Ltd (CFCL)

(Period April 2022-September 2022)

EC Conditions:

SI No as per EC	Description	Status as on Date
2.0	<p>The Ministry of Environment & Forests has examined the application. It is noted that CFCL have proposed for the revamping/expansion of existing capacity of Ammonia and Urea from 3,040 & 5240 to 3900 and 6,800 TPD respectively at Gadepan, Kota, Rajasthan.</p> <p>Total land available is 800 ha and expansion will be carried out in 400 ha.</p>	<p>Complied with.</p> <p>Combined EC of Phase-I, II, III and revamping of Phase-I & Phase-II was issued vide Environment clearance letter.no. J-11011 / 664 /2008-IA II (I) DT.18.06.2021 & amendment letter dated 16th Nov 2021 for amalgamation of production capacities of CFCL Ammonia Urea Plant Complex at Gadepan.</p> <p>For Compliance refer point no-13a (page no.-34-35).</p>
3.0	<p>Low NOX burners will be installed to reduce NOx emissions. SO2 will be significantly reduced due to use of NG. To control the fugitive emissions/odour nuisance, ammonia and ammonical water will be routed through closed drains/pipes and discharged to atmosphere through vent stacks after scrubbing with condensate. Total water requirement from Kali Sindh River will be 41,760 m3/d for which 'Permission' has been accorded by the Irrigation Department. All the treated effluent will be recycled and reused in the process or used for green belt development within the premises during non-rainy season. During rainy season, treated effluent will be discharged into Kali Sindh River only after meeting the norms as prescribed by the SPCB / CPCB. Sludge from ETP and STP generated as solid waste will be used as manure within CFCL premises. Used oil and spent catalyst will be sold to authorized Recyclers/reprocessors.</p>	<p>No new boiler has been installed in Revamp.</p> <p>To control the fugitive emissions/odor nuisance, ammonical water is routed through closed pipes and ammonia is recovered and recycled back to process.</p> <p>Total water drawl from Kali Sindh river is within prescribed limits; the maximum water drawl from Kali Sindh river on any day in the period was 38,785 m3/d</p> <p>All the treated effluent (process condensates) is recycled and reused in the process.</p> <p>Cooling towers blow down, DM plant regeneration effluent etc after treatment are used for green belt development only after meeting the norms as prescribed by the SPCB / CPCB; within the premises during non-rainy season. During rainy season, treated effluent is discharged into Kali Sindh River only after meeting the norms as prescribed by the SPCB / CPCB.</p> <p>STP Sludge is used as manure within CFCL premises.</p> <p>Used oil and spent catalyst is sold to authorized Recyclers/reprocessors.</p>

4.0	Public hearing meeting was held on 13th April 2006. 'NOC' has been accorded by the Rajasthan State Pollution Control Board (RSPCB) vide letter no. F12 (21-63) RSCB/G.I./312 dated 31st May, 2006. Air and water consents for the existing plant have also been accorded by the RSPCB which is valid upto 30.06.2006. Total cost of the project is Rs 685.60 Crores.	Air & Water consents renewed and valid up to 31.12.2026, accorded by RSPCB																																																															
5.0	The Ministry of Environment and Forests hereby accords environmental clearance to the above unit under the EIA Notification, 1994 as amended subsequently subject to the compliance of the terms and conditions mentioned below:	Noted																																																															
A	SPECIFIC CONDITIONS:																																																																
[i]	The gaseous emissions (SO ₂ , NO _x , NH ₃ , Urea dust) particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. Low-NO _x burners shall be installed in boiler and reformer to reduce NO _x emissions and shall be monitored as per the CPCB guidelines. CO ₂ recovery plant shall be installed to reduce CO ₂ emissions in the environment. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	<p>The gaseous emissions (SO₂, NO_x, NH₃, Urea dust) particulate matter from various process units conform to the standards prescribed by RSPCB. Emissions monitoring data from various sources for the period from Period April 2022-September 2022 have been shown as under</p> <table border="1" data-bbox="683 1010 1507 1409"> <thead> <tr> <th>Parameters →</th> <th colspan="3">Dust (mg/nm³)</th> <th colspan="3">Ammonia (mg/nm³)</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Prilling Tower-I</td> <td>46.6</td> <td>40.1</td> <td>43.9</td> <td>76.6</td> <td>57.4</td> <td>65.8</td> </tr> <tr> <td>Prilling Tower-II</td> <td>46.7</td> <td>41.8</td> <td>44.3</td> <td>73.3</td> <td>57.4</td> <td>65.9</td> </tr> <tr> <th>Parameters →</th> <th colspan="3">Dust (mg/nm³)</th> <th colspan="3">Ammonia (mg/nm³)</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> <tr> <td>Scrubber Screen House</td> <td>24.4</td> <td>13.6</td> <td>18.6</td> <td>28.4</td> <td>16.3</td> <td>22.0</td> </tr> <tr> <td>Scrubber Packing Plant-I</td> <td>26.7</td> <td>12.2</td> <td>17.7</td> <td>29.1</td> <td>13.1</td> <td>21.4</td> </tr> <tr> <td>Scrubber Packing Plant-II</td> <td>19.4</td> <td>13.2</td> <td>16.7</td> <td>26.7</td> <td>14.8</td> <td>22.9</td> </tr> </tbody> </table>	Parameters →	Dust (mg/nm ³)			Ammonia (mg/nm ³)			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Prilling Tower-I	46.6	40.1	43.9	76.6	57.4	65.8	Prilling Tower-II	46.7	41.8	44.3	73.3	57.4	65.9	Parameters →	Dust (mg/nm ³)			Ammonia (mg/nm ³)			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Scrubber Screen House	24.4	13.6	18.6	28.4	16.3	22.0	Scrubber Packing Plant-I	26.7	12.2	17.7	29.1	13.1	21.4	Scrubber Packing Plant-II	19.4	13.2	16.7	26.7	14.8	22.9
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[ii]	In urea plant, particulate emissions shall not exceed 50 mg/Nm ³ . Monitoring of Prilling tower shall be carried out as per the CPCB guidelines. Hydrocarbon monitors shall also be installed.	Emissions from Prilling towers are within prescribed norms. Analysis data for the period from Period April 2022- September 2022 have been shown as under. <table border="1" data-bbox="683 1010 1484 1192"> <thead> <tr> <th rowspan="2">Parameter</th> <th colspan="3">Dust mg/nm³</th> <th colspan="3">Ammonia mg/nm³</th> </tr> <tr> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Locations</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Prilling Tower-I</td> <td>46.6</td> <td>40.1</td> <td>43.9</td> <td>76.6</td> <td>57.4</td> <td>65.8</td> </tr> <tr> <td>Prilling Tower-II</td> <td>46.7</td> <td>41.8</td> <td>44.3</td> <td>73.3</td> <td>57.4</td> <td>65.9</td> </tr> </tbody> </table>	Parameter	Dust mg/nm ³			Ammonia mg/nm ³			MAX	MIN	AVG	MAX	MIN	AVG	Locations							Prilling Tower-I	46.6	40.1	43.9	76.6	57.4	65.8	Prilling Tower-II	46.7	41.8	44.3	73.3	57.4	65.9													
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[iii]	To control the fugitive emissions/odour nuisance ammonia and ammonical water from different pump ground leakages, vents, vessels etc. will be routed through closed drains/pipes and shall be connected to the vent stacks. Hydrolyser stripper and Ammonia stripper will be revamped during expansion and Ammonia will be discharged to atmosphere through vent stacks after scrubbing with condensate.	To control the fugitive emissions; ammonical water from different pump gland leakages etc. are routed through closed drains/pipes for recovery and off gases after scrubbing are connected to the vent stack. Hydrolyser strippers in urea plant and process condensate strippers in Ammonia plants have been revamped. Entire stripped condensate is recycled back to process as boiler feed water																																															

