हिंदुस्तान उर्वरक एवं रसायन लिमिटेड
HINDUSTAN URVARAK & RASAYAN LTD.
(A Joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)
P.O.-Barauni Urvarak Nagar, Begusarai-851115 (Bihar)

Ref. No.: HURL/BR/EC/C/04

Date: 30/05/2025

To,
The Scientist-D,
Regional Office (ECZ),
Ministry of Environment, Forest and Climate Change,
Bungalow No. A-2, Shyamali Colony,
Ranchi – 834002.

Subject: Regarding Six months EC compliance report of M/s Hindustan Urvarak & Rasayan Limited (HURL)-Barauni for October-2024 to March-2025.

Ref: MoEF&CC, Environmental Clearance Letter No. J-11011/371/2016-IAII (I) dated: 29.08.2017.

Dear Sir,

With reference to the subject mentioned above, please find attached herewith the Six months EC compliance report for the period October-2024 to March-2025.

Thanking you,

Yours faithfully,
For Hindustan Urvarak & Rasayan Limited

(Sanjai Kumar Gupta)
Business Unit Head - Barauni.

Encl: Annexures

CC: **Mr. Suresh P Roy**, Regional officer,
Bihar State Pollution Control Board
Barauni Industrial area, Begusarai (Bihar).

CC: **Regional Directorate** – Kolkata
Central Pollution Control Board,
Ministry of Environment, Forest and Climate Change,
'South end Conclave' Block-502, 5th & 6th Floor, 1582,
Razidanga, Main Road, Kolkata-700107 West Bengal.

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	IA/BR/IND2/61377/2016
Compliance ID	128745542
Compliance Number(For Tracking)	EC/M/COMPLIANCE/128745542/2025
Reporting Year	2025
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	31-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	BIHAR
RO/SRO Office Address	Integrated Regional Offices, Ranchi
Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, BIHAR with Notification to Project Proponent.	

Half Yearly Compliance Report
2025
01 Jun(01 Oct - 31 Mar)

Acknowledgement

Proposal Name	Ammonia Urea Fertilizer project at Barauni
Name of Entity / Corporate Office	HINDUSTAN URVARAK AND RASAYAN LIMITED
Village(s)	N/A
District	BEGUSARAI

Proposal No.	IA/BR/IND2/61377/2016	**Category**	Industrial Projects - 2
Plot / Survey / Khasra No.	N/A	**Sub-District**	N/A
State	BIHAR	**Entity's PAN**	*****9368N
MoEF File No.	J-11011/371/2016-IA II (I)	**Entity name as per PAN**	HINDUSTAN URVARAK & RASAYAN LIMITED

Compliance Reporting Details

Reporting Year 2025

Remarks (if any)

Reporting Period 01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office HINDUSTAN URVARAK AND RASAYAN LIMITED

	Project Area as per EC Granted	Actual Project Area in Possession
Private	480	350
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	480	350

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Ammonia	Others:MTPD	N/A	2200	490579 MT	
2	Urea	Others:MTPD	N/A	3850	855394 MT	

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Corporate Environmental Responsibility	5000 trees per year in 5 years shall be planted in nearby villages with the consultation of the villagers. Survival rate of plants shall be reported to RO, MoEF & CC in 6 monthly compliance report.
PPs Submission: Complied Plantation work is awarded to State Forest dept on depositary work basis. 25000 plats planted by State Forest dept. (DFO Begusarai) in FY 2022-23 and survival rate of plants in Oct 2024 attached as Annexure-II		Date: 31/05/2025
2	MISCELLANEOUS	Emissions limits for the pollutants from the DG sets and the stack height, shall be in conformity with the extant statuary regulations and/or the CPCB guidelines in this regard.
PPs Submission: Complied Diesel Generator Sets are being used only in case of total Power Failure for safe shutdown of the Plants. Normally, the plant Complex Power requirement is being met from NBPDCL and Natural Gas based HURL own Captive Power Generation (2 Gas Turbines). Adequate stack height provided to ensure the statutory regulations and guidelines.		Date: 31/05/2025
3	AIR QUALITY MONITORING AND PRESERVATION	To control source emissions, scrubber and/or other suitable pollution control device shall be installed to meet the prescribed Particulate Matter emission norms of 50 mg/Nm3, and also the NAAQS.
PPs Submission: Complied This has been addressed in the Feasibility Report of the project during design stage of the plant itself and complied. Design considerations include scrubbers, adequate height of prilling tower and other gas sensors/control measures in the plant to meet emission norms as per NAAQS. AAQ analysis report is attached as Annexure-I		Date: 31/05/2025
4	WATER QUALITY MONITORING AND PRESERVATION	Fresh water requirement shall not exceed 5.36 cum/ton of Urea production. Fresh water shall be sourced from River Ganga only after the required permission from the concerned authority. During construction phase, ground water may be used after prior permission in this regard from the concerned regulatory authority.
PPs Submission: Complied Fresh water supply is sourced from river Ganga. Requisite NOC has been accorded by Central Water Commission (CWC). However, it is ensured that the fresh water requirement does not exceed 5.36 cum/ton of Urea production.		Date: 31/05/2025
5	WATER QUALITY MONITORING AND PRESERVATION	As already committed by the project proponent, no waste/treated water shall be discharged outside to ensure ZLD. The effluent discharge, if any, shall meet the standards for 'Nitrogenous Fertilizer Industry' prescribed under the Environment (Protection) Rules, 1986.
PPs Submission: Complied ZLD plant is commissioned on 12.05.2024 and currently in operation. As the Project is based on Zero liquid discharge concept entire wastewater generated will be treated upto tertiary level in ETP and reusing in process.		Date: 31/05/2025
6	GREENBELT	The project proponent shall develop greenbelt in an area of 33% i.e., nearly 116 acres out of 350 acres of plant area of the project. The green belt of 30 m width around periphery shall be provided.
PPs Submission: Agreed to Comply MOU made DFO Begusarai for plantation within the plant premises, approximately 41.30 acres of land has been designated for the creation of a green belt, out of a total area of approximately 116		Date: 31/05/2025

