



HINDUSTAN URVARAK & RASAYAN LIMITED
(A JV of NTPC, CIL, IOCL, FCIL & HFCL)
Barauni Urvarak Nagar, Begusarai-851115

Ref. No.: HURL/BR/ECZ/08

Date: 25/Nov/2022

To,
Regional Office (Eastern Central Zone),
Ministry of Environment and Climate Change,
Bungalow no. A-2,
Shyamali Colony,
Ranchi: 834002.

Subject: Regarding submission of Six months EC compliance report on PARIVESH Portal by of M/s Hindustan Urvarak & Rasayan Limited (HURL)- for April-2022 to September-2022

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

Dear Sir,

With reference to the subject as mentioned above, please find attached herewith the Six-month EC compliance report for the period April-22- September -22 with all annexures & same have been uploaded on PARIVESH portal.

Thanking you.

For & on behalf of
HURL, Barauni


(Karanam Manoranjan Babu)

Encl: As above.

CC: Regional officer,
Bihar State Pollution Control Board
Barauni Industrial area
Begusarai.

CC: Regional Directorate – KOLKATA
Central Pollution Control Board,
Ministry of Environment & Forests, Govt. of India,
'South end Conclave' Block-502, 5th & 6th Floor, 1582,
Razidanga, Main Road, Kolkata-700107

Karanam Manoranjan Babu
Vice President (Tech. Services & Prodn.)
Hindustan Urvarak & Rasayan Ltd.
Urvarak Nagar, Barauni, Begusarai
(Bihar) 851115

EC Conditions Six Monthly Compliance Report

(by Project Proponent)



Proposal No : IA/BR/IND2/61377/2016

1. Name of the Entity / Corporate Office :

File No. :	J- 11011/371/2016-IA.II(I)	Proposal Name :	New Ammonia-Urea Fertilizer project
Date Of EC. :	29 Aug 2017	EC Letter :	
Name of the Entity / Corporate Office :	HINDUSTAN URVARAK AND RASAYAN LIMITED	Email Address :	corp.nbd@hurl.net.in
Address :	Core-2, Floor-2, SCOPE Minar, Laxmi Nagar District Centre, Laxmi Nagar Delhi	Mobile No :	98688 3183

2. Proponent Details :

Proponent Name :	Sanjay	Designation :	GeneralManager
Telephone No :	11-22502263	Mobile No :	+91 9868831831
Fax No :	11-01122502267	Email Address :	goutammajee@hurl.net.in
Website :		Pin Code :	110092
State :	Delhi	District :	East
Village/Town :			

3. Compliance Letter/Report (Proponent):

Compliance Period :	2022 / 01 Dec (01 April - 30 Sep)	Compliance Submission Date :	25 Nov 2022 17:23:43:740
Remarks :	NA		
Site Visit Report :	N/A	Site Visit Date :	N/A
ATR Report :	N/A	ATR Date :	N/A
Additional Attachment (If Any) :	N/A	Additional Remarks (If Any) :	

4. Summary Status of Compliance :


Total Condition :	72		
Complied :	39	Being Complied :	4
Not Complied :	0	Partially Complied :	0
Agreed to Comply :	29		



5. Details of Production and Project Area :

Date of Commencement of	18 May	Project Area as Per EC Granted (In Case of Mine	480
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Project/Activity :		2018	Lease):	
Actual Project Area(In Case of Mine Lease):		480		
PRODUCTION CAPACITY :				
S.No	Name of the Product	Units	As per EC granted	Production during last financial year
1	UREA	Tons per Day (TPD)	3850	0
2	AMMONIA	Tons per Day (TPD)	2200	0
3	Urea	Tons per Day (TPD)	3850	0.0
4	Ammonia	Tons per Day (TPD)	2200	0.0

6. Specific Conditions (Proponent) :


S.No	Condition	Self Declaration	Remarks / Reason	Supporting Documents	Observation of IRO
1	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.	Complied	For workers, rest shed with toilets, drinking water, Canteen has been provided. Old buildings in township are housing labourers. Medical healthcare is being provided, ambulance available at site.	N/A	
2	The Unit Shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Agreed to Comply	Recommendation of Feasibility Report & RAR for the Project and shall be complied within the plant during its operation. Proposed Plant is equipped with control of failures/hazards.	N/A	
3	Urea dust shall be controlled by prescribed standard technique.	Agreed to Comply	Addressed in Feasibility Report & EMP of the Project and shall be complied with during operation. Concerns addressed while designing the prilling tower: Height, gas sensors, PM monitor to control.	N/A	
4	Emissions limits for the pollutants from the DG sets and the stack height shall be in conformity with the extant statutory regulations and/or the CPCB guidelines in this regard.	Complied	The electricity is being supplied by NBPDCL through dedicated 132 KV line However DG sets used at site are in conformity with the extent		



			CPCB emission regulation. Evidence Emission report is attached.		
5	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 of the construction labourers are being done and records have been maintained for the same. The same shall also be complied with in the plant during operation of plant	N/A	
6	Storage of hazardous raw material shall not exceed more than 7 days.	Being Complied	Currently Project is in construction phase, During plant operation, storage of raw materials addressed in the Feasibility and EIA (HAZID & ENVID) report. Complied with the stated condition	N/A	
7	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.	Agreed to Comply	Presently, construction activity is in progress & new peripheral boundary, internal roads are yet to be developed. Tree plantation around periphery will be complied after completion of roads and bound		
8	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.	Being Complied	The process of Authorization for collection, storage and disposal of hazardous waste under the Hazardous & other Waste Rules, 2016 has been initiated.	N/A	
9	The levels of PM10 (Urea dust), SO2, 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,	Complied	Environmental Monitoring w.r.t. Air, Water and Noise is being carried out HUBERT Enviro, Chennai. Six monthly compliance report is also being sent to the Regional office of MoEF & BSPCB.		



	the respective Zonal office of CPCB and the SPCB.				
10	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 will be sourced from river Ganga during plant operation, NOC has been accorded by CWC. For construction purpose, ground water is being used with NOC from Central Ground Water Authority	N/A	
11	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/Nm ³ , and also the NAAQS.	Agreed to Comply	Addressed in the Feasibility Report design stage & shall be complied during operation phase. Design include scrubbers, adequate height prilling tower, gas sensors/control measures to meet NAAQS norms	N/A	
12	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.	Agreed to Comply	Enterprise Social Commitment (ESC) will be carried out as per laid down condition by the Project. Detail action plan along with budget have been taken up by HURL	N/A	
13	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	Agreed to Comply	The water sprinkling is being done on regular basis for dust suppression in and around construction site. Air Quality is being monitored in work zone environment as per the plan	N/A	
14	Planting of 5000 trees per year in 5 year in nearby villages in consultation with the local / forest dept. Survival rate of the plants shall be reported to RO, MoEF&CC in 6monthly compliance report. Conservation plant for shall be continue with.	Agreed to Comply	A detailed proposal has been obtained from the State Forest dept. and its approval is in advanced stage at HURL. Once approved the work will be awarded to State Forest Department for implementation.	N/A	