[iv]	<p>Ambient air quality monitoring stations shall be set up in the downwind direction as well as where maximum ground level concentration are anticipated in consultation with the RSPCB, and data submitted to the Ministry's Regional Office at Lucknow six monthly and RSPCB quarterly alongwith statistical analysis.</p>	<p>05 Ambient Air Quality Monitoring Stations are functioning within the factory premises; these stations have been installed in consultation with R.O. Kota.</p> <p>Ambient Air Quality Monitoring at all the five stations are being carried out as per the standard procedures on bi-weekly basis and data regularly submitted to RSPCB & MoEF's Regional Office.</p> <p>Analysis data for the period from Period April 2022-Septemberf 2022 have been shown as under.</p> <table border="1" data-bbox="685 451 1484 1167"> <thead> <tr> <th colspan="8">AAQM STATION AT NORTH SIDE OF HOLDING POND</th> </tr> <tr> <th></th> <th>PM₁₀</th> <th>PM_{<2.5}</th> <th>NH₃</th> <th>NO_x</th> <th>SO_x</th> <th>CO</th> <th>HC</th> </tr> <tr> <td></td> <td colspan="7" style="text-align: center;">µg/m³</td> </tr> </thead> <tbody> <tr> <td>Max</td> <td>68.0</td> <td>34.3</td> <td>56.7</td> <td>7.9</td> <td>4.9</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>27.3</td> <td>20.1</td> <td>23.1</td> <td>4.4</td> <td>2.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>42.9</td> <td>25.0</td> <td>37.1</td> <td>6.4</td> <td>3.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT LAB TECH</th> </tr> <tr> <td>Max</td> <td>67.7</td> <td>36.5</td> <td>66.6</td> <td>7.7</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>24.9</td> <td>18.2</td> <td>24.4</td> <td>4.1</td> <td>2.1</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>44.1</td> <td>26.7</td> <td>41.5</td> <td>6.2</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II</th> </tr> <tr> <td>Max</td> <td>66.3</td> <td>36.7</td> <td>59.9</td> <td>7.9</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>16.6</td> <td>20.5</td> <td>4.6</td> <td>2.2</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>41.5</td> <td>26.0</td> <td>37.0</td> <td>6.2</td> <td>3.4</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT RAW WATER RESERVOIR</th> </tr> <tr> <td>Max</td> <td>69.9</td> <td>35.9</td> <td>67.9</td> <td>7.3</td> <td>4.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>17.2</td> <td>21.4</td> <td>3.2</td> <td>2.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>40.5</td> <td>25.4</td> <td>36.6</td> <td>6.0</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION IN COLONY</th> </tr> <tr> <td>Max</td> <td>72.7</td> <td>38.3</td> <td>59.7</td> <td>7.8</td> <td>4.5</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>25.9</td> <td>17.5</td> <td>25.4</td> <td>4.2</td> <td>2.1</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>44.6</td> <td>26.3</td> <td>41.0</td> <td>6.3</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> </tbody> </table>	AAQM STATION AT NORTH SIDE OF HOLDING POND									PM ₁₀	PM _{<2.5}	NH ₃	NO _x	SO _x	CO	HC		µg/m ³							Max	68.0	34.3	56.7	7.9	4.9	<1.0	ND	Min	27.3	20.1	23.1	4.4	2.6	<1.0	ND	Avg	42.9	25.0	37.1	6.4	3.6	<1.0	ND	AAQM STATION AT LAB TECH								Max	67.7	36.5	66.6	7.7	4.7	<1.0	ND	Min	24.9	18.2	24.4	4.1	2.1	<1.0	ND	Avg	44.1	26.7	41.5	6.2	3.3	<1.0	ND	AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II								Max	66.3	36.7	59.9	7.9	4.7	<1.0	ND	Min	23.3	16.6	20.5	4.6	2.2	<1.0	ND	Avg	41.5	26.0	37.0	6.2	3.4	<1.0	ND	AAQM STATION AT RAW WATER RESERVOIR								Max	69.9	35.9	67.9	7.3	4.6	<1.0	ND	Min	23.3	17.2	21.4	3.2	2.3	<1.0	ND	Avg	40.5	25.4	36.6	6.0	3.3	<1.0	ND	AAQM STATION IN COLONY								Max	72.7	38.3	59.7	7.8	4.5	<1.0	ND	Min	25.9	17.5	25.4	4.2	2.1	<1.0	ND	Avg	44.6	26.3	41.0	6.3	3.3	<1.0	ND
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Min	23.3	16.6	20.5	4.6	2.2	<1.0	ND																																																																																																																																																																											
Avg	41.5	26.0	37.0	6.2	3.4	<1.0	ND																																																																																																																																																																											
AAQM STATION AT RAW WATER RESERVOIR																																																																																																																																																																																		
Max	69.9	35.9	67.9	7.3	4.6	<1.0	ND																																																																																																																																																																											
Min	23.3	17.2	21.4	3.2	2.3	<1.0	ND																																																																																																																																																																											
Avg	40.5	25.4	36.6	6.0	3.3	<1.0	ND																																																																																																																																																																											
AAQM STATION IN COLONY																																																																																																																																																																																		
Max	72.7	38.3	59.7	7.8	4.5	<1.0	ND																																																																																																																																																																											
Min	25.9	17.5	25.4	4.2	2.1	<1.0	ND																																																																																																																																																																											
Avg	44.6	26.3	41.0	6.3	3.3	<1.0	ND																																																																																																																																																																											
[v]	<p>Total water requirement after expansion shall not exceed 41,760 m³/d as per the permission accorded by the Irrigation Department, Govt. of Rajasthan Efforts shall be made to reduce water consumption by adopting water conservation measures and recycling & reusing treated waste water in the process to reduce the fresh water consumption or for green belt development within the premises. No effluent shall be discharged outside the premises except during the rainy season into Kali Sindh river after meeting the norms prescribed under the E (P) Act, 1986 and RSPCB whichever are more stringent.</p>	<p>Total water drawl from Kali Sindh River is within prescribed limits; the maximum water drawl from Kali Sindh river on any day in the period was 38,785 m³/d.</p> <p>Continuous efforts are made for water conservation, entire process condensates are reused in process after treatment</p> <p>Cooling tower blow down, DM plant regeneration effluent etc after treatment are used for green belt development only after meeting the norms as prescribed by the SPCB / CPCB; within the premises during non-rainy season. During rainy season, treated effluent is discharged into Kali Sindh River only after meeting the norms as prescribed by the SPCB / CPCB</p>																																																																																																																																																																																