acres. This plantation work expected to complete before monsoon season.			
7	PUBLIC HEARING	All the commitments made during the Public Hearing/ Public Consultation meeting held on 29th April, 2017 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	
PPs Submission: Agreed to Comply All the commitments made during Public Hearing/Public Consultation meeting held on 27th April, 2017 are being complied for which adequate budget was considered in the project cost.			Date: 31/05/2025
8	Corporate Environmental Responsibility	At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Ranchi. Implementation of such program shall be ensured accordingly in a time bound manner.	
PPs Submission: Agreed to Comply The Enterprise Social Commitment (ESC) will be implemented according to the specified conditions outlined by the Project. HURL is responsible for developing a detailed action plan and budget. Currently, HURL management is reviewing a proposal titled Improvement, Augmentation of Education and Related Infrastructure for selected Government Schools in Barauni, Begusarai district, under the Corporate Environmental Responsibility (CER) initiative.			Date: 31/05/2025
9	MISCELLANEOUS	A regular environment manager having post graduate qualification in environmental sciences/ environmental engineering to be appointed for looking after the environmental management activities of the proposed plant.	
PPs Submission: Complied The environmental management activities of the plant are being looked after by a permanent Manager level officer Mr. Srinu Pitta. Environmental Monitoring work has been outsourced to an external agency (NABL accredited Lab).			Date: 31/05/2025
10	Statutory compliance	Continuous online (24x7) monitoring system for emissions and effluent generation shall be installed for flow/discharge measurement and the pollutants concentration within the plant. Data shall be uploaded on company's website and provided to the respective RO of MoEF&CC, CPCB and SPCB.	
PPs Submission: Complied Continuous online(24x7) monitoring system for stacks emissions has been installed at site. Its Connectivity with CPCB server completed. Manual display board for environment data (EC required data) display has been installed and data is being updated regularly.			Date: 31/05/2025
11	Risk Mitigation and Disaster Management	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	
PPs Submission: Complied Plant is equipped with adequate measures for control of failures/ hazards. Firefighting facilities are implemented as per norms.			Date: 31/05/2025
12	Statutory compliance	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	
PPs Submission: Complied Regular health check-up/monitoring of the commissioning/operation workers are being done. All the			Date:

workers are ensured to be equipped with PPEs such as helmets, hand gloves, boots etc. before entering into plant site.		31/05/2025
13	MISCELLANEOUS	Storage of hazardous raw material shall not exceed more than 7 days.
PPs Submission: Complied Storage of raw materials addressed in the Feasibility Report and EIA (HAZID and ENVID) report of the Project, being complied with the stated condition.		Date: 31/05/2025
14	Statutory compliance	Urea dust shall be controlled by prescribed standard technique.
PPs Submission: Complied This is addressed while designing the prilling tower w.r.t height of UPT, gas sensors, manual PM monitoring etc. to control emission of urea dust and subsequent loss/ environmental pollution. The urea dust concentration is less than 50 mg/Nm3 or below 0.5 Kg/MT of urea produced. Following control measures adopted to ensure the above concentration: Provided adequate free fall height Maintaining the moisture content in the melt below 0.5 percentage to increase prill strength. Prilling Tower of special design installed to maintain uniform and low velocity profile of cooling air. The louvers of the prilling tower designed in such a way that the air entering the louvers located in the bottom of PT shall generate low velocity cooled air. Maintaining optimum melt temperature Use of special design prilling buckets, etc. Besides above, all safety valves exhaust, which operates during occasional upsets, connected to Blow-down Stacks and the inerts shall be vented through 93-m high Vent Stacks.		Date: 31/05/2025
15	Statutory compliance	In Urea Plant, particulate emissions shall not exceed 50 mq/Nm3, Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.
PPs Submission: Complied Particulate Emissions are within the 50 mg/Nm3. Urea Prilling tower Emissions are being monitored as per the CPCB Guidelines. Emission Monitoring report attached as Annexure-I.		Date: 31/05/2025
16	Statutory compliance	The levels of PM10 (Urea dust), S02, NOx, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF&CC, the respective Zonal office of CPCB and the SPCB.
PPs Submission: Complied The levels of PM10 (Urea dust), SOx, NOx, Ammonia, Ozone and HC in the ambient air are being monitored since the construction phase by external agencies, having CPCB recognized laboratories. (Monitoring Report for October 2024 to March 2025 attached as Annexure- I). Monitoring data is updated manually at outside of Plant Gate. Six monthly compliance reports with monitoring results are uploaded on HURLs website and its regular updating is done periodically. Simultaneously, every six-monthly compliance report is also being sent to the Regional office of MoEF and CC, the respective Zonal office of MoEF and CC and BSPCB as per stated condition.		Date: 31/05/2025
17	AIR QUALITY MONITORING AND PRESERVATION	In plant, control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals / materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the SPCB.

PPs Submission: Complied The water sprinkling is being done on need basis for dust suppression in and around site. Air Quality is being monitored in work zone environment as per monitoring plan for assessment of pollution level during the operation phase (Annexure-I). The technology has inherent design features for minimum gaseous emissions. Gaseous raw materials, Liquid product, gaseous product, urea product and chemicals are handled in the closed system. Fugitive emission surveys are carried out to monitor emission in the work zone environment, product area etc. and are regularly monitored. Fugitive emissions monitored confirm the emission limits stipulated by as per SPCB norms.		Date: 31/05/2025
18	WASTE MANAGEMENT	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous waste "(Management, Handling and Trans-Boundary Movement) Rules, 2016 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire 'fighting facilities in case of emergency.
PPs Submission: Complied Authorization has been obtained from BSPCB for Authorization for collection, storage and disposal of hazardous waste under the Hazardous and other Waste (Management, Handling and Trans-Boundary Movement) Rules, 2016. Adequate fire-fighting facilities have been provided and maintained for meeting the emergencies. (Authorization no. HW/B-1934 patna-10 dated 20.07.2022)		Date: 31/05/2025
19	MISCELLANEOUS	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.
PPs Submission: Complied The plant is at the operation stage. However, all necessary compliances were ensured during the construction phase. Majority of the construction wastes have been removed in an environmentally friendly manner.		Date: 31/05/2025

General Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.
PPs Submission: Complied It is being complied regularly.		Date: 31/05/2025
2	MISCELLANEOUS	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry. 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.
PPs Submission: Complied Noted, there is no further expansion or modifications in the plant is envisaged at this stage. However, as and when required, a fresh reference shall be made to the MoEF and CC, Govt. of India.		Date: 31/05/2025

3	AIR QUALITY MONITORING AND PRESERVATION	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

PPs Submission: Complied The locations of ambient air quality monitoring have been decided in consultation with the Bihar State Pollution Control Board (BSPCB) and HURL officials for monitoring of Air Quality during construction /commissioning phase. 06 Nos. of AAQMS have been installed in the project area, out of which one station is selected in up-wind (East) and one station is selected in down-wind (West) directions.	Date: 31/05/2025

4	AIR QUALITY MONITORING AND PRESERVATION	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 18th November, 2009 shall be followed.

PPs Submission: Complied Being Complied.	Date: 31/05/2025

5	Noise Monitoring & Prevention	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules,1989 viz. 75 dBA (day time) and 70 dBA (night time).