15	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.	Agreed to Comply	All the commitments made during Public Hearing/Public Consultation meeting held on 27th April, 2017 shall be satisfactorily implemented by HURL-Barauni.	N/A	
16	In urea plant, Particulate emissions shall not exceed 50mg/Nm ³ . Monitoring of Prilling tower shall be carried out as per CPCB guidelines.	Agreed to Comply	This has been addressed in the Feasibility Report and EMP of the Project and shall be complied with during operation phase	N/A	
17	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.	Agreed to Comply	The EC conditions relating to establishment of Environmental Cell have been complied. As far as qualification in environmental sciences/engineer is concerned recruitment at HURL level underprogress	N/A	
18	Continuous online (24 X 7) 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.	Agreed to Comply	Online monitoring system will be implemented during operation phase At present manual display board for environment data (EC required data) display has been installed which being updated regularly.	N/A	
19	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	Commissioning activity is in progress. As the Project is based on Zero liquid discharge concept entire wastewater generated will be treated upto tertiary level in ETP inside the plant and will be reuse	N/A	
20	Emissions limits for the pollutants from the DG sets and the stack height shall be in conformity with the extant statutory regulations and/or the CPCB guidelines in this regard.	Complied	The electricity is being supplied by NBPDC through dedicated 132 KV line However DG sets used at site are in conformity with the extent		

			CPCB emission regulation. Evidence Emission report is attached.		
21	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.	Agreed to Comply	All the commitments made during Public Hearing/Public Consultation meeting held on 27th April, 2017 shall be satisfactorily implemented by HURL-Barauni.	N/A	
22	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.	Agreed to Comply	Enterprise Social Commitment (ESC) will be carried out as per laid down condition by the Project. Detail action plan along with budget have been taken up by HURL.	N/A	
23	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.	Agreed to Comply	The EC conditions relating to establishment of Environmental Cell have been complied. As far as qualification in environmental sciences/engineer is concerned recruitment at HURL level underprogress	N/A	
24	In urea plant, Particulate emissions shall not exceed 50mg/Nm ³ . Monitoring of Prilling tower shall be carried out as per CPCB guidelines.	Complied	This has been addressed in the Feasibility Report and EMP of the Project and shall be complied with during operation phase.	N/A	
25	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.	Complied	Workers rest shed with toilets drinking water necessary infrastructure/Car has been provided.Old buildings in township are housing labourers.Medical healthcare is provided Site Ambulance available	N/A	
26	Urea dust shall be controlled	Complied	Addressed in the	N/A	



	by prescribed standard technique.		Feasibility and is complied in operation phase. The concerns are addressed while designing the prilling tower w.r.t height of UPT, gas sensors. Maintains moisture content.		
27	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 laborers are being done and records have been maintained for the same. The same is complied in the plant during operation and production phase.	N/A	
28	The Unit Shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Complied	This has been addressed in the Feasibility Report and RAR conducted for the Project and recommendation is complied with in the plant during operation phase & production phase incl. fire Fight facility	N/A	
29	Storage of hazardous raw material shall not exceed more than 7 days.	Complied	The hazardous raw material required are stored in the designated place away from the construction area. In operation and production stage, storage of raw materials addressed in the Feasibility Report.	N/A	
30	Planting of 5000 trees per year in 5 year in nearby villages in consultation with the local / forest dept. Survival rate of the plants shall be reported to RO, MoEF&CC in 6monthly compliance report. Conservation plant for shall be continue with.	Agreed to Comply	A detailed proposal has been prepared as per the budgetary offer obtained from the State Forest dept. and was approved. The work will be awarded to State Forest Department for		


			implementation on ground.		
31	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. Firefighting facilities also present at site Hydrant System, Deluge Spray System etc	N/A	
32	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.	Agreed to Comply	Presently Commissioning activity is in progress and new peripheral boundary and internal roads partially developed. An area of nearly 116 acres is marked within plant premises for the proposed green belt		
33	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	Commissioning activity is in progress. As the Project is based on Zero liquid discharge concept entire wastewater generated will be treated upto tertiary level in ETP inside the plant and will be reuse	N/A	
34	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	Complied	This has been addressed in the Feasibility Report and EMP of the Project and is complied with in the plant during operation and production stage.	N/A	
35	Continuous online (24 X 7) 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	It will be implemented during operation phase & production phase. At present manual display board for environment data (EC required data) display has been installed and data is being		

			updated regularly		
36	The levels of PM10 (Urea dust), SO2, 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.	Complied	EnvironmentMonit w.r.t. Air,Water and Noise during construction phase is carried out by MoEF&CC recognized,NABL accredited environmentlabora of the HUBERTEnviro Chennai which is hired by PD		
37	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 is complied in operation phase.	N/A	
38	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 will be sourced from river Ganga during plant operation & production phase. Requisite NOC has been accorded by Central Water Commission. Construction activity completed.		


7. General Conditions (Proponent) :


S.No	Condition	Self Declaration	Remarks / Reason	Supporting Documents	Observation of IRO
1	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	The same has been complied and receiving copy sent to your good office.	N/A	
2	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	Date of Financial Closure: 11.10.2016 CCEA GOI formally approved the revival of the Sindri, Gorakhpur & on 13.07.2016. Date of final approval of the Barauni Project: 16. Date of Start: 18.05.	N/A	


3	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated is 18th November, 2009 shall be followed.	Agreed to Comply	All efforts are being made to contain PM10 & PM2.5 Measures include cordoning off the construction site, intermittent water sprinkling, allowing the construction vehicles with PUC certificate etc.	N/A	
4	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. (xiii) A copy of the clearance letter shall be sent by the project propone	Agreed to Comply	Proposed project cost: Rs.7043 crores Rs. 8387.99 crores Revised as per addendum II. Copy of EC letter has been submitted by HURL to concerned Panchayat, Zila Parisad/Municipal Corporation etc.		
5	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.	Complied	The environmental statement for the financial year ending 31st march 2022 in Form-V has already been submitted.		
6	The Project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.	Agreed to Comply	HURL shall strictly comply with the conditions laid by BSPCB, Bihar State Government and any other Statutory Authority during construction and operation phase of the plant.	N/A	
7	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 is provided to collect water from all the plant buildings viz. admin, control rooms and laboratory as	N/A	

			well as surface run off to ensure effective RWH & ground water recharge.		
8	No further expansion or modifications in the Plant shall be carried out without prior approval of the MoEF&CC. In case of deviations or alterations in the project proposal from those submitted to MoEF&CC 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	Agreed to Comply	This condition will be complied with as stated. There has been no expansion/ modification in the proposed plant other than approved ones by MoEF&CC.	N/A	
9	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.	Being Complied	AAQMS location is decided in consultation with Bihar State Pollution Control Board 06 Nos. of AAQMS have been installed out of which one station is up-wind (East) & one station is in down-wind (West)	N/A	
10	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 Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.	Complied	The same is complied with Environment monitoring work from May2018 by M/s PDIL and all reports from Start to till to Sept-2022 have been submitted in the in the 06 monthly compliance report regular.	N/A	
11	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Agreed to Comply	Plant once operational, CSR activities with local villages & administration will be undertaken as per norms Presently, HURL/Contractor has engaged skilled/ unskilled workers from surrounding areas.	N/A	
12	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	Agreed to Comply	Noise levels are being monitored at six locations and all recorded values are within the norms. Equipment meeting statutory w.r.t.		

	standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).		noise and vibrations has been preferred		
13	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Agreed to Comply	Presently in construction phase, monitoring function of specified parameters are being done by MoEF&CC recognized environmental laboratory of Projects and Development India Ltd (PDIL), Noida.	N/A	
14	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 conce	Complied	Advertisement was published in newspapers dated 28 Mar'17 about environmental clearance granted to HURL Barauni project EC letter at HURL'S website www.hurl.net.in MOEF website at http://moef.nic.in	N/A	
15	The company shall undertake all eco-developmental measures including community welfare measures for overall improvement of the environment.	Agreed to Comply	Once the plant becomes operational, CSR activities as per norm / Law will be undertaken by involving local villages and administration as per rule and government guidelines.	N/A	
16	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.	Agreed to Comply	This condition will be complied with during plant operation and production phase.	N/A	
17	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	Complied	HURL has taken care of compliance with all the pollution control measured at every single step wherever possible at design stage itself. This includes	N/A	

	public hearing be implemented.		provision of suitable UPT, scrubbers, stacks etc.		
18	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	HURL shall strictly comply with the conditions laid by BSPCB, Bihar State Government and any other Statutory Authority during construction and operation phase of the plant.	N/A	
19	No further expansion or modifications in the Plant shall be carried out without prior approval of the MoEF&CC. In case of deviations or alterations in the project proposal from those submitted to MoEF&CC 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	This condition will be complied with as stated. There has been no expansion/ modification in the proposed plant other than approved ones by MoEF&CC.	N/A	
20	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.	Agreed to Comply	This condition will be complied with during plant operation and production phase. Also licensor training were imparted to plant personnel at commissioning stage.	N/A	
21	The company shall undertake all eco-developmental measures including community welfare measures for overall improvement of the environment.	Agreed to Comply	Once the plant becomes operational, CSR activities as per norm / Law will be undertaken by involving local villages and administration as per rule and government guidelines.	N/A	
22	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	The same has been complied and receiving copy had earlier been sent to your good office.	N/A	
23	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	Complied	The environmental statement for the financial year ending 31st march 2022 in Form-V has		

	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.		already been submitted.		
24	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 conce	Complied	The advertisement was published in the newspapers dated 28 march 2017 to inform the public about the environment clearance granted to ammonia urea fertilizer project at HURLBarauni & upload on website	N/A	
25	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	Noise levels are being monitored at six locations and all recorded values are within the norms. New generation equipment meeting statutory w.r.t. noise and vibrations has been preferred for installation		
26	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	Date of Financial Closure: 11.10.2016 CCEA GOI formally approved the revival of the Sindri, Gorakhpur & on 13.07.2016. Date of final approval of the Barauni Project: 16. Date of Start: 18.05.	N/A	
27	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 Complied	Presently in commissioning phase, monitoring function of specified parameters are being done by MoEF&CC recognized environmental laboratory PDIL. A quality control laboratory is under construction.	N/A	

28	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Agreed to Comply	Once the plant becomes operational, CSR activities as per norms / Law will be undertaken by involving local villages and administration as per rule and government guidelines.	N/A	
29	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 be implemented.	Complied	HURL has taken care of compliance with all the pollution control measured at every single step wherever possible at design stage itself. This includes provision of suitable UPT, scrubbers, stacks etc.	N/A	
30	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. (xiii) A copy of the clearance letter shall be sent by the project propone	Agreed to Comply	Proposed project cost: Rs.7043 crores Rs. 8387.99 crores Revised as per addendum II. Copy of EC letter has been submitted by HURL to concerned Panchayat, Zila Parisad/Municipal Corporation etc.		
31	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 BSPCB.06 Nos. of AAQMS have been installed in the project area.	N/A	
32	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 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 RWH & ground water recharge.	N/A	
33	The National Ambient Air	Complied	All efforts are	N/A	

	Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated is 18th November, 2009 shall be followed.		being made to contain the PM10 & PM2.5 values within the standard limits at construction site.Measures include cordoning off the construction site, intermittent water sprinkling etc.		
34	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 Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.	Complied	The same is complied with Environment monitoring work from May2018 by M/s PDIL and all reports from Start to till to Sept-2022 have been submitted in the in the 06 monthly compliance report regular.	N/A	

I ' HINDUSTAN URVARAK AND RASAYAN LIMITED ' hereby give undertaking that the specific / general condition is entered by me is correct.

E-Sign

HINDUSTAN URVARAK AND RASAYAN LIMITED

Date : 25 Nov 2022 17:23:43:740

****Note : N/A - Not Available**

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Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE- I

This Compliance Report is the fulfillments of the condition of the Environmental Clearance (EC) vide File No. EC [IA/BR/IND2/61377/2016, J-11011/371/2016-IA II(I)] dated 29.08.2017 for the period of April 2022 to September 2022. This report has been prepared by Projects and Development India Limited (PDIL) 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 PDIL, Noida under the strict supervision of the Government Analysts.

The proposed project is located at Barauni with the capacity of 2200MTPD Ammonia and 3850MTPD Urea in the District Begusarai in the State of Bihar.

The compliance report fulfills the 19 nos. of Specific Conditions and 17 nos. of Standard Conditions led by Ministry of Environment, Forests and Climate Change (MoEF&CC). 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, Gol (2000)
- Manual on Artificial Recharge of Ground Water, Central Water Ground Board, Ministry of Water Resources, Gol (2007)
- Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, Gol (2002)

The Environmental Monitoring report of 6 months w.r.t. Air, Water and Noise have been presented separately with the average values. The Air Quality results have been presented through a self explanatory table with the NAAQ Standards w.r.t. the parameter PM₁₀, PM_{2.5}, NO_x, SO₂, C₆H₆, Benzo(α)pyrene, CO, NH₃, O₃, Ni, As and Pb. 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 IS10500:2012. The analysis consists of maximum eight nos. of physical parameters, thirteen nos. of chemical parameters, maximum ten nos. of heavy metals and three nos. of miscellaneous parameters. All the parameters are within the limits specified under Drinking Water Standard (IS:10500:2012). 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.

The above 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 April 2022 to September 2022.