[vi]	Regular monitoring of ground water by installing piezometric wells around the guard pond shall be periodically monitored and reports submitted to Ministry's Regional Office at, CPCB and RSPCB.	<p>Regular monitoring of ground water is done through piezometric wells around the guard pond & holding pond and reports are submitted to Ministry's Regional Office, CPCB and RSPCB.</p> <p>Analysis data for the period from April 2022- September 2022 have been shown as under.</p> <table border="1" data-bbox="683 338 1507 737"> <thead> <tr> <th rowspan="3">Piezometer Well Nos</th> <th colspan="3">Around Guard Pond</th> <th colspan="3">Around Holding Pond</th> </tr> <tr> <th colspan="6">Nitrate (mg/l)</th> </tr> <tr> <th>Max</th> <th>Min</th> <th>Avg</th> <th>Max</th> <th>Min</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7.8</td> <td>5.7</td> <td>6.8</td> <td>8.3</td> <td>6.3</td> <td>7.3</td> </tr> <tr> <td>2</td> <td>7.4</td> <td>4.9</td> <td>6.2</td> <td>7.7</td> <td>4.5</td> <td>6.2</td> </tr> <tr> <td>3</td> <td>5.9</td> <td>3.7</td> <td>5.1</td> <td>7.6</td> <td>5.3</td> <td>6.4</td> </tr> <tr> <td>4</td> <td>8.7</td> <td>5.6</td> <td>6.9</td> <td>8.7</td> <td>4.9</td> <td>6.5</td> </tr> <tr> <td>5</td> <td>6.6</td> <td>5.9</td> <td>6.3</td> <td>7.9</td> <td>3.3</td> <td>5.8</td> </tr> <tr> <td>6</td> <td>7.6</td> <td>5.3</td> <td>6.4</td> <td>7.3</td> <td>5.9</td> <td>6.7</td> </tr> <tr> <td>7</td> <td>7.7</td> <td>4.9</td> <td>6.2</td> <td>7.5</td> <td>5.9</td> <td>6.6</td> </tr> <tr> <td>8</td> <td>8.6</td> <td>4.8</td> <td>6.2</td> <td>8.3</td> <td>4.9</td> <td>7.0</td> </tr> </tbody> </table>	Piezometer Well Nos	Around Guard Pond			Around Holding Pond			Nitrate (mg/l)						Max	Min	Avg	Max	Min	Avg	1	7.8	5.7	6.8	8.3	6.3	7.3	2	7.4	4.9	6.2	7.7	4.5	6.2	3	5.9	3.7	5.1	7.6	5.3	6.4	4	8.7	5.6	6.9	8.7	4.9	6.5	5	6.6	5.9	6.3	7.9	3.3	5.8	6	7.6	5.3	6.4	7.3	5.9	6.7	7	7.7	4.9	6.2	7.5	5.9	6.6	8	8.6	4.8	6.2	8.3	4.9	7.0
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[vii]	Spent catalysts generated shall be properly stored in closed metallic drums before selling to authorized recyclers/reprocessors. Used oil and spent catalyst shall also be sold to authorized recyclers/reprocessors. Sludge from raw water treatment plant and STP sludge generated as solid waste shall be used as manure within CFCL premises.	Spent catalysts generated are properly stored in closed metallic drums and are sold to authorized recyclers/reprocessors. In case no refiner lifts the spent catalyst same is disposed to Rajasthan waste management project, CTDF Udaipur and used oil is sold out to the authorized parties registered with the MOEF and CPCB for recovery / reuse/ reprocessing of the oil. Discarded containers are disposed to Rajasthan waste management project, CTDF Udaipur. Used oil is sold to authorized recyclers/reprocessors. Contaminated cotton rags are sent to approved common incinerator. Form-4 (Annual return for hazardous waste) and Form-10 (Hazardous waste manifest) are being submitted on regular basis to RSPCB. Form-3 is maintained by us at site. Sludge from raw water treatment plant and STP is used as manure within CFCL premises.																																																																											
[viii]	The company shall undertake adequate protection measures for handling of ammonia vapours in case of plant upset conditions. Safety valve exhaust and drains shall be connected to a separate close header from which ammonia vapours shall be vented from vent stack after diluting with steam.	Adequate protection measures are in place for handling of ammonia vapours in case of plant upset conditions. Safety valve and vents are connected to a separate close header with provision for dilution with steam before venting at safe height																																																																											
[ix]	The company shall implement all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries.	CFCL has implemented all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries.																																																																											

[x]	The company shall develop rain water harvesting structures to harvest the runoff water from the roof tops and by laying a separate storm water drainage system for recharge of ground water.	CFCL has constructed rain water harvesting structures (check dam) on nearby Kalisindh and Parwan rivers. Two nos rain water harvesting recharge wells are operational in the township area to harvest run off rain water. Similar activities are planned outside of the campus in the year 2022-23
[xi]	Green belt shall be developed in at least 33 % of total plant area excluding lawns etc. and properly maintained. An effort shall be made to further increase the percentage by regularly planting trees at all the vacant spaces to mitigate the effects of fugitive emissions all around the plant as per the Central Pollution Control Board guidelines. Density of trees at the site shall be maintained as 2,000-2,500 trees/ha.	In CFCL Gadepan 34.1 % of total area developed under the green belt. The green belt is being properly maintained and regular tree plantation is carried out. Regarding the plant density every plant species has their optimal spacing depending upon type of species, climate, usage, land and soil type. CFCL Green belt development has been based on the optimal spacing as per recommendation of literature, books and experts.
B	GENERAL CONDITIONS:	
[i]	The project authorities must strictly adhere to the stipulations made by the Rajasthan State Pollution Control Board (RSPCB) and the State Government.	CFCL strictly adheres to the stipulations made by the Rajasthan State Pollution Control Board (RSPCB) and the State Government.
[ii]	No further expansion/modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Noted.
[iii]	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management & Handling) Rules, 2003.	CFCL strictly complies with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The generated spent catalyst sold out to the authorized parties registered with the MOEF and CPCB for metal recovery / reuse after processing. Incase no refiner lifts the spent catalyst same is disposed to Rajasthan waste management project, CTDF Udaipur and used oil is sold out to the authorized parties registered with the MOEF and CPCB for recovery / reuse/ reprocessing of the oil. Discarded containers are disposed to Rajasthan waste management project, CTDF Udaipur. Contaminated cotton rags are sent to approved common incinerator. Form-4 (Annual return for hazardous waste) and Form-10 (Hazardous waste manifest) are being submitted on regular basis to RSPCB. Form-3 is maintained by us at site.