PPs Submission: Complied The noise levels are maintained within the standard prescribed limits by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. (Data attached as Annexure-1)	Date: 31/05/2025

6	WATER QUALITY MONITORING AND PRESERVATION	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.

PPs Submission: Complied Rain water harvesting system is provided to collect water from all the plant buildings viz. admin, control rooms and laboratory as well as surface run off to ensure effective rain water harvesting and subsequent ground water recharge. As per envisaged plan, buildings like control room, operator room, maintenance building, canteen, laboratory building etc. will be having rain water harvesting facility. These are completed.	Date: 31/05/2025

7	Human Health Environment	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

PPs Submission: Complied All Employees are imparted training on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees is being undertaken on regular basis.	Date: 31/05/2025

8	PUBLIC HEARING	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.

PPs Submission: Complied This condition will be complied in totality as stated. HURL has taken care of compliance with all the pollution control measured at every single step wherever suggested/possible at design stage itself. This includes provision of suitable UPT, scrubbers, stacks, ETP with ZLD, equipments with acoustic enclosures, development of green belt/ green cover, rain water harvesting system etc. The effective implementation of all env. Pollution control measures being ensured in operational phase.		Date: 31/05/2025
9	Human Health Environment	The company shall undertake all relevant measures for improving the socioeconomic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
PPs Submission: Agreed to Comply CSR activities are being undertaken as and when applicable. However, some initiatives are under implementation as well as under consideration aimed at improving the socio-economic conditions of the surrounding area, as part of fulfilment of the obligations under ESC/ PH issues. The various activities are being initiated through CIPET and other imparted agencies.		Date: 31/05/2025
10	Corporate Environmental Responsibility	The company shall undertake all eco-developmental measures including community welfare measures for overall improvement of the environment.
PPs Submission: Agreed to Comply All eco-developmental measures including community welfare measures for overall improvement of the environment will be undertaken by involving local villages and administration as per rule and Government guidelines. MoU made with CIPET.		Date: 31/05/2025
11	MISCELLANEOUS	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
PPs Submission: Being Complied The EC conditions relating to establishment of Environmental Cell have been complied with and the following arrangement for environment cell is in place. 1) Mr. Srinu Pitta, Manager (Env. and QC) reports to Shri. Sanjai Kumar Gupta, Project Head (BUH) 2) Mr. Divyanshu Trivedi, AM (Env. and QC) Full-fledged laboratory facilities are to be established to carry out the Environmental Management and Monitoring functions. Which is currently done by 3rd party agency.		Date: 31/05/2025
12	Corporate Environmental Responsibility	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management pollution control measures shall not be diverted for any other purpose.
PPs Submission: Complied Being Complied.		Date: 31/05/2025
13	Statutory compliance	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions, representations, if any, were received while processing the proposal.
PPs Submission: Complied Complied		Date: 31/05/2025
14	Statutory compliance	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance

		conditions including results of monitored data (both in hard copies as well as by-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.
PPs Submission: Complied Being Complied. Regularly six-monthly compliance report is being submitted to MOEF and CC zonal office (both in hard copies as well as by-mail) and posted on the website of the company.		Date: 31/05/2025
15	Statutory compliance	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 (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&CC by-mail.
PPs Submission: Agreed to Comply The environmental statement for the financial year ending 31st march 2025 in Form-V to be submitted and uploaded the same on Company website.		Date: 31/05/2025
16	Statutory compliance	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://moef.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.
PPs Submission: Complied Complied		Date: 31/05/2025
17	MISCELLANEOUS	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
PPs Submission: Complied Complied		Date: 31/05/2025

Visit Remarks

Last Site Visit Report Date:	N/A
Additional Remarks:	

Note: This acknowledgement is as per the details submitted by project proponent. In no way is this document to be considered as conclusion on any action on the compliance of the project. This is strictly for the project proponent's reference purpose.

COMPLIANCE OF EC CONDITIONS FOR THE PERIOD OCTOBER-2024 TO MARCH 2025

S. No.	EC Conditions	Self-Declaration	Compliance status
(A)	**Specific Conditions**		
1.	Emissions limits for the pollutants from the DG sets and the stack height, shall be in conformity with the extant statuary regulations and/or the CPCB guidelines in this regard.	Complied	Diesel Generator Sets are being used only in case of total Power Failure for safe shutdown of the Plants. Normally, the plant Complex Power requirement is being met from NBPDCL and Natural Gas based HURL own Captive Power Generation (2 Gas Turbines). Adequate stack height provided to ensure the statutory regulations & guidelines.
2.	To control source emissions, scrubber and/or other suitable pollution control device shall be installed to meet the prescribed Particulate Matter emission norms of 50 mg/Nm3, and also the NAAQS.	Complied	This has been addressed in the Feasibility Report of the project during design stage of the plant itself and complied. Design considerations include scrubbers, adequate height of prilling tower and other gas sensors/control measures in the plant to meet emission norms as per NAAQS. AAQ analysis report is attached as **Annexure-I**
3.	Fresh water requirement shall not exceed 5.36 cum/ton of Urea production. Fresh water shall be sourced from River Ganga only after the required permission from the concerned authority. During construction phase, ground water may be used after prior permission in this regard from the concerned regulatory authority.	Complied	Fresh water supply is sourced from river Ganga. Requisite NOC has been accorded by Central Water Commission (CWC). However, it is ensured that the fresh water requirement does not exceed 5.36 cum/ton of Urea production.
4.	As already committed by the project proponent, no waste/treated water shall be discharged outside to ensure ZLD. The effluent discharge, if any, shall meet the standards for 'Nitrogenous Fertilizer Industry' prescribed under the Environment (Protection) Rules, 1986.	Complied	ZLD plant is commissioned on 12.05.2024 and currently in operation. As the Project is based on Zero liquid discharge concept entire wastewater generated will be treated upto tertiary level in ETP and reusing in process.
5.	The project proponent shall develop greenbelt in an area of 33% i.e., nearly 116 acres out of 350 acres of plant area of the project. The green belt of 30 m width around periphery shall be provided.	Agree to Comply	MOU made DFO Begusarai for plantation within the plant premises, approximately 41.30 acres of land has been designated for the creation of a green belt, out of a total area of approximately 116 acres. This plantation work expected to complete before monsoon season.
6.	5000 trees per year in 5 years shall be planted in nearby villages with the consultation of the villagers. Survival rate of plants shall be reported to RO, MoEF & CC in 6 monthly compliance report.	Complied	Plantation work is awarded to State Forest dept on depositary work basis. 25000 plats planted by State Forest dept. (DFO Begusarai) in FY 2022-23 and survival rate of plants in Oct 2024 attached as **Annexure-II**
7.	All the commitments made during the Public Hearing/ Public Consultation meeting held on 29th April, 2017 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	Agree to Comply	All the commitments made during Public Hearing/Public Consultation meeting held on 27th April, 2017 are being complied for which adequate budget was considered in the project cost.
8.	At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise	Agree to Comply	The Enterprise Social Commitment (ESC) will be implemented according to the specified conditions