Amid

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सरकारी विश्लेषक
पर्यावरणीय प्रयोगशाला
(केन्द्रीय प्रदूषण नियंत्रण बोर्ड)
प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड
(भारत सरकार का उपक्रम)

Sujal

Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE - I

HURL, BARAUNI, AIR QUALITY DATA (Year: 2022)

Period	Parameters	Admn. Building HURL (SA1)	Simariya Village (SA2)	Near HURL Township (SA3)	Mahna Village (SA4)	Chakiya Village (SA5)	Bihat Village (SA6)	NAAQ Standards Annual/24/8/1 Hly. Avg.
Avg. (April 2022)	PM ₁₀	79.8	85.7	75.4	84.7	86.1	83.7	60/100
	PM _{2.5}	42.5	43.2	38.1	43.4	45.6	42.7	40/60
	SO ₂	12.0	13.0	9.7	11.1	12.9	12.1	50/80
	NO _x	21.8	23.4	16.5	18.7	25.3	24.4	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.50	0.62	0.41	0.51	0.60	0.65	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	17.3	19.4	14.4	19.7	21.1	25.1	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0
Avg. (May 2022)	PM ₁₀	76.5	81.5	71.1	82.4	85.0	82.5	60/100
	PM _{2.5}	41.1	41.6	37.5	42.4	43.8	42.1	40/60
	SO ₂	10.6	11.5	9.6	11.0	12.7	11.9	50/80
	NO _x	19.4	20.8	14.7	16.9	22.8	22.0	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.44	0.52	0.35	0.44	0.52	0.53	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	16.4	18.2	13.4	18.3	19.5	20.9	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0
Avg. (June 2022)	PM ₁₀	70.9	71.5	59.5	70.8	73.9	74.7	60/100
	PM _{2.5}	38.1	36.6	32.1	36.8	39.4	38.5	40/60
	SO ₂	10.3	11.4	9.5	10.9	12.6	12.0	50/80
	NO _x	17.0	18.3	12.9	14.8	19.9	19.0	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.36	0.42	0.29	0.36	0.42	0.43	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	13.9	15.1	11.5	15.9	17.0	17.7	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0
Avg. (July 2022)	PM ₁₀	68.8	68.7	58.9	69.3	71.7	73.4	60/100
	PM _{2.5}	34.6	33.7	29.7	34.5	36.6	36.3	40/60
	SO ₂	10.6	11.6	9.7	11.1	13.0	12.4	50/80
	NO _x	15.3	15.9	12.4	14.4	19.2	18.7	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.30	0.34	0.24	0.32	0.38	0.41	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	12.2	13.3	10.4	14.6	15.8	16.6	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0
Avg. (August 2022)	PM ₁₀	62.2	62.4	53.1	61.5	65.2	66.9	60/100
	PM _{2.5}	31.0	31.4	26.5	30.4	32.8	33.1	40/60
	SO ₂	10.3	9.4	8.7	9.9	11.6	11.1	50/80
	NO _x	14.3	12.5	10.4	12.1	16.3	15.6	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.20	0.18	0.14	0.19	0.22	0.24	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	12.5	11.5	11.3	13.2	14.4	15.1	100/180

आकाश चौकर
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(भारत सरकार का उपक्रम)

Sujedha

Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0
Avg. (September 2022)	PM ₁₀	67.0	66.6	53.1	58.1	60.8	60.7	60/100
	PM _{2.5}	33.6	33.0	26.5	29.3	31.5	30.2	40/60
	SO ₂	10.2	9.6	8.7	10.1	11.6	10.9	50/80
	NO _x	13.8	12.4	10.5	13.0	15.3	14.8	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.23	0.20	0.14	0.19	0.23	0.22	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	13.9	12.8	12.6	14.4	15.8	16.3	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
As	BDL	BDL	BDL	BDL	BDL	BDL	06	
Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0	
Average (April 2022 - September 2022)	PM ₁₀	70.9	72.7	61.9	71.1	73.8	73.7	60/100
	PM _{2.5}	36.8	36.6	31.7	36.1	38.3	37.2	40/60
	SO ₂	10.7	11.1	9.3	10.7	12.4	11.7	50/80
	NO _x	16.9	17.2	12.9	15.0	19.8	19.1	40/80
	C ₆ H ₆	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.34	0.38	0.26	0.34	0.40	0.41	02/04
	NH ₃	BDL	BDL	BDL	BDL	BDL	BDL	100/400
	O ₃	14.4	15.1	12.3	16.0	17.3	18.6	100/180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
As	BDL	BDL	BDL	BDL	BDL	BDL	06	
Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.5/1.0	

NOTE: BDL = Below Detection Limit
 (µg/m³) = PM₁₀, PM_{2.5}, SO₂, NO_x, NH₃, O₃, C₆H₆, Benzo (a)pyrene
 (mg/m³) = CO
 (ng/m³) = Ni, As, Pb

Barauni

आकोश
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 (भारत सरकार का उपक्रम)

Sujat

Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE - I

HURL, BARAUNI, GROUND WATER QUALITY DATA (Year: 2022)
AVG. (APRIL 2022 TO SEPTEMBER 2022)

(Results are expressed in mg/l, unless otherwise stated)

Sl. No.	Parameters	Analysis Results			Requirement (Acceptable/ Permissible Limits) (IS:10500:2012)
		Hand Pump - Admn. Building of HURL (GW1)	Hand Pump - HURL Township (GW2)	Hand Pump - Chakiya Village (GW3)	
PHYSICAL					
1	pH	7.33	7.33	7.28	6.5-8.5
2	Temperature (°C)	27.8	27.8	27.9	-
3	Colour, HU	<5	<5	<5	5/15
4	Odour	Agreeable	Agreeable	Agreeable	Agreeable
5	Taste	Agreeable	Agreeable	Agreeable	Agreeable
6	Turbidity (NTU)	<5	<5	<5	1/5
7	Total Suspended Solids	NIL	NIL	NIL	-
8	Total Dissolved Solids	470.8	555.0	545.0	500/2000
CHEMICAL					
1	P- Alkalinity as CaCO ₃	NIL	NIL	NIL	-
2	Total Alkalinity as CaCO ₃	324.7	402.3	393.7	200/600
3	Chloride as Cl	29.3	34.3	36.3	250/1000
4	Sulphate as SO ₄	66.3	70.3	67.7	200/400
5	Nitrate as NO ₃	1.2	1.3	1.5	45/NR
6	Fluoride as F	<0.4	<0.4	<0.4	1.0/1.5
7	Total Hardness as CaCO ₃	342.3	447.0	438.3	200/600
8	Ca. Hardness as CaCO ₃	212.7	276.7	266.7	75/200
9	Mg. Hardness as CaCO ₃	129.7	170.3	174.0	30/100**
10	Sodium as Na	40.2	33.3	33.5	-
11	Potassium as K	5.2	4.3	4.2	-
12	Silica as SiO ₂	12.0	12.7	12.3	-
13	Iron as Fe	0.55	0.70	0.75	0.3/NR
HEAVY METALS					
1	Manganese as Mn	BDL	BDL	BDL	0.1/0.3
2	Total Chromium as Cr	BDL	BDL	BDL	0.05/NR
3	Lead as Pb	BDL	BDL	BDL	0.01/NR
4	Zinc as Zn	0.19	0.20	0.20	5.0/15
5	Cadmium as Cd	BDL	BDL	BDL	0.003/NR
6	Copper as Cu	BDL	BDL	BDL	0.05/1.5
7	Nickel as Ni	BDL	BDL	BDL	0.02/NR
8	Arsenic as As	BDL	BDL	BDL	0.01/0.05
9	Selenium as Se	BDL	BDL	BDL	0.01/NR
OTHERS					
1	Mineral oil	Absent	Absent	Absent	0.5/NR
2	Phenolic Compounds as C ₆ H ₅ OH	BDL	BDL	BDL	0.001/0.002
3	Coliform (MPN/100ml)	<100	<100	<100	-