[iv]	The project proponent shall also comply with all the safeguards recommended in the EIA/EMP Report.	CFCL has complied with all the safeguards recommended in the EIA/EMP Report.
[v]	The project authorities will set up a separate environmental management cell for effective implementation of all the above stipulations under control of Senior Executive.	A separate Environmental Management cell with suitably qualified people to carry out various functions is already operational under the control of Senior Executive, who reports directly to the Head of the organization.
[vi]	As proposed in EIA/EMP, Rs. 3.20 Crores allocated towards environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and a time bound implementation schedule for all the conditions stipulated here in shall be submitted. The funds so provided shall not be diverted for any other purposes.	Rs. 4.095 Crores have been utilized towards environmental pollution control measures during the revamp project implementation.
[vii]	The Regional Office of this Ministry at Lucknow / CPCB / RSPCB shall monitor the stipulated conditions. A six monthly compliance status report and the monitored data alongwith statistical interpretation shall be submitted to monitoring agencies regularly.	Six monthly compliance status report and the monitored data is submitted to monitoring agencies regularly.
[viii]	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 RSPCB / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This should 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 Regional office at Lucknow.	Public was informed regarding environment clearance by publicizing in local newspapers and copies of newspaper were submitted to MoEF vide our letter SMEQC/01/87/285286 dated 05.03. 2008

[ix]	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 commencing the land development work, if any.	Date of financial closure of the revamp project is 27.10.2010
6.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
7.0	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.	Noted
8.0	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Air & Water consents renewed and valid up to 31.12.2026, accorded by RSPCB Environment statement, Form-4 (annual return for hazardous waste) and Form-10 (hazardous waste manifest) are being submitted on regular basis to RSPCB. Form -3 is maintained by us at site. Public Liability Insurance policy is taken and is renewed regularly. Copy of Policy (Valid up to 18.01.2023) has been submitted to RSPCB.

Chambal Fertilisers and Chemicals Limited
CFG3 Project

Reference: Environment clearance letter .no. J-11011/664/2008-IAII (I) dated 22nd April 2010
& amendment letter dated 10th June, 2011 and validity extension letter
Dated 22nd June, 2015.

(Period April 2022-September 2022)

A. SPECIFIC CONDITIONS:

Clause No.	Description	Status as on Date																																																														
Point no. (i)	The company shall comply with all the conditions stipulated in the environmental clearances issued vide letters no. J-11011/2/96-IA-II dated 24.7.1996, and letter no. J-11011/152/2006-IA-II (I) dated 18.9.2007	Being complied and half-yearly compliance report is being submitted to MOEF.																																																														
Point no. (ii)	The company shall undertake measures for water conservation. The specific water consumption shall not exceed 8 m3/MT of Urea. The waste water generated from all the sources after treatment shall be recycled back in the process to maintain Zero discharge condition. The process water condensate shall be recycled as boiler feed water. The waste water generation shall not exceed 5 m3/MT of urea produced.	Plants are designed to achieve water consumption not exceeding 8 m3/MT of Urea. RO-ZLD unit is in operation. The waste water generated is being treated in RO-ZLD Plant and permeate is recycled as cooling tower makeup. The process water condensates (Ammonia & Urea Process condensates, Turbine Condensates and Steam Condensates are recycled as boiler feed water. Plants are designed to achieve waste water generation not exceeding 5 m3/MT of Urea.																																																														
Point no. (iii)	The project authority shall obtain prior permission from State Irrigation Department. A copy of permission shall be submitted to the Ministry's Regional Office at Lucknow.	Complied with																																																														
Point no. (iv)	The gaseous emissions (NOx, NH3, Urea dust) from various units shall conform to the prescribed standards. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system (s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	Plants are designed to maintain the emissions well within the prescribed standards. Monitoring report by MoEF approved lab is attached. Unit shall not be kept operational if there is any deviation from permissible limits/ norms until the control measures are rectified to achieve the desired efficiency. Analysis data for the period from April 2022-September 2022 have been shown as under. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Parameters</th> <th colspan="3">Dust (mg/nm3)</th> <th colspan="3">Ammonia (mg/nm3)</th> </tr> <tr> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Scrubber Screen House-III</td> <td>29.7</td> <td>11.1</td> <td>18.9</td> <td>30.4</td> <td>15.6</td> <td>21.8</td> </tr> <tr> <td>Scrubber Packing Plant-III</td> <td>26.7</td> <td>12.4</td> <td>19.0</td> <td>31.2</td> <td>13.6</td> <td>20.4</td> </tr> <tr> <td>Prilling Tower-III</td> <td>47.3</td> <td>40.3</td> <td>43.8</td> <td>76.6</td> <td>52.7</td> <td>63.6</td> </tr> <tr> <td colspan="4" style="text-align: center;">Parameters</td> <td colspan="3" style="text-align: center;">NOx Analysis (ppm)</td> </tr> <tr> <td colspan="4"></td> <td>MAX</td> <td>MIN</td> <td>AVG</td> </tr> <tr> <td colspan="4">Heat recover Steam generation-III</td> <td>41.2</td> <td>32.9</td> <td>36.6</td> </tr> <tr> <td colspan="4">Ammonia Plant –Reformer-III</td> <td>88.3</td> <td>57.0</td> <td>72.2</td> </tr> </tbody> </table>	Parameters	Dust (mg/nm3)			Ammonia (mg/nm3)			MAX	MIN	AVG	MAX	MIN	AVG	Scrubber Screen House-III	29.7	11.1	18.9	30.4	15.6	21.8	Scrubber Packing Plant-III	26.7	12.4	19.0	31.2	13.6	20.4	Prilling Tower-III	47.3	40.3	43.8	76.6	52.7	63.6	Parameters				NOx Analysis (ppm)							MAX	MIN	AVG	Heat recover Steam generation-III				41.2	32.9	36.6	Ammonia Plant –Reformer-III				88.3	57.0	72.2
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Point no. (v)	The company shall upload the status of compliance of the stipulated environmental clearance conditions. Including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF, the respective Zonal office of CPCB and the state pollution control board .The level of PM10 ,NH3, methane and NOx (ambient levels) and emission from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.	Status of the compliance is updated on the CFCL website and simultaneously reports are submitted to MoEF office and CPCB Bhopal office with a copy to RPCB Jaipur once in six months. As directed by MoEF, Ambient air quality and Stack emissions are displayed near the main gate.																																												
Point no. (vi)	To control fugitive emissions, regular monitoring of shop floor environment shall be carried. Leakages in the form of gases, liquid and dust emission shall be checked and mitigative measures taken. The company shall provide de-dusting system at all the transfer points in the bagging system. The dust emissions from the urea plant shall conform to the prescribed standards.	Work place monitoring for different parameters like Ammonia, Carbon monoxide and urea dust is carried out regularly. Analysis data for the period from Period April 2022- September 2022 have been shown as under :																																												
		<table border="1"> <thead> <tr> <th>Parameters</th> <th>Locations</th> <th>Phase-I</th> <th>Phase-II</th> <th>Phase-III</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Ammonia (PPM)</td> <td>Carbamate Pump Section / HP section</td> <td>5.0~7.5</td> <td>5.0~7.5</td> <td>7.5~10.0</td> </tr> <tr> <td>Reformer</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> </tr> <tr> <td>Platform in bagging plant</td> <td colspan="3">2.8 ~ 8.0</td> </tr> <tr> <td>Packing area in bagging plant</td> <td colspan="3">8.8 ~ 12.6</td> </tr> <tr> <td>Operator cabin</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> </tr> <tr> <td rowspan="2">PM (Dust) (mg/Nm³)</td> <td>Platform in bagging plant</td> <td colspan="3">1.0 ~ 5.0</td> </tr> <tr> <td>Packing area in bagging plant</td> <td colspan="3">2.7~3.5</td> </tr> <tr> <td>CO (mg/Nm³)</td> <td>Near Reformer, Near HTS & LTS areas</td> <td>NT</td> <td>NT</td> <td>NT</td> </tr> </tbody> </table>					Parameters	Locations	Phase-I	Phase-II	Phase-III	Ammonia (PPM)	Carbamate Pump Section / HP section	5.0~7.5	5.0~7.5	7.5~10.0	Reformer	<5.0	<5.0	<5.0	Platform in bagging plant	2.8 ~ 8.0			Packing area in bagging plant	8.8 ~ 12.6			Operator cabin	<5.0	<5.0	<5.0	PM (Dust) (mg/Nm ³)	Platform in bagging plant	1.0 ~ 5.0			Packing area in bagging plant	2.7~3.5			CO (mg/Nm ³)	Near Reformer, Near HTS & LTS areas	NT	NT	NT
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		Wet de-dusting systems have been provided in Bagging plant to control the dust emissions. These systems are equipped with wet scrubbers. Scrubbed liquid is transferred to Urea plants for Urea and ammonia recovery. In ammonia urea plants ammonia, CO and HC detectors are installed for detection of any leakage. Mitigative measures are taken immediately to arrest the leakages if any. Urea Prilling Tower emissions remain within the prescribed limits.																																												
Point no. (vii)	The company shall install low NOx burners in primary reformer furnaces and in gas turbine to mitigate the NOx emission.	Low NOx burners have been installed in primary reformer and gas turbine for power generation to mitigate the NOx emission.																																												