श्रीनु पिल्ला
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हिंदुस्तान उर्वरक & रसायन लिमिटेड
बरौनी (बिहार) 851115

	Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Ranchi. Implementation of such program shall be ensured accordingly in a time bound manner.		outlined by the Project. HURL is responsible for developing a detailed action plan and budget. Currently, HURL management is reviewing a proposal titled "Improvement/Augmentation of Education & Related Infrastructure" for selected Government Schools in Barauni, Begusarai district, under the Corporate Environmental Responsibility (CER) initiative.
9.	A regular environment manager having post graduate qualification in environmental sciences/ environmental engineering to be appointed for looking after the environmental management activities of the proposed plant.	Complied	The environmental management activities of the plant are being looked after by a permanent Manager level officer Mr. Srinu Pitta. Environmental Monitoring work has been outsourced to an external agency (NABL accredited Lab).
10.	Continuous online (24x7) monitoring system for emissions and effluent generation shall be installed for flow/discharge measurement and the pollutants concentration within the plant. Data shall be uploaded on company's website and provided to the respective RO of MoEF&CC, CPCB and SPCB.	Complied	Continuous online(24x7) monitoring system for stacks emissions has been installed at site. Its Connectivity with CPCB server completed. Manual display board for environment data (EC required data) display has been installed and data is being updated regularly.
11.	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Complied	Plant is equipped with adequate measures for control of failures/ hazards. Firefighting facilities are implemented as per norms.
12.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied	Regular health check-up/monitoring of the commissioning/operation workers are being done. All the workers are ensured to be equipped with PPEs such as helmets, hand gloves, boots etc. before entering into plant site.
13.	Storage of hazardous raw material shall not exceed more than 7 days.	Complied	Storage of raw materials addressed in the Feasibility Report and EIA (HAZID & ENVID) report of the Project, being complied with the stated condition.
14.	Urea dust shall be controlled by prescribed standard technique.	Complied	This is addressed while designing the prilling tower w.r.t height of UPT, gas sensors, manual PM monitoring etc. to control emission of urea dust and subsequent loss/ environmental pollution. The urea dust concentration is less than 50 mg/Nm3 or below 0.5 Kg/MT of urea produced. Following control measures adopted to ensure the above concentration: • Provided adequate free fall height • Maintaining the moisture content in the melt below 0.5% to increase prill strength. • Prilling Tower of special design installed to maintain uniform and low velocity profile of cooling air. • The louvers of the prilling tower designed in such a way that the air entering the louvers located in the bottom of PT shall generate low velocity cooled air.

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हिंदुस्तान उर्वरक & रसायन लिमिटेड
बरौनी (बिहार) 851115

			• Maintaining optimum melt temperature • Use of special design prilling buckets, etc. Besides above, all safety valves exhaust, which operates during occasional upsets, connected to Blow-down Stacks and the inerts shall be vented through 93-m high Vent Stacks.
15.	In Urea Plant, particulate emissions shall not exceed 50 mq/Nm^3, Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.	Complied	Particulate Emissions are within the 50 mg/Nm3. Urea Prilling tower Emissions are being monitored as per the CPCB Guidelines. Emission Monitoring report attached as **Annexure-I**.
16.	The levels of PM_{10} (Urea dust), SO_2, NO_x, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF&CC, the respective Zonal office of CPCB and the SPCB.	Complied	The levels of PM10 (Urea dust), SOx, NOx, Ammonia, Ozone and HC in the ambient air are being monitored since the construction phase by external agencies, having CPCB recognized laboratories. (Monitoring Report for October 2024 to March 2025 attached as **Annexure- I**). Monitoring data is updated manually at outside of Plant Gate. Six monthly compliance reports with monitoring results are uploaded on HURL's website and its regular updating is done periodically. Simultaneously, every six-monthly compliance report is also being sent to the Regional office of MoEF&CC, the respective Zonal office of MoEF&CC and BSPCB as per stated condition.
17.	In plant, control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals / materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the SPCB.	Complied	The water sprinkling is being done on need basis for dust suppression in and around site. Air Quality is being monitored in work zone environment as per monitoring plan for assessment of pollution level during the operation phase **(Annexure-I)**. The technology has inherent design features for minimum gaseous emissions. Gaseous raw materials, Liquid product, gaseous product, urea product and chemicals are handled in the closed system. Fugitive emission surveys are carried out to monitor emission in the work zone environment, product area etc. and are regularly monitored. Fugitive emissions monitored confirm the emission limits stipulated by as per SPCB norms.
18.	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous waste "(Management, Handling and Trans-Boundary Movement) Rules, 2016 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire 'fighting facilities in case of emergency.	Complied	Authorization has been obtained from BSPCB for Authorization for collection, storage and disposal of hazardous waste under the Hazardous & other Waste (Management, Handling and Trans-Boundary Movement) Rules, 2016. Adequate fire-fighting facilities have been provided and maintained for meeting the emergencies. (Authorization no. HW/B-1934 patna-10 dated 20.07.2022)
19.	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structure to be removed after	Complied	The plant is at the operation stage. However, all necessary compliances were ensured during the construction phase. Majority of the construction wastes have been removed in an environmentally friendly manner.

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	the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.		
(B)	**General Conditions**		
1.	The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.	Complied	It is being complied regularly.
2.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry. 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.	Complied	Noted, there is no further expansion or modifications in the plant is envisaged at this stage. However, as and when required, a fresh reference shall be made to the MoEF&CC, Govt. of India.
3.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Complied	The locations of ambient air quality monitoring have been decided in consultation with the Bihar State Pollution Control Board (BSPCB) and HURL officials for monitoring of Air Quality during construction /commissioning phase. 06 Nos. of AAQMS have been installed in the project area, out of which one station is selected in up-wind (East) and one station is selected in down-wind (West) directions.
4.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 18th November, 2009 shall be followed.	Complied	Being Complied.
5.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules,1989 viz. 75 dBA (day time) and 70 dBA (night time).	Complied	The noise levels are maintained within the standard prescribed limits by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. (Data attached as **Annexure-1**)
6.	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Complied	Rain water harvesting system is provided to collect water from all the plant buildings viz. admin, control rooms and laboratory as well as surface run off to ensure effective rain water harvesting and subsequent ground water recharge. As per envisaged plan, buildings like control room, operator room, maintenance building, canteen, laboratory building etc. will be having rain water harvesting facility. These are completed.