Note: NR - No Relaxation, *Calcium as Ca & ** Magnesium as Mg

(Handwritten Signature)

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(भारत सरकार का उपक्रम)

(Handwritten Signature)

Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE - I

HURL, BARAUNI, SURFACE WATER QUALITY DATA (Year: 2022)
AVG. (APRIL 2022 TO SEPTEMBER 2022)

(Results are expressed in mg/l, unless otherwise stated)

Sl. No.	Parameters	Analysis Results			Requirement (Acceptable/ Permissible Limits) (IS:10500:2012)
		Ganga River (SW1)	Bihat Village (Pond) (SW2)	Baya Nala (SW3)	
PHYSICAL					
1	Temperature (°C)	28.3	28.5	28.6	-
2	Colour, HU	<5	<5	<5	5/15
3	Turbidity (NTU)	36.3	37.3	47.7	1/5
4	pH	7.20	7.42	7.33	6.5-8.5
5	Total Dissolved Solids	221.7	560.0	456.7	500/2000
6	Total Suspended Solids	93.7	98.0	113.0	-
CHEMICAL					
1	Total Alkalinity as CaCO ₃	156.7	210.7	225.0	200/600
2	Chloride as Cl	19.7	158.0	115.7	250/1000
3	Sulphate as SO ₄	20.0	53.0	26.3	200/400
4	Nitrate as NO ₃	1.0	2.4	1.6	45/NR
5	Fluoride as F	<0.4	<0.4	<0.4	1.0/1.5
6	Total Hardness as CaCO ₃	181.3	218.7	253.0	200/600
7	Calcium Hardness as CaCO ₃	112.0	149.3	163.7	75/200*
8	Magnesium Hardness as CaCO ₃	69.3	69.3	89.3	30/100**
9	Dissolve Oxygen	7.0	6.6	6.6	-
10	COD	6.8	8.5	8.5	-
11	BOD _(3 days at 27° C)	1.6	3.4	2.6	-
12	Sodium as Na	10.5	124.8	79.7	-
13	Potassium as K	1.5	16.0	10.3	-
HEAVY METALS					
1	Iron as Fe	0.10	0.15	0.13	0.3/NR
2	Manganese as Mn	BDL	BDL	BDL	0.1/0.3
3	Total Chromium as Cr	BDL	BDL	BDL	0.05/NR
4	Lead as Pb	BDL	BDL	BDL	0.01/NR
5	Zinc as Zn	0.23	0.31	0.25	5.0/15
6	Cadmium as Cd	BDL	BDL	BDL	0.003/NR
7	Copper as Cu	BDL	BDL	BDL	0.05/1.5
8	Nickel as Ni	BDL	BDL	BDL	0.02/NR
9	Arsenic as As	BDL	BDL	BDL	0.01/0.05
10	Selenium as Se	BDL	BDL	BDL	0.01/NR
OTHERS					
1	Mineral oil	Absent	Absent	Absent	0.5/NR
2	Phenolic Compounds as C ₆ H ₅ OH	BDL	BDL	BDL	0.001/0.002
3	Coliform Organisms (MPN/100ml)	1306.7	1136.7	1555.0	-

Note: NR - No Relaxation, *Calcium as Ca & ** Magnesium as Mg

Signature

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(भारत सरकार का उपक्रम)

Signature

Compliance of EC conditions for the period of April 2022 - September 2022 for proposed Ammonia - Urea (2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE - I

HURL, BARAUNI, NOISE QUALITY DATA (Year: 2022)

Period	Parameters	Admn. Building HURL (SA1)	Simariya Village (SA2)	Near HURL Township (SA3)	Mahna Village (SA4)	Chakiya Village (SA5)	Bihat Village (SA6)	Prescribed Limits in dB(A) as per NAAQS
April 2022	24-hrs Avg L _{eq} Value dB(A)	51.5	49.5	46.7	49.0	50.1	49.8	-
	Day time L _{eq} Value dB(A)	52.9	51.0	48.0	50.5	51.5	51.3	75/55
	Night time L _{eq} Value dB(A)	45.1	42.5	41.4	41.9	43.6	42.3	70/45
May 2022	24-hrs Avg L _{eq} Value dB(A)	51.6	49.5	46.5	49.5	50.1	50.8	-
	Day time L _{eq} Value dB(A)	53.1	44.8	53.1	44.8	53.1	44.8	75/55
	Night time L _{eq} Value dB(A)	51.0	42.2	51.0	42.2	51.0	42.2	70/45
June 2022	24-hrs Avg L _{eq} Value dB(A)	52.2	50.5	49.5	51.0	52.0	51.8	-
	Day time L _{eq} Value dB(A)	53.6	51.9	50.9	52.5	53.4	53.2	75/55
	Night time L _{eq} Value dB(A)	46.3	44.5	43.6	43.7	46.0	45.6	70/45
July 2022	24-hrs Avg L _{eq} Value dB(A)	52.5	51.1	50.0	50.9	52.0	52.2	-
	Day time L _{eq} Value dB(A)	53.9	52.6	51.4	52.4	53.4	53.7	75/55
	Night time L _{eq} Value dB(A)	46.7	44.8	43.4	44.0	45.3	45.6	70/45
August 2022	24-hrs Avg L _{eq} Value dB(A)	53.0	51.5	49.4	51.9	52.6	52.6	-
	Day time L _{eq} Value dB(A)	55.0	52.9	50.8	53.3	53.9	54.0	75/55
	Night time L _{eq} Value dB(A)	46.2	45.2	44.1	44.9	46.7	46.0	70/45
September 2022	24-hrs Avg L _{eq} Value dB(A)	50.6	49.2	50.1	46.5	47.9	46.1	-
	Day time L _{eq} Value dB(A)	56.1	54.1	56.1	52.0	53.5	51.0	75/55
	Night time L _{eq} Value dB(A)	45.1	44.3	44.1	40.9	42.2	41.1	70/45

Avg. (April 2022 - September 2022)	24-hrs Avg L _{eq} Value dB(A)	52.2	50.5	48.7	50.5	51.3	51.4	-
	Day time L _{eq} Value dB(A)	53.7	49.9	51.3	49.9	53.2	50.5	75/55
	Night time L _{eq} Value dB(A)	48.0	44.0	46.0	43.6	47.5	44.4	70/45