Point no. (viii)	It is noted that the residual from RO unit shall be disposed to the brick kilns. The company shall review the scheme for disposal of RO rejects and submit to the ministry.	Scheme for disposal of RO plant rejects already submitted to MoEF & RSPCB Jaipur vide letter no. SMEQC/CFG3/326318 dt 30.01.18. As per condition of Hazardous Waste Authorization, RO-ZLD sludge is disposed to CTDF Udaipur and ACC Cement Lakheri, Bundi.
Point no. (ix)	The company shall develop the green belt in 33% area out of total area to mitigate the effect of fugitive emissions and noise as per the guidelines CPCB.	In CFCL Gadepan 34.1 % of the total land area of the complex is covered under the green belt. The green belt is being properly maintained and regular tree plantation is carried out.
Point no. (x)	The company shall implement all the recommendations made in the charter on corporate responsibility for Environmental protection (CREP) for fertilizer industries.	CFCL has implemented all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries. Various conditions applicable to us like water consumption of max. 8M ³ /Ton of Urea, Dryness of storm water drain channels, Ground water monitoring, safe disposal of catalyst are in compliance.
Point no. (xi)	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.	Noted, Occupational health surveillance of the workers are carried out periodically as per rules. For this a well-defined system is in place and records are being maintained by Medical Officer. No worker was found suffering with any occupational disease.
Point no. (xii)	The company shall undertake adequate protection measures for handling of ammonia vapor in case of plant upset condition. Safety valve exhaust & drains shall be connected to flare and vent stack.	Adequate precautions have already been taken at the design stage itself for handling ammonia bearing vapors and non-ammonia bearing process gases which are sent for flaring during emergency/ upset condition including startups & shutdowns.
Point no. (xiii)	The company shall review the need for additional storage of ammonia. While decommissioning naphtha storage tank which shall be ensured that the tank is fully empty & made free of hydrocarbons.	Noted and reviewed. Two (02) double walled ammonia storage tanks at atmospheric pressure have already provided at the time of Phase-I plant establishment. As directed, no additional ammonia storage tank has been installed with Phase-III Plant. Naphtha tanks are dismantled safely on permanent basis and are non-existent now.
Point no. (xiv)	The company shall comply with the recommendations made in the EIA /EMP and Risk assessment reports.	The project complies to all safeguards recommended in the e EIA / EMP and Risk assessment reports.
Point no. (xv)	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	Complied with. Fire water hydrant system for CFG3 plants is designed as per TAC guidelines. Firefighting system include pressurized fire hydrant network in all plants, gas detectors, smoke detectors, fire extinguishers and well-equipped fire station.
Point no. (xvi)	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.	Noted. Garland drains are constructed in G3 plant to avoid mixing of accidental spillages with domestic waste and storm drains.