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7.	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Complied	All Employees are imparted training on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees is being undertaken on regular basis.
8.	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.	Complied	This condition will be complied in totality as stated. HURL has taken care of compliance with all the pollution control measured at every single step wherever suggested/possible at design stage itself. This includes provision of suitable UPT, scrubbers, stacks, ETP with ZLD, equipment's with acoustic enclosures, development of green belt/ green cover, rain water harvesting system etc. The effective implementation of all env. Pollution control measures being ensured in operational phase.
9.	The company shall undertake all relevant measures for improving the socioeconomic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Agree to Comply	CSR activities are being undertaken as and when applicable. However, some initiatives are under implementation as well as under consideration aimed at improving the socio-economic conditions of the surrounding area, as part of fulfilment of the obligations under ESC/ PH issues. The various activities are being initiated through CIPET and other imparted agencies.
10.	The company shall undertake all eco-developmental measures including community welfare measures for overall improvement of the environment.	Agree to Comply	All eco-developmental measures including community welfare measures for overall improvement of the environment will be undertaken by involving local villages and administration as per rule and Government guidelines. MoU made with CIPET.
11.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Being to Comply	The EC conditions relating to establishment of Environmental Cell have been complied with and the following arrangement for environment cell is in place. 1) Mr. Srinu Pitta, Manager (Env. & QC) reports to Shri. Sanjai Kumar Gupta, Project Head (BUH) 2) Mr. Divyanshu Trivedi, AM (Env. & QC) Full-fledged laboratory facilities are to be established to carry out the Environmental Management and Monitoring functions. Which is currently done by 3rd party agency.
12.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management pollution control measures shall not be diverted for any other purpose.	Complied	Being Complied.

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13.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions, representations, if any, were received while processing the proposal.	Complied	Complied.
14.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.	Complied	Being Complied. Regularly six-monthly compliance report is being submitted to MOEF & CC zonal office (both in hard copies as well as by-mail) and posted on the website of the company.
15.	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 (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&CC by-mail.	Agreed to Complied	The environmental statement for the financial year ending 31st march 2025 in Form-V to be submitted and uploaded the same on Company's website.
16.	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://moef.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.	Complied	Complied.
17.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Complied	Complied.

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Annexure-1

Env. STATEMENT for CTO Compliance for the period October 2024 - March 2025 for Ammonia -Urea (2200 MTPD & 3850 MTPD) plant of HURL at Barauni

This Compliance Report is the fulfilments of the condition of the Environmental Clearance (EC) vide File No.EC [IA/BR/IND2/61377/2016, J-11011/371/2016-IA II (I)] for the period of October 2024 - March 2025 This report has been prepared by Go Green Mechanisms Pvt Ltd by collecting respective samples in consultation with the State Pollution Control Board (SPCB) officials and Hindustan Urvarak and Rasayan Limited (HURL) officials During the above mentioned period the analysis of the environmental parameters has been conducted by the MOEF&CC recognized Laboratory at Go Green Mechanisms Pvt Ltd, Ahmedabad.

The proposed project is located at Barauni and was commissioned on 18 November 2022 with the capacity of 2200MTPD Ammonia and 3850MTPD Urea in the District Begusarai in the state of Bihar. The commercial production has started from 19 November 2022 with the board name APNA UREA. The area falls in the agricultural belt of the Bihar.

The compliance report fulfils the 19 Nos of Specific Conditions and 17 Nos. of General Conditions led by Ministry of Environment, Forests and Climate Change Rainwater Harvesting and Ground Water charging has been proposed as per Standard Guidelines:

- Guidelines on Artificial Recharge of Water, Central Water Ground Board, Ministry of Water Resources, GoI (2000)
- Manual on Artificial Recharge of Ground Water, Central Water Ground Board, Ministry of Water Resources, GoI (2007)
- Rain Water Harvesting and Conservation Manual Consultancy Services Organization, CPWD, GoI (2002)

The Environmental Monitoring report of 6 months w.r.t Air. Water and Noise have been presented separately with the average values. The environmental conditions and the compliance have been found normal as per the Standards. The Air Quality results have been presented through a self-explanatory table with the NAAQ Standards w.r.t the parameter PM10, PM2.5, NOx. SOX, C6H6, CO Benzo(a) pyrene (BAP), NH3, Ozone, Nickel, Arsenic and Lead. Three sets each of Ground Water Samples and Surface Water Samples have been collected, analyzed in a self-explanatory table, and compared with Drinking Water Standards (IS:10500:2012) The analysis consists of eight nos. of physical parameters, thirteen no's of chemical parameters, nine no's of Heavy metals and three no's of miscellaneous parameters. Noise Quality has also been measured at six different locations in the periphery of the project area. The results have been presented through self-explanatory table consisting of the Standard NAAQS w.r.t noise.

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The below report with respect to Air, Water and Noise represents the average values of different sampling stations collected at different time during the study period of October 2024 - March 2025.

TABLE -1

Location of Air Quality Monitoring Stations

Sr. No.	Location of Station	Frequency
1.	HURL Admin Building(SA1)	Twice a Week
2.	HURL Township(SA2)	Twice a Week
3.	Chakiya Village (SA3)	Twice a Week
4.	Bihat Village (SA4)	Twice a Week
5.	Simiriya Village (SA5)	Twice a Week
6.	Chackbali Village(SA6)	Twice a Week

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HURL Barauni, Air Quality data – (October 2024 - March 2025)

Month	Parameters		NAAQS Standards	HURL Admin Building (SA1)	HURL Township (SA2)	Chakiya Village (SA3)	Bihat Village (SA4)	Simariya Village (SA5)	Chackbali Village (SA6)
Oct-24	PM_{10}	µg/m³	100	68.79	71.57	71.71	70.54	72.14	68.47
	$PM_{2.5}$	µg/m³	60	33.74	34.71	35.08	34.93	33.93	33.6
	SO_2	µg/m³	80	15.23	15.95	15.05	15.26	15.76	14.37
	NO_2	µg/m³	80	21.93	22.27	22.65	22.4	22.66	20.56
	Ozone	µg/m³	180	13.69	14.03	13.45	13.38	13.96	14.02
	Ammonia	µg/m³	400	9.31	11.87	13.23	13.63	12.01	11.33
	Carbon Monoxide	mg/m³	4	0.61	0.62	0.56	0.63	0.64	0.58
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)
Nov-24	PM_{10}	µg/m³	100	68.84	70.01	71.08	71.8	69.44	73.26
	$PM_{2.5}$	µg/m³	60	35.69	35.53	36.66	35.47	35.65	36.42
	SO_2	µg/m³	80	14.14	14.33	14.6	13.91	13.59	14.62
	NO_2	µg/m³	80	24.26	22.73	24.17	25.64	23.13	25.5
	Ozone	µg/m³	180	12.84	13.57	13.07	13.8	14.18	14.4
	Ammonia	µg/m³	400	12.21	14.07	11.53	12.84	14.32	12.28
	Carbon Monoxide	mg/m³	4	0.49	0.53	0.44	0.54	0.52	0.56
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)