Manoj
 आकोश छोकर
 सरकारी विश्लेषक
 पर्यावरणीय प्रयोगशाला
 (केन्द्रीय प्रदूषण नियंत्रण बोर्ड)
 प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड
 (भारत सरकार का उपक्रम)

Sujetha

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TESTING CERTIFICATE

Annexure II
Specific Condition Pt-4

Issued to:
TECHNIP ENERGIES INDIA LIMITED
HURL, Barauni
Bihar - 851119

Date of Report: 29/09/2022
Report No: 270922/Civ/08845/i
Date of Field Testing: 27/09/2022 To 28/09/2022
Period of Testing & Analysis: 28/09/2022 To 29/09/2022
Job S. No.: GTRL/270922/08780
Job Code No.: Civ/280922/08789/i
ULR No.: TC5102220000003168F

Name of Client: TECHNIP ENERGIES INDIA LIMITED
Customer Ref No. to GTRL : Nil
Customer-Client Agreement No. : Nil
Sample Description : Ambient Air; Location -Near Plant
Environmental Condition During Sampling: Temperature - 30°C, RH - 55%, Weather - Clear
Sampling Duration: 24 Hrs., Date & Time :- 27/09/2022 (11:45 AM) to 28/09/2022 (11:45 AM)
Name of Work : Environmental Monitoring work at HURL Plant, Barauni

S. No.	Tests	Test Method	Requirement NATIONAL AMBIENT AIR QUALITY STANDARDS CPCB, Notification 18 November 2009	Result	Conformity
1	PM _{2.5} , µg/m ³	IS 5182 (Part 24):2006 (RA 2017)	60, Max.	38 48 30 Avg. = 38	Yes
2	PM ₁₀ , µg/m ³	IS 5182 (Part 23):2006 (RA 2017))	100, Max.	70 74 62 Avg. = 68	Yes
3	Sulphur Dioxide (SO ₂), µg/m ³	IS 5182 (Part 2):2001 (RA 2017)	80, Max.	9.4	Yes
4	Nitrogen Dioxide (NO ₂), µg/m ³	IS 5182 (Part 6):2006 (RA 2017)	80, Max.	12.8	Yes

End of Report

AUTHORIZED SIGNATORY

ANUJ KUMAR (TM)

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TC-5102

Suresh



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TESTING CERTIFICATE

ISSUED TO:	DATE OF REPORT:	29/09/2022
TECHNIP ENERGIES INDIA LIMITED	REPORT NO.:	270922/Civ/08845/II
HURL, BARAUNI	DATE OF FIELD TESTING:	27/09/2022 To 28/09/2022
BIHAR - 851119	PERIOD OF TESTING & ANALYSIS:	28/09/2022 To 29/09/2022
	JOB S. NO.:	GTRL/270922/08780
	JOB CODE NO.:	Civ/280922/08789/II
	ULR No.:	TC5102220000003169F

Name of Customer:	TECHNIP ENERGIES INDIA LIMITED
Customer Ref No. to GTRL :	NIL
Customer-Client Agreement No. :	NIL
Sample Description:	Stack emission of EDG 1 ; Location – HURL Plant, DG ID :- B42 – PK -0001A
Environmental Condition During Sampling:	Temperature - 30°C, RH – 55% , Weather - Clear
Sampling Time:	12:30 P.M. To 12:58 P.M.
Name of Work:	Environmental Monitoring work at BPCL Patna AFS

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
3.	Sampling Duration, min.	28
4.	Stack Temperature, °C	120°C
5.	Capacity of Stack	11 KV
6.	Height of Stack from Ground Level	31.5 meter
7.	Diameter of Stack	500 mm
8.	Average Flow Rate	25.2 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	9.8 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1986 General Emission Standard – Part -D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00 Max.	48.41
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2019)	Not Specified	57.2
3	Oxides of Nitrogen(Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2017)	Not Specified	82.8

End of Report

AUTHORIZED SIGNATORY

Andj Kumar
ANDJ KUMAR (TM)



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Signature



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TESTING CERTIFICATE

ISSUED TO:

TECHNIP ENERGIES INDIA LIMITED

HURL, BARAUNI

BIHAR - 851119

DATE OF REPORT:

29/09/2022

REPORT NO:

270922/Civ/08845/III

DATE OF FIELD TESTING:

27/09/2022 To 28/09/2022

PERIOD OF TESTING & ANALYSIS:

28/09/2022 To 29/09/2022

JOB S. NO.:

GTRL/270922/08780

JOB CODE NO.:

Civ/280922/08789/III

ULR No.:

TC5102220000003170F

Name of Customer:

TECHNIP ENERGIES INDIA LIMITED

Customer Ref No. to GTRL :

NIL

Customer-Client Agreement No. :

NIL

Sample Description:

Stack emission of EDG 2; Location – HURL Plant, DG ID :- B42 – PK -0001B

Environmental Condition During Sampling:

Temperature - 30°C, RH – 55%, Weather - Clear

Sampling Time:

01:10 P.M. To 01:40 P.M.

Name of Work:

Environmental Monitoring work at BPCL Patna AFS

S. No.**Particular****Result**

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
3.	Sampling Duration, min.	30
4.	Stack Temperature, °C	110°C
5.	Capacity of Stack	11 KV
6.	Height of Stack from Ground Level	31.5 meter
7.	Diameter of Stack	500 mm
8.	Average Flow Rate	25.0 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	11.2 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement	Result
			The Environmental (Protection) Rules, 1986 General Emission Standard – Part -D	
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00 Max.	48.38
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2019)	Not Specified	57.8
3	Oxides of Nitrogen(Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2017)	Not Specified	82.0

End of Report

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ANUJ KUMAR (TM)



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TC-0102

Sujata



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TESTING CERTIFICATE

ISSUED TO:
TECHNIP ENERGIES INDIA LIMITED
HURL, BARAUNI
BIHAR - 851119

DATE OF REPORT: 29/09/2022
REPORT NO: 270922/Civ/08845/iv
DATE OF FIELD TESTING: 27/09/2022 To 28/09/2022
PERIOD OF TESTING & ANALYSIS: 28/09/2022 To 29/09/2022
JOB S. No.: GTRL/270922/08780
JOB CODE NO.: Civ/280922/08789/iv
ULR No.: TC5102220000003171F

Name of Customer: TECHNIP ENERGIES INDIA LIMITED
Customer Ref No. to GTRL : NIL
Customer-Client Agreement No. : NIL
Sample Description: Stack emission of EDG 3; Location – HURL Plant, DG ID :- B42 – PK -0001c
Environmental Condition During Sampling: Temperature - 30^oc, RH – 55% , Weather - Clear
Sampling Time: 01:50 P.M. To 02:15 P.M.
Name of Work: Environmental Monitoring work at BPCL Patna AFS