Point no. (xvii)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure & facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care ,crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Required necessary infrastructure & facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. were provided during implementation of the project. After completion of the project all temporary structures have been removed.
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B. GENERAL CONDITIONS:

Clause No.	Description	. Status as on Date																																																															
Point no. (i)	The project authorities shall strictly adhere to the stipulations of the SPCB/ State Government or any other statutory body.	Noted & being complied																																																															
Point no. (ii)	The gaseous emissions (SO ₂ , NO _x , NH ₃ , Fertilizer dust) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. Emission data shall be periodically monitored and reports submitted to Ministry's Regional office, CPCB and SPCB.	<p>Emissions from various process units are strictly conforming to the standards prescribed by RSPCB (Rajasthan State Pollution Control Board). . Emission data is periodically monitored, and reports are submitted to Ministry's Regional office, CPCB Bhopal and RSPCB Jaipur. Analysis data for the period from Period April 2022- September 2022 have been shown as under.</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th colspan="3">Dust mg/nm³</th> <th colspan="3">Ammonia mg/nm³</th> </tr> <tr> <th>Locations</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> </tr> </thead> <tbody> <tr> <td>Scrubber Screen House-III</td> <td>29.7</td> <td>11.1</td> <td>18.9</td> <td>30.4</td> <td>15.6</td> <td>21.8</td> </tr> <tr> <td>Scrubber Packing Plant-III</td> <td>26.7</td> <td>12.4</td> <td>19.0</td> <td>31.2</td> <td>13.6</td> <td>20.4</td> </tr> <tr> <td>Prilling Tower-III</td> <td>47.3</td> <td>40.3</td> <td>43.8</td> <td>76.6</td> <td>52.7</td> <td>63.6</td> </tr> <tr> <td colspan="7" style="text-align: center;">NOx Analysis (ppm)</td> </tr> <tr> <th>Source</th> <th>MAX</th> <th>MIN</th> <th>AVG</th> <td colspan="3"></td> </tr> <tr> <td>Heat recover Steam generation-III</td> <td>41.2</td> <td>32.9</td> <td>36.6</td> <td colspan="3"></td> </tr> <tr> <td>Ammonia Plant –Reformer-III</td> <td>88.3</td> <td>57.0</td> <td>72.2</td> <td colspan="3"></td> </tr> </tbody> </table>	Parameter	Dust mg/nm ³			Ammonia mg/nm ³			Locations	MAX	MIN	AVG	MAX	MIN	AVG	Scrubber Screen House-III	29.7	11.1	18.9	30.4	15.6	21.8	Scrubber Packing Plant-III	26.7	12.4	19.0	31.2	13.6	20.4	Prilling Tower-III	47.3	40.3	43.8	76.6	52.7	63.6	NOx Analysis (ppm)							Source	MAX	MIN	AVG				Heat recover Steam generation-III	41.2	32.9	36.6				Ammonia Plant –Reformer-III	88.3	57.0	72.2			
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Point no. (iii)	All the waste waters generated from the various processes shall be recycled / reused in the plant and zero discharge shall be maintained. The domestic waste water shall be treated in septic tanks and treated waste shall be used for irrigation in the green belt.	Reverse Osmosis Plant (RO Plant) is operational along with Multi-effect evaporator (MEE) type Zero Liquid Discharge Plant (ZLD). Waste water generated from various processes is being treated in RO Plant. Treated water is used as cooling tower makeup. Domestic sewage is being treated in STP. Treated domestic effluent is utilized in Plantation/Other horticulture activities within premises.																																																															

Point no. (iv)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted.																																																																																																																																																
Point no. (v)	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Noted and being complied. All the pollution control measures form the integral part of the process controlling the pollution by itself. With any process failures plants go to a safe shutdown and are not restarted until the control measures are rectified to achieve the desired efficiency.																																																																																																																																																
Point no. (vi)	The location of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required, in the down wind direction as well as where maximum ground level concentrations are anticipated.	<p>Five ambient air quality monitoring stations are operational. Locations of these monitoring stations were decided in consultation with Regional Office, RSPCB, Kota. Ambient Air Quality Monitoring at all the five stations are being carried out as per the standard procedures on bi-weekly basis and data regularly submitted to RSPCB & MoEF's Regional Office. Analysis data for the period from Period April 2022-September 2022 have been shown as under.</p> <table border="1" data-bbox="646 1234 1490 1835"> <thead> <tr> <th colspan="8">AAQM STATION AT NORTH SIDE OF HOLDING POND</th> </tr> <tr> <th></th> <th>PM₁₀</th> <th>PM_{2.5}</th> <th>NH₃</th> <th>NO_x</th> <th>SO_x</th> <th>CO</th> <th>HC</th> </tr> <tr> <td></td> <td colspan="7" style="text-align: center;">$\mu\text{g}/\text{m}^3$</td> </tr> </thead> <tbody> <tr> <td>Max</td> <td>68.0</td> <td>34.3</td> <td>56.7</td> <td>7.9</td> <td>4.9</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>27.3</td> <td>20.1</td> <td>23.1</td> <td>4.4</td> <td>2.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>42.9</td> <td>25.0</td> <td>37.1</td> <td>6.4</td> <td>3.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT LAB TECH</th> </tr> <tr> <td>Max</td> <td>67.7</td> <td>36.5</td> <td>66.6</td> <td>7.7</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>24.9</td> <td>18.2</td> <td>24.4</td> <td>4.1</td> <td>2.1</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>44.1</td> <td>26.7</td> <td>41.5</td> <td>6.2</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II</th> </tr> <tr> <td>Max</td> <td>66.3</td> <td>36.7</td> <td>59.9</td> <td>7.9</td> <td>4.7</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>16.6</td> <td>20.5</td> <td>4.6</td> <td>2.2</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>41.5</td> <td>26.0</td> <td>37.0</td> <td>6.2</td> <td>3.4</td> <td><1.0</td> <td>ND</td> </tr> <tr> <th colspan="8">AAQM STATION AT RAW WATER RESERVOIR</th> </tr> <tr> <td>Max</td> <td>69.9</td> <td>35.9</td> <td>67.9</td> <td>7.3</td> <td>4.6</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Min</td> <td>23.3</td> <td>17.2</td> <td>21.4</td> <td>3.2</td> <td>2.3</td> <td><1.0</td> <td>ND</td> </tr> <tr> <td>Avg</td> <td>40.5</td> <td>25.4</td> <td>36.6</td> <td>6.0</td> <td>3.3</td> <td><1.0</td> <td>ND</td> </tr> </tbody> </table>	AAQM STATION AT NORTH SIDE OF HOLDING POND									PM₁₀	PM_{2.5}	NH₃	NO_x	SO_x	CO	HC		$\mu\text{g}/\text{m}^3$							Max	68.0	34.3	56.7	7.9	4.9	<1.0	ND	Min	27.3	20.1	23.1	4.4	2.6	<1.0	ND	Avg	42.9	25.0	37.1	6.4	3.6	<1.0	ND	AAQM STATION AT LAB TECH								Max	67.7	36.5	66.6	7.7	4.7	<1.0	ND	Min	24.9	18.2	24.4	4.1	2.1	<1.0	ND	Avg	44.1	26.7	41.5	6.2	3.3	<1.0	ND	AAQM STATION AT SOUTH SIDE OF COOLING TOWER-II								Max	66.3	36.7	59.9	7.9	4.7	<1.0	ND	Min	23.3	16.6	20.5	4.6	2.2	<1.0	ND	Avg	41.5	26.0	37.0	6.2	3.4	<1.0	ND	AAQM STATION AT RAW WATER RESERVOIR								Max	69.9	35.9	67.9	7.3	4.6	<1.0	ND	Min	23.3	17.2	21.4	3.2	2.3	<1.0	ND	Avg	40.5	25.4	36.6	6.0	3.3	<1.0	ND
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		AAQM STATION IN COLONY							
		Max	72.7	38.3	59.7	7.8	4.5	<1.0	ND
		Min	25.9	17.5	25.4	4.2	2.1	<1.0	ND
		Avg	44.6	26.3	41.0	6.3	3.3	<1.0	ND
Point no. (vii)	Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.	De dusting systems equipped with wet scrubbers and stacks of appropriate height have been installed in Urea Product handling section. Scrubbed liquor is recycled back to Urea plant for recovery of Urea and Ammonia.							
Point no. (viii)	All the storage tanks will be under negative pressure to avoid any leakages. Breathers valves, N2 blanketing and secondary condensers with brine chilling system shall be provided for all the storage tanks to minimize Vapour losses. All liquid raw material shall be stored in storage Tanks and Drums.	These measures are considered in the plants where-ever applicable and feasible. Built in safety features have been incorporated in all critical storage tanks & process since design stage itself. All liquid raw materials are stored in storage Tanks and Drums.							
Point no. (ix)	<p>The company shall undertake following waste Minimization measures.</p> <ul style="list-style-type: none"> ➤ Metering and control of quantities of active ingredients to minimize waste. ➤ Reuse of by-products from the process as raw material or as raw material substitutes in other processes. ➤ Use of automated filling to minimize spillage. ➤ Use of 'Closed Feed' system into batch reactors. ➤ Venting equipment through vapour recovery system. ➤ Use of high-pressure hoses for equipment cleaning to reduce wastewater generation. 	The Company follows the concept of 3Rs (Reduce, Reuse and Recycle) for waste management. The Company has adopted best practices to manage waste disposal through a comprehensive waste management system under the Health, Safety, Security, and Environment & Quality Policy. Metering & control devices are provided to minimize the waste. Automated filling machines are provided in Bagging Plant to minimize spillage. Wet Scrubbers are provided to recover Urea dust in Bagging Plant. Vacuum Dry cleaners are used for cleaning.							
Point no. (x)	Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control	CFCL ammonia urea plants are Natural Gas based plants. For both feed & fuel, natural gas is used. Therefore, very limited fugitive emissions are generated during Urea product handling. A very efficient urea dust collection and recovery systems (De-dusting System) are operational in Urea Product handling plant (UPH). Emissions from outlet of De-dusting systems are strictly conforming to the standards prescribed by RSPCB.							