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Month	Parameters		NAAQS Standards	HURL Admin Building(SA1)	HURL Township (SA2)	Chakiya Village (SA3)	Bihat Village (SA4)	Simariya Village (SA5)	Chackbali Village(SA6)
Dec-24	PM_{10}	µg/m³	100	72.91	70.93	72.59	71.76	72.42	73.62
	$PM_{2.5}$	µg/m³	60	39.14	36.42	38.69	35.88	36.3	37.63
	SO_2	µg/m³	80	17.49	18.79	19.62	19.21	15.3	19.63
	NO_2	µg/m³	80	33.2	31.58	34.62	31.27	26.98	35.75
	Ozone	µg/m³	180	21.35	20.28	21.33	20.23	11.95	22.84
	Ammonia	µg/m³	400	17.86	19.2	18	16.36	15.21	18.81
	Carbon Monoxide	mg/m³	4	0.53	0.57	0.56	0.54	0.58	0.57
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)
Jan-25	PM_{10}	µg/m³	100	73.71	76.56	73.96	78.27	76.57	75.96
	$PM_{2.5}$	µg/m³	60	39.67	39.99	38.22	43.16	41.39	41.12
	SO_2	µg/m³	80	16.52	18.22	16.65	15.86	18.02	16.35
	NO_2	µg/m³	80	28.51	27.47	24.17	25.43	27.2	25.76
	Ozone	µg/m³	180	14.94	16.81	15.09	16.03	18.35	16.83
	Ammonia	µg/m³	400	19.97	20.56	19.11	21.39	22.58	21.55
	Carbon Monoxide	mg/m³	4	0.65	0.62	0.56	0.56	0.71	0.62
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)

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Month	Parameters		NAAQS Standards	HURL Admin Building(SA1)	HURL Township (SA2)	Chakiya Village (SA3)	Bhat Village (SA4)	Simariya Village (SA5)	Chackbali Village(SA6)
Feb-25	PM_{10}	µg/m³	100	71.09	73.44	65.81	74.44	70.55	74.36
	$PM_{2.5}$	µg/m³	60	39.42	41.29	35.04	41.71	38.69	41.29
	SO_2	µg/m³	80	14.76	17.07	13.62	16.9	15.63	17
	NO_2	µg/m³	80	24.28	27.3	23.09	27.03	25.14	27.28
	Ozone	µg/m³	180	14.01	15.92	12.66	16.04	14.89	16
	Ammonia	µg/m³	400	17.32	20.27	18.01	18.54	20.09	19.87
	Carbon Monoxide	mg/m³	4	0.56	0.59	0.53	0.56	0.57	0.58
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)
Mar-25	PM_{10}	µg/m³	100	75.05	80.65	69.82	72.63	76.86	77.04
	$PM_{2.5}$	µg/m³	60	41.66	44.94	37.65	39.94	43.69	42.91
	SO_2	µg/m³	80	16.57	18.93	15.04	14.53	16.98	16.78
	NO_2	µg/m³	80	25.84	28.82	24.68	24.29	26.82	26.75
	Ozone	µg/m³	180	16.57	19.17	15.99	15.4	17.73	16.96
	Ammonia	µg/m³	400	15.36	17.56	15.53	14.87	17.73	18.09
	Carbon Monoxide	mg/m³	4	0.58	0.64	0.55	0.58	0.62	0.6
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)

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Month	Parameters		NAAQS Standards	HURL Admin Building(SA1)	HURL Township (SA2)	Chakiya Village (SA3)	Bihat Village (SA4)	Simariya Village (SA5)	Chackbali Village(SA6)
Average (October 2024 - March 2025)	PM_{10}	µg/m³	100	71.73	73.86	70.83	73.24	73.00	73.79
	$PM_{2.5}$	µg/m³	60	38.22	38.81	36.89	38.52	38.28	38.83
	SO_2	µg/m³	80	15.79	17.22	15.76	15.95	15.88	16.46
	NO_2	µg/m³	80	26.34	26.70	25.56	26.01	25.32	26.93
	Ozone	µg/m³	180	15.57	16.63	15.27	15.81	15.18	16.84
	Ammonia	µg/m³	400	15.34	17.26	15.90	16.27	16.99	16.99
	Carbon Monoxide	mg/m³	4	0.57	0.60	0.53	0.57	0.61	0.59
	Benzene	µg/m³	5	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)
	Benzo(a) pyrene	ng/m³	1	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)	BQL (QL=0.5)
	Nickel	ng/m³	20	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)
	Arsenic	ng/m³	6	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
	Lead	µg/m³	1	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)	BQL (QL=0.001)

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TABLE -2

Location of Noise Monitoring Stations

Sr. No.	Source	Frequency
1.	HURL Admin Building (SN1)	Once in a Month
2.	HURL Township (SN2)	Once in a Month
3.	Chakiya Village (SN3)	Once in a Month
4.	Bihat Village (SN4)	Once in a Month
5.	Simiriya Village (SN5)	Once in a Month
6.	Chackbali Village (SN6)	Once in a Month

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HURL Barauni, Noise data – (October 2024 - March 2025)

Month	Parameters	Prescribed Limit in dB(A) as per NAAQS Industrial area	HURL Admin Building	HURL Township	Chakiya Village	Bihat Village	Simiriya Village	Chackbali Village
Oct-24	24 hrs. Avg Leq Value dB(A)	-	67.0	66.8	65.0	72.0	63.3	63.7
	Day time dB (A) Leq	75	68.8	68.6	66.7	73.7	65.1	65.4
	Night time dB (A) Leq	70	52.3	45.0	52.8	54.3	43.2	46.1
Nov-24	24 hrs. Avg Leq Value dB(A)	-	67.6	69.3	67.5	69.9	62.6	60.0
	Day time dB (A) Leq	75	69.1	71.0	68.8	71.6	64.2	61.5
	Night time dB (A) Leq	70	60.4	55.4	63.0	56.8	53.1	53.0
Dec-24	24 hrs. Avg Leq Value dB(A)	-	67.3	69.2	67.2	70.0	62.6	60.1
	Day time dB (A) Leq	75	68.8	70.9	68.5	71.6	64.2	61.5
	Night time dB (A) Leq	70	60.3	56.2	61.8	61.2	53.1	53.0
Jan-25	24 hrs. Avg Leq Value dB(A)	-	65.3	67.9	67.3	67.8	62.2	60.6
	Day time dB (A) Leq	75	66.8	69.6	68.9	69.4	63.8	62.2
	Night time dB (A) Leq	70	58.2	55.3	58.8	59.1	52.5	51.8
Feb-25	24 hrs. Avg Leq Value dB(A)	-	64.2	68.1	61.6	66.0	59.9	60.3
	Day time dB (A) Leq	75	65.8	69.8	63.2	67.7	61.5	61.9
	Night time dB (A) Leq	70	55.8	57.2	53.7	52.1	48.6	52.2
Mar-25	24 hrs. Avg Leq Value dB(A)	-	64.6	63.3	60.6	62.1	59.5	61.0
	Day time dB (A) Leq	75	66.1	65.0	62.1	63.6	61.1	62.6
	Night time dB (A) Leq	70	57.9	52.4	53.3	53.0	49.5	51.5
Average	24 hrs. Avg Leq Value dB(A)	-	66.0	67.4	64.9	68.0	61.7	61.0
	Day time dB (A) Leq	75	67.6	69.2	66.4	69.6	63.3	62.5
	Night time dB (A) Leq	70	57.5	53.6	57.2	56.1	50.0	51.3