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
3.	Sampling Duration, min.	30
4.	Stack Temperature, ^o C	110 ^o c
5.	Capacity of Stack	11 KV
6.	Height of Stack from Ground Level	31.5 meter
7.	Diameter of Stack	500 mm
8.	Average Flow Rate	25.0 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	11.2 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement	Result
			The Environmental (Protection) Rules, 1986 General Emission Standard – Part -D	
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00 Max.	48.46
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2019)	Not Specified	57.74
3	Oxides of Nitrogen(Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2017)	Not Specified	75.6

End of Report

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TESTING CERTIFICATE

ISSUED TO:
TECHNIP ENERGIES INDIA LIMITED
HURL, BARAUNI
BIHAR - 851119

DATE OF REPORT: 29/09/2022
REPORT NO: 270922/Civ/08845/v
DATE OF FIELD TESTING: 27/09/2022 To 28/09/2022
PERIOD OF TESTING & ANALYSIS: 28/09/2022 To 29/09/2022
JOB S. NO.: GTRL/270922/08780
JOB CODE NO.: Civ/280922/08789/v
ULR No.: TC5102220000003172F

Name of Customer: TECHNIP ENERGIES INDIA LIMITED
Customer Ref No. to GTRL : NIL
Customer-Client Agreement No. : NIL
Sample Description: HRSG 1 ; Location – HURL Plant
Environmental Condition During Sampling: Temperature - 30^oc , RH – 55% , Weather - Clear
Sampling Time: 02:30 P.M. To 02:55 P.M.
Name of Work: Environmental Monitoring work at BPCL Patna AFS

S. No.	Particular	Result
1.	Type of Fuel Used	Natural Gas
3.	Sampling Duration, min.	25
4.	Stack Temperature, °C	90 ^o c
5.	Capacity of Stack	11 KV
6.	Height of Stack from Ground Level	45 meter
7.	Diameter of Stack	500 mm
8.	Average Flow Rate	20.5 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	10.2 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1986 General Emission Standard – Part -D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00 Max.	45.30
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2019)	Not Specified	50.82
3	Oxides of Nitrogen(Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2017)	Not Specified	42.6

End of Report

AUTHORIZED SIGNATORY

Anuj Kumar
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TC-5102

Anuj Kumar



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ISSUED TO:
TECHNIP ENERGIES INDIA LIMITED
HURL, BARAUNI
BIHAR - 851119

DATE OF REPORT: 29/09/2022
REPORT NO: 270922/Civ/08845/v1
DATE OF FIELD TESTING: 27/09/2022 To 28/09/2022
PERIOD OF TESTING & ANALYSIS: 28/09/2022 To 29/09/2022
JOB S. No.: GTRL/270922/08780
JOB CODE No.: Civ/280922/08789/v1
ULR No.: TC5102220000003172F

Name of Customer: TECHNIP ENERGIES INDIA LIMITED
Customer Ref No. to GTRL : NIL
Customer-Client Agreement No. : NIL
Sample Description: HRSG 2 Location – HURL Plant
Environmental Condition During Sampling: Temperature - 30°C, RH – 55%, Weather - Clear
Sampling Time: 03:30 P.M. To 03:50 P.M.
Name of Work: Environmental Monitoring work at BPCL Patna AFS

S. No.	Particular	Result
1.	Type of Fuel Used	Natural Gas
3.	Sampling Duration, min.	20
4.	Stack Temperature, °C	98°C
5.	Capacity of Stack	11 KV
6.	Height of Stack from Ground Level	45 meter
7.	Diameter of Stack	500 mm
8.	Average Flow Rate	22.5 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	10.0 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1986 General Emission Standard – Part -D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00 Max.	46.20
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2019)	Not Specified	50.80
3	Oxides of Nitrogen(Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2017)	Not Specified	42.0

End of Report

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ANUJ KUMAR (TM)



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Signature



Specific Condition Pt. no → 4

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna
CIN – U74110BR2012SGC018889 Website – www.bsptcl.in
Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021

Letter No565...../
SO Cell/SLDC/HURL, Barauni/05/2022

Patna, Dated ...09...09...2022

From,

Sri A K Chaudhary
Chief Engineer (System Operation)

To,

1. Sri Dharminder Bagga
Vice President, HURL Barauni
Email Id:-bhatiaks@hurl.net.in

Sub: Regarding grant of permission for First time charging of 132KV BTPS-HURL T/L & synchronized operation of captive power generation unit (2x23MW) of HURL with the Grid

Ref. - (i) Director (Operation), NBPDC Letter No. COM/HURL Barauni-03/2022/190 dated 05.04.22


Sir,

With reference to the subject matter, the permission for synchronized operation of captive power generation unit of HURL with 132/33 kv Grid substation NTPC, Barauni (BTPS) is hereby accorded subject to following conditions:-

1. M/s HURL has to ensure the availability of real time SCADA data at SLDC, Patna within the stipulated time frame as mentioned in undertaking dated 29.08.2022.
2. Parallel operation of Captive Power plant with BSPTCL system should be as per terms & conditions of Letter mentioned under Ref. No. (i).

Encl. : As above

Yours faithfully


(A K Chaudhary)
Chief Engineer (System Operation)

P.m.



RAINWATER HARVESTING

The rain water collected from the roof of the permanent buildings shall be harvested for ground water recharge as a compensation to meet the requirement due to loss of permeable area promoting ground water recharge, maintenance of existing hydro-dynamic pattern of the area and to conserve the salinity of ground water in the area. The excess rainwater shall be sent to the trap through storm water drain and attempts shall be made not to mix any process waste with the storm water. The trap shall have two compartments, one consisting of sized boulders and the other, sized hard coke. The excess water from sized hard coke shall be collected in another tank before discharge in to natural drainage system. The drainage system of project area shall be aligned as per the existing natural drainage pattern of the area.

Rain water harvesting and recharging system shall be installed as per the relevant the central ground water board guidelines applicable for the area. The rain water harvesting/aquifer recharging system have been proposed as water conservation measure. The systems shall be installed at such location of the project area close to the Administrative building so as to facilitate collection of most of the rain water from the roofs of the building in the project area. Similarly, same system of rain water harvesting shall be implemented in the township.

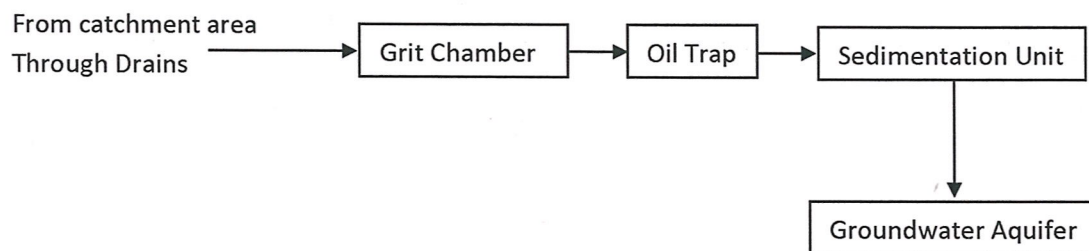
The bores shall be provided within 3 m deep enclosures, which will comprise layers of boulders, gravel and coarse sand so as to separate suspended matter from the rainwater. Three nos. of ground water recharging systems have been proposed to be developed in the township area and three nos. in the factory area. Rainwater harvesting system will consist of the following units:

1. Rainwater Collection System
2. Rainwater Filtration System
3. Rainwater Recharging Pond including an active well of depth 20m and dia 100-150mm.