	Boards/Central Pollution Control Board.	Workplace monitoring is carried out at regular interval, which helps to maintain emissions level within the prescribed limit.																																											
Point no. (xi)	The project authorities shall strictly comply with the rules and guidelines under manufacture, storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 & January, 2000.	Complied with. Handling, manufacture, storage and transport of hazardous chemicals are in accordance with the Manufacture, storage and Import of Hazardous chemicals Rules, 1989 as amended in year 1994 & 2000. Safety report is prepared and submitted to RSPCB Kota & CIFB Jaipur. Mock drills are conducted periodically. On site Emergency plan (DMP) is in place and reviewed periodically and same is submitted to RSPCB & CIFB Office. All Hazardous chemicals are adequately stored and marked.																																											
Point no. (xii)	The overall noise levels 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 generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (Day time) and 70 dBA (Nighttime).	<p>The selection of any equipment has been made with specification of low noise levels. An adequate measure for the control of noise has been taken so as to keep the noise levels below the prescribed limit in the work environment. Persons working near the noisy machines like ammonia plant compressor area, Urea Plant compressor area, GT etc. have been provided with well-designed earmuffs / plugs. The ambient noise levels are strictly conforming to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.</p> <p>Analysis data for the period from Period April 2022-September 2022 have been shown as under.</p> <table border="1"> <thead> <tr> <th rowspan="3">Locations</th> <th colspan="4">Noise (dba)</th> </tr> <tr> <th colspan="2">DAY</th> <th colspan="2">NIGHT</th> </tr> <tr> <th>MAX</th> <th>MIN</th> <th>MAX</th> <th>MIN</th> </tr> </thead> <tbody> <tr> <td>Reservoir</td> <td>58.0</td> <td>41.0</td> <td>45.0</td> <td>34.0</td> </tr> <tr> <td>South Side of Cooling Tower</td> <td>68.0</td> <td>52.0</td> <td>61.0</td> <td>45.0</td> </tr> <tr> <td>North Side of Holding Pond</td> <td>68.0</td> <td>52.0</td> <td>62.0</td> <td>41.0</td> </tr> <tr> <td>Near Adm. building</td> <td>59.0</td> <td>52.0</td> <td>49.0</td> <td>40.0</td> </tr> <tr> <td>Shopping Centre</td> <td>58.0</td> <td>47.0</td> <td>47.0</td> <td>40.0</td> </tr> <tr> <td>Guest House</td> <td>66.0</td> <td>46.0</td> <td>46.0</td> <td>41.0</td> </tr> </tbody> </table>	Locations	Noise (dba)				DAY		NIGHT		MAX	MIN	MAX	MIN	Reservoir	58.0	41.0	45.0	34.0	South Side of Cooling Tower	68.0	52.0	61.0	45.0	North Side of Holding Pond	68.0	52.0	62.0	41.0	Near Adm. building	59.0	52.0	49.0	40.0	Shopping Centre	58.0	47.0	47.0	40.0	Guest House	66.0	46.0	46.0	41.0
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Point no. (xiii)	The company shall develop rain water harvesting structures to harvest the runoff water for recharge of ground water.	CFCL has already taken the steps towards Rainwater harvesting structures. State government has approved construction of low height dams at river Parwan and river Kalisindh. Construction of Low-height Dam at Rajgarh on Parwan River is completed. Construction of Low Height Dam at Khan-ki-Jhopri on Kalisindh river is also completed. Two nos rainwater harvesting recharge wells are operational in the township area to harvest run off rainwater. Similar activities are planned outside of the campus in the year 2022-23																																											
Point no. (xiv)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval.	Eco development measures including community welfare measures have been implemented as per plan. The eco-development plan has been submitted to RSPCB vide our on 16.07.2010.																																											

Point no. (xv)	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 equipped with full-fledged laboratory facilities to carry out the Environmental Management and Monitoring functions is in place and operational.
Point no. (xvi)	The Project authorities shall earmark adequate funds 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 provided shall not be diverted for any other purpose.	CFCL had earmarked adequate funds 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 in Environment clearance and CTO/CTE. An annual budget for Capital investment & Revenue expenditure is taken every year. This amount is utilized for operational improvement and maintenance of Environment Management System. The funds earmarked for the environmental protection measures are not allowed to divert for other purpose.
Point no. (xvii)	The implementation of the project vis-à-vis environmental action plans 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.	Noted, Six monthly compliance status report is being submitted regularly to the concerned authorities and posted on the website of the company.
Point no. (xviii)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/representations, if any were received while processing the proposal.	Copy of clearance letter submitted to all concerned.
Point no. (xix)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC 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'	Noted and reports are being submitted to RSPCB, CPCB Bhopal and MoEF.
Point no. (xx)	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment	The environmental statement for the financial year 2021-22 in Form-V has been submitted on 28/09/2022 to the Rajasthan State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 and the same has been put on the CFCL website along with the status of compliance of environmental clearance conditions. Copy of the same has been submitted MoEF Luckow Regional Office by e-mail.