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TABLE-3

Location of Ground water Monitoring Stations

Sr. No.	Source	Parameters	Frequency
1.	HURL Plant Nr. Main gate (Bore-well)	As per (IS:10500)	Once in a Month
2.	HURL Township (Guest House) (Bore-Well)	As per (IS:10500)	Once in a Month
3.	Chakiya Village (Hand Pump)	As per (IS:10500)	Once in a Month

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Sr No.	Parameters	Unit	Township (Guest House)	Chakiya Village	Nr. Main gate	AL	PL
1	Alkalinity as CaCO3	mg/L	352.67	377.00	338.83	200	600
2	Calcium	mg/L	111.09	110.69	111.08	75	200
3	Chloride	mg/L	38.32	138.80	33.24	250	1000
4	Color	CU	BQL (QL=2.5)	BQL (QL=2.5)	BQL (QL=2.5)	5	15
5	Fluoride	mg/L	0.46	0.50	0.21	1	1.5
6	Mg	mg/L	30.17	49.90	34.30	30	100
7	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
8	Oil & Grease	mg/L	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	NS	NS
9	pH	-	7.51	7.61	7.64	6.5-8.5	No relaxation
10	Silica	mg/L	7.26	2.86	14.37	NS	NS
11	Sulphate	mg/L	28.61	53.91	17.64	200	400
13	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
14	Temprature	oC	25.77	25.75	25.47	NS	NS
15	TDS	mg/L	539.00	715.50	531.83	500	2000
16	TSS	mg/L	BQL (QL=5)	BQL (QL=5)	BQL (QL=5)	NS	NS
17	Total Hardness	mg/L	401.33	480.17	415.67	200	600
18	Turbidity	NTU	2.19	1.17	2.48	1	5
19	Total Alkalinity	mg/L	BQL(QL=2)	BQL(QL=2)	BQL(QL=2)	NS	NS
20	Arsenic as As	mg/L	0.01	0.01	0.01	0.01	0.05
21	Cadmium as Cd	mg/L	BQL(QL=0.002)	BQL (QL=0.002)	BQL(QL=0.002)	0.003	No relaxation
22	Total Chromium as Cr	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	BQL (QL=0.02)	0.05	No relaxation
23	Copper as Cu	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	BQL (QL=0.02)	0.05	1.5
24	Iron as Fe	mg/L	0.05	0.07	0.06	0.3	No relaxation
25	Lead as Pb	mg/L	BQL(QL=0.005)	BQL (QL=0.005)	BQL(QL=0.005)	0.01	No relaxation
26	Manganese As Mn	mg/L	BQL (QL=0.05)	0.32	0.20	0.1	0.3
27	Nickel as Ni	mg/L	BQL (QL=0.01)	BQL (QL=0.01)	BQL (QL=0.01)	0.02	No relaxation
28	Zinc as Zn	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	BQL (QL=0.02)	5	15
29	Potassium as K	mg/L	2.92	4.57	3.17	NS	NS
30	Sodium As Na	mg/L	27.59	71.31	22.33	NS	NS
31	Nitarte	mg/L	2.70	0.49	0.52	45	No relaxation
32	Total Coliform	MPN per 100ml	BQL(QL=2)	BQL(QL=2)	BQL(QL=2)	Absent	Absent

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TABLE -4

Location of Surface water Monitoring Stations

Sr. No.	Source	Parameters	Frequency
1.	Ganga River	As per (IS:10500)	Once in a Month
2.	Bihat Pokhar	As per (IS:10500)	Once in a Month
3.	Baya Nallah	As per (IS:10500)	Once in a Month

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Sr No.	Parameters	Unit	Ganga River	Bihat Pokhar	AL	PL
1	Alkalinity as CaCO3	mg/L	84.33	235.67	200	600
2	BOD at 27°C for 3 days	mg/L	7.87	6.42	75	200
3	Calcium as Ca	mg/L	36.41	70.40	250	1000
4	Chemical Oxygen Demand (COD)	mg/L	35.33	26.00	5	15
5	Chloride	mg/L	59.40	138.04	1	1.5
6	Colour	CU	BQL (QL=2.5)	BQL (QL=2.5)	30	100
7	Fluoride	mg/L	0.20	0.63	Agreeable	Agreeable
8	Magnesium as Mg	mg/L	13.97	24.46	NS	NS
9	Oil & Grease	mg/L	BQL (QL=1)	BQL (QL=1)	6.5-8.5	No relaxation
10	pH	-	7.45	7.44	NS	NS
11	Sulphate	mg/L	20.41	17.73	200	400
12	Temperature	oC	25.60	25.75	Agreeable	Agreeable
13	TDS	mg/L	247.83	566.50	NS	NS
14	TSS	mg/L	12.68	13.67	500	2000
15	Total Hardness	mg/L	166.67	276.33	NS	NS
16	Turbidity	NTU	38.85	3.78	200	600
17	Dissolved Oxygen	mg/L	6.33	6.50	1	5
18	Arsenic as As	mg/L	BQL (QL=0.005)	BQL (QL=0.005)	NS	NS
19	Cadmium as Cd	mg/L	BQL (QL=0.002)	BQL (QL=0.002)	0.01	0.05
20	Chromium as Cr	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	0.003	No relaxation
21	Copper as Cu	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	0.05	No relaxation
22	Iron as Fe	mg/L	BQL (QL=0.05)	BQL (QL=0.05)	0.05	1.5
23	Lead as Pb	mg/L	BQL (QL=0.005)	BQL (QL=0.005)	0.3	No relaxation
24	Manganese As Mn	mg/L	BQL (QL=0.05)	BQL (QL=0.05)	0.01	No relaxation
25	Nickel as Ni	mg/L	BQL (QL=0.01)	BQL (QL=0.01)	0.1	0.3
26	Zinc As Zn	mg/L	BQL (QL=0.02)	BQL (QL=0.02)	0.02	No relaxation
27	Potassium As K	mg/L	4.26	20.22	5	15
28	Sodium As Na	mg/L	11.07	75.66	NS	NS
29	Nitrate	mg/L	2.62	4.45	NS	NS
30	Total Coliform	MPN per 100ml	30.00	29.67	45	No relaxation