	(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 Offices of MoEF by e-mail.	
Point no. (xxi)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB / Committee and may also be seen at Website of the ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Public was informed through published information in two local newspapers and copy was submitted to the Regional Office. Public notification was also displayed on CFCL website.
Point no. (xxii)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure & final approval of the project by the concerned authorities and date of start of the project.	Financial closure achieved and date of start of CFG3 project is 15-March-2016.

**B. ADDITIONAL CONDITIONS SPECIFIED IN VALIDITY EXTENSION LETTER DATED
22- JUN-2015:**

Clause No.	Description	Status as on Date
Point no. (3)	No effluent shall be discharged outside the plant premises and 'Zero effluent discharge condition shall be implemented	Complied with. RO-ZLD unit is in operation. The wastewater generated is being treated in RO-ZLD Plant and permeate is recycled as cooling tower makeup.
Point no. (4)	Company shall install continuous monitoring system (24x7 monitoring devices) for flow measurement and relevant pollutants in the treatment system and gaseous emission. The data to be made available to the respective SPCB and in the company's website.	Noted. As per CPCB guidelines we have installed PTZ camera and flowmeter in RO-ZLD plant. Aux Boilers and HRSG NOx emissions Online data is being transferred to RSPCB. For online monitoring of emissions from natural draft prilling towers, there are certain constraints w.r.t availability of reliable technologies.

COMBINED EC of PHASE- I, II, III & REVAMPING OF PHASE-I & PHASE-II PLANTS HAS BEEN ISSUED
vide Environment clearance letter.no **J-11011 / 664 /2008-IA II (I) DT.18.06.2021** & amendment letter dated 16th Nov, 2021

Sub.: Amalgamation and Amendment of Environment clearances (EC) of CFCL Phase-I&II and Phase-III plants i.e., Ammonia (6100 MTPD), Urea (10800 MTPD), Captive Power Plant (55 MWH), Steam HRSG (240 TPH), Steam Boiler (320 TPH)

13. Based on recommendations of EAC and submission of the project proponent, the Committee, after detailed deliberation, has recommended the following amendments in the earlier environmental clearance.

(a) The details of the product and capacities are as under: -

S.No.	Product	Unit	Existing as per EC & CTO			Total (Existing)	Proposed/Amendment			Total After Amalgamation And Amendment
			G-I with CPP	G-II	G-III		G-I with CPP	G-II	G-III	
1	Ammonia	MTPD	2000	1900	2200	6100	2000	1750	2350	6100
2	Urea	MTPD	3500	3300	4000	10800	3500	3100	4200	10800
3	Captive Power Plant	MWH	37	0	18	55	37	0	18	55
4	Steam (HSRG)	TPH	140	0	100	240	140	0	100	240
5	Steam (Boiler)	TPH	160	160	0	320	160	160	0	320

CFCL Reply: Maximum production in any day in the period (01-04-2022 to 30-09-2022) was with in approved capacity as per EC

S No	Capacities of CFCL Ammonia Urea Complex as per EC	Highest production on any day in the period (01-04-2022 to 30-09-2022)
1	Ammonia: 6100 MTPD	5867
2	Urea: 10800 MTPD	10002

3	Captive Power Plant: 55 MWH	39
4	Steam (HRSG): 240 TPH	157
5	Steam (Boiler) :320 TPH	260

(b) " The discharge from G-I and G-II plant in the Kalisindh River be permitted only during the rainy season when the precipitation value is more than 5 mm in a day and its succeeding 10 days (max) depending on the rainfall, after meeting the stringent norms as prescribed.

S. No.	Rainfall in a day (mm)	No. of succeeding days for treated effluent discharge to river after rainfall (days)
1	5	1
2	10	2
3	Greater than 20 mm and less than 75	5
4	Greater than 75 mm	10

During non-monsoon season, when precipitation is less than 5 mm in day (threshold value), the discharge from G-I & G-II plant in the Kalisindh River is not permitted and shall be ZLD system for river discharge. However, treated effluent (other than Ammonia Urea Process effluent) meeting the Standard for land discharge, can be used for irrigation in greenbelt within CFCL's premises .

The Committee further recommended that the concerned State Pollution Control Board from time to time shall monitor discharge from G-I & G-II plant in the Kalisindh River and ensure strict compliance of the same and report this non-compliance, if any, to this Ministry. The State Pollution Control Board shall also ensure that the river water quality remains un-deteriorated".

CFCL Reply: Noted and being complied

MODE OF FINAL DISCHARGE OF TREATED EFFLUENT

A) G-I & G-II Plants

- **Use for Irrigation**

The Treated Effluent of G-I & G-II Plant after meeting the standards prescribed by RPCB is used for green belt development within factory and township.

- **Discharge to Kalisindh River**

Treated effluent discharge from G-I and G-II plant in the Kalisindh River shall be done only during the rainy season when the precipitation value is more than 5 mm in a day and its succeeding 10 days (max) depending on the rainfall as specified in the above EC condition, after meeting the stringent norms as prescribed by RSPCB/CPCB. This discharge shall be done during rainy days when there is a sufficient dilution in the river, the treated effluent from holding pond is discharged to the Kalisindh River through underground 06 Km long HDPE pipeline with diffusers at the confluence point.

G-III Plants (New Plant CFG#3)

Effluent from G-III Plants (CFG#3) is treated in a RO-ZLD unit. The treated water from RO-ZLD unit is used as make up water for Cooling Towers. Thus G –III Plant is a Zero Liquid Discharge Plant. Capacity of RO Plant: 4800 M3/Day, Capacity of ZLD (MEE Plant): 456 M3/Day

14. All other terms and conditions stipulated in the earlier environmental clearances dated 24.07.1996, 21.05.2007, 18.09.2007, 22.04.2010, 10.06.2011 and 22.06.2015 shall remain unchanged.

CFCL Reply: Noted