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Sr No.	Parameters	Unit	Baya Nallah	Norms
1	Alkalinity as CaCO3	mg/L	154.83	-
2	BOD at 27°C for 3 days	mg/L	8.83	30
3	Calcium as Ca	mg/L	45.49	-
4	Chemical Oxygen Demand (COD)	mg/L	38.00	250
5	Chloride	mg/L	34.07	-
6	Colour	CU	BQL (QL=2.5)	-
7	Fluoride	mg/L	0.16	2
8	Magnesium as Mg	mg/L	18.55	-
9	Oil & Grease	mg/L	BQL (QL=1)	10
10	pH	-	7.67	5.5 to 9.0
11	Sulphate	mg/L	22.10	-
12	Temperature	oC	26.20	-
13	TDS	mg/L	263.17	-
14	TSS	mg/L	14.50	100
15	Total Hardness	mg/L	190.17	-
16	Turbidity	NTU	0.10	-
17	Dissolved Oxygen	mg/L	4.67	-
18	Arsenic as As	mg/L	BQL (QL=0.005)	0.2
19	Cadmium as Cd	mg/L	BQL (QL=0.002)	2
20	Chromium as Cr	mg/L	BQL (QL=0.02)	2
21	Copper as Cu	mg/L	BQL (QL=0.02)	3
22	Iron as Fe	mg/L	BQL (QL=0.05)	3
23	Lead as Pb	mg/L	BQL (QL=0.005)	0.1
24	Manganese As Mn	mg/L	BQL (QL=0.05)	2
25	Nickel as Ni	mg/L	BQL (QL=0.01)	3
26	Zinc As Zn	mg/L	BQL (QL=0.02)	5
27	Potassium As K	mg/L	2.02	-
28	Sodium As Na	mg/L	16.07	-
29	Nitrate	mg/L	0.48	50
30	Total Coliform	MPN per 100ml	36.50	-

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TABLE -5

Location of Flue Gas Monitoring Stations

Sr. No.	Source	Parameters	Frequency
1.	HRSG -01	PM, SOx, NOx & CO	Twice in a Month
2.	HRSG -02	PM, SOx, NOx & CO	Twice in a Month
3.	Primary Reformer	PM, SOx, NOx & CO	Twice in a Month
4.	UREA Prill Tower	PM, NH3	Twice in a Month

Month	Perameter	HRSG -01	HRSG -02	Primary Reformer	UREA Prill Tower
Oct-24	PM (mg/Nm³)	3.25	4.20	3.60	43.00
	Sox (ppm)	3.50	4.50	4.50	-
	NOx (ppm)	63.00	59.00	30.50	-
	CO (mg/Nm3)	14.30	14.35	25.40	-
	NH3 (mg/Nm³)	-	-	-	60.00
Nov-24	PM (mg/Nm³)	3.50	4.00	3.70	41.65
	Sox (ppm)	3.50	3.00	3.50	-
	NOx (ppm)	65.00	45.50	37.50	-
	CO (mg/Nm3)	18.90	20.60	27.50	-
	NH3 (mg/Nm³)	-	-	-	47.95
Dec-24	PM (mg/Nm³)	4.40	3.98	4.53	41.40
	Sox (ppm)	4.50	3.50	5.50	-
	NOx (ppm)	76.00	70.50	40.00	-
	CO (mg/Nm3)	18.90	19.50	16.60	-
	NH3 (mg/Nm³)	-	-	-	46.90
Jan-25	PM (mg/Nm³)	4.20	4.75	3.65	47.40
	Sox (ppm)	5.00	4.00	3.50	-
	NOx (ppm)	61.00	66.00	39.50	-
	CO (mg/Nm3)	22.90	22.35	26.35	-
	NH3 (mg/Nm³)	-	-	-	48.90
Feb-25	PM (mg/Nm³)	4.10	4.85	3.95	40.35
	Sox (ppm)	2.50	3.00	3.50	-
	NOx (ppm)	48.50	68.00	35.50	-
	CO (mg/Nm3)	17.75	22.35	29.80	-
	NH3 (mg/Nm³)	-	-	-	46.80
Mar-25	PM (mg/Nm³)	3.95	4.70	3.35	40.30
	Sox (ppm)	2.50	4.50	2.50	-
	NOx (ppm)	41.00	56.50	36.50	-
	CO (mg/Nm3)	14.30	21.75	25.20	-
	NH3 (mg/Nm³)	-	-	-	39.10
Average	PM (mg/Nm³)	3.90	4.41	3.80	42.35
	Sox (ppm)	3.58	3.75	3.83	-
	NOx (ppm)	59.08	60.92	36.58	-
	CO (mg/Nm3)	17.84	20.15	25.14	-
	NH3 (mg/Nm³)	-	-	-	48.28

GO GREEN MECHANISMS PVT. LTD. AHMEDABAD

श्रीनु पिल्ला
प्रबंधक, केन्द्रीय प्रयोगशाला, ई & क्यूसी विभाग
हिंदुस्तान उर्वरक & रसायन लिमिटेड
बरौनी (बिहार) 851115

For. GO GREEN MECHANISMS PVT. LTD.

Authorized Signatory

Annexure - II

बेगूसराय वन प्रमंडल, बेगूसराय
अक्टूबर, 2024 के आधार पर उत्तरजीविता प्रतिवेदन
HURL योजना

क्र.	प्रमंडल का नाम	जिला का नाम	वन प्रक्षेत्र का नाम	वृक्षारोपण स्थल का नाम	वृक्षारोपण वर्ष	लम्बाई (कि. मी.) में लम्बाई (किलोमीटर में)	रोपित पौधों की संख्या	उत्तरजीवित पौधों की संख्या (अक्टूबर, 2024)	उत्तरजीवितता प्रतिशत (अक्टूबर, 2024)	अभियुक्ति
1	2	3	4	6	7	8	9	10	11	12
HURL योजना										
1	बेगूसराय	बेगूसराय	बेगूसराय	[illegible] ढाला से [illegible] तक (बायां साईड)	2022-23	7	5000	3895	77.90	
2				[illegible] से चौकी ढाला (बायां साईड)		4	5500	4304	78.25	
3				[illegible] चौकी ढाला से उमेश नगर (दोनों साईड)		4	9500	8775	92.37	
4				[illegible] ढाला से [illegible] ढाला (बा साईड)		5	5000	4285	85.70	
कुल :-						20	25000	21259	85.04	

वन प्रमंडल पदाधिकारी,
बेगूसराय वन प्रमंडल, बेगूसराय।

श्रीनु पिड्डा
प्रबंधक, केन्द्रीय प्रयोगशाला, ई & क्यूसी विभाग
हिंदुस्तान उर्वरक & रसायन लिमिटेड
(एनटीपीसी, आईओसीएल, एफसीआईएल, एचएफसीएल & सीआईएल का एक संयुक्त उद्यम)
बरौनी (बिहार) 851115