The system will be cleaned during dry season and will be made ready to collect water for harvesting from its command area during monsoon. Provision shall also be made in the rainwater harvesting system for Chlorination/disinfection especially during the first phase of monsoon. The system shall be designed as per the guidelines for rainwater harvesting prepared by Central Ground Water Board (Ministry of Water Resources).

The scheme of rain water harvesting and aquifer recharging is presented below:

Block Diagram for Proposed Rain Water Harvesting / Aquifer Recharging System



Sujedh.

The rainwater harvesting system for the fertilizer plant will follow the guidelines laid out by different Departments/Ministries as far as possible.

- a) Guidelines on Artificial Recharge of Water, Central Water Ground Board, Ministry of Water Resources, Gol (2000);
- b) Manual on Artificial Recharge of Ground Water, Central Water Ground Board, Ministry of Water Resources, Gol (2007);
- c) Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, Gol (2002);

The sizing of the rain water collection drain and sub-units including the harvesting pond shall be calculated depending upon the maximum rain intensity within 50 years and roof area of the building after finalization of the building design.

Sujetha

GREEN BELT DEVELOPMENT & PLANTATION OF TREES

The project proponent shall develop greenbelt in an area of 33% i.e., nearly 116 acres out of 350 acres plant area of the project. The greenbelt of 30m width around periphery shall be provided (Plate A)

5000 trees per year in 5 year shall be planted in nearby village with the consultation of the villagers. Survival rate of plants shall be reported to RO, MoEF&CC in 6 monthly compliance reports.

Purpose

Trees and plants are an essential component of healthy environment. In addition to maintaining the oxygen-carbon dioxide balance in the atmosphere through photosynthesis, trees and plants control air and noise pollution, control soil erosion, provide food and shelter to domestic and wild animals including birds and insects, and improve the aesthetic value of the environment. The utility of the green belt predominantly lies in its capacity to attenuate the fugitive emission and spillage. Thus, the objectives of the proposed green belt program are as follows:

- a) To control air pollution due to fugitive emissions and spillage.
- b) To attenuate noise generated by various machines.
- c) To attenuate the effect of accidental release of toxic gases.
- d) To reduce the effect to fire and explosion.
- e) To improve the general appearance and aesthetics of the area.
- f) To provide food and habitat for wildlife.
- g) To control soil erosion.
- h) To obscure the proposed facilities from general view.


Areas to be afforested

Barauni Fertilizer plant shall be established in existing 350 acres of land in the battery limit of HFCL. Green-belt development program shall be undertaken in 33% of the plant area including 30 m wide green belt around the battery limit of the plant. There exists a thick green belt around the existing abandoned fertilizer plant. The existing township is well planned with a proper forestation. While preparing the layout plan for locating the different facilities, extreme care has been exercised to preserve the existing plantation to the extent possible. Trees, lawns and gardens shall be developed within the premises to cover all the vacant areas. Extreme care shall be taken to utilize all available areas for forestation.

Scheme and Species for Green Belt

The general approach for selection of species for green belt development is their potential for attenuation of fugitive emissions and noise, diversity of vegetation, introduction of species attracting birds and animals, and to create a natural habitat. It is proposed to develop trees of different heights so as to provide cover from ground level up to the canopy of tall tree species. Further, trees with big foliage and those known to prosper well in the area will be developed. Preference will be given to fruit bearing trees so as to provide food and shelter to birds and insects.

The plan for development of green belt is as given below:



- a) The distance between two plants should not be less than 3.0 m so that a 30 m width green belt will have ten rows of plantations. Thus a 30 m width green belt will have a plant boundary of 1.0 km will have 3330 plants.
- b) A pit of 45 cm x 45 cm x 45 cm must be dug for plantation of saplings which are at least 6 months old.
- c) Saplings must be planted at the onset of monsoon.

Different species in the green belt suggested to have dense stratified 3 to 5 layer canopy so as to form a visible barrier and wind breaker

- a) On the outer ring of the green belt facing fugitive emissions from the open surface and roads close plantation of 2 to 3 rows of evergreen *Alstoniascholaris* intermixed with *FicusCunea* and Babul.
- b) Behind the outer layer, fast growing evergreen plants having good fugitive emission removing capacity like evergreen *MahuaIndica* and *Derris Indica*, Sagwan, Gambhar and Putranjiya.
- c) Middle layer may be planted with Silver Oak which is tall, hardy and evergreen.
- d) In the next layer some typical hard and fast growing plants like *Leucaena*, *Acacia auriculiformis*, *Cassia fistula*, *C. Siamea*, *Inga ducis* may also be considered.
- e) In the inner perhibery *Bouganvella* may be planted as it has high capacity for absorbing toxic gases.
- f) Some plants having good timber value like *Dalbergiasissoo*, *Albizzialebbek*, *Azadiractaindica*, *Tectonsgrandis* along with fruit trees like Ber, Guava, Jamun, Jack fruit and Bel may also be planted to attract birds.
- g) For fencing purpose plants from *Asclepiadaceae* and *Apocynaceae* families like *AlstoniaCalotropis* which are resistant to grazing may be considered.
- h) The entire green belt may be interspersed with climbers.

Efforts would be made by M/s HURL in collaboration with State Forest Department to explore mutual areas of interest in the area of identifying trees/plants to maintain/enhance the current biodiversity index.

Sujedha

Government of India
 Ministry of Environment, Forests and Climate Change (MoEF&CC)
 Regional Office – Ranchi

MONITORING REPORT

PART I

DATA SHEET

File No

1		Project Type	Industrial (Ammonia & Urea production)
2		Name of the project	Ammonia-Urea Fertilizer Project Hindustan Urvarak&Rasayan Limited, Barauni
3		Clearance letters/Om No. and dated	J-11011/371/2016-IA II(I)
4		Locations	Barauni
	A	Taluk(S) District	Barauni Begusarai
	B	State(S)	Bihar
	C	Latitudes/Longitudes	Location Longitude Latitude Elevation (m) NE Boundary, 86°2'11.00"E, 25°24'58.76"N, 48 Northern Boundary, 86°1'48.52"E, 25°25'0.64"N, 47 NW Boundary, 86°1'32.62"E, 25°25'1.39"N, 47 Centre of HFC Plant, 86°1'43.32"E, 25°24'46.89"N, 48 Eastern Boundary, 86°2'7.44"E, 25°24'42.87"N, 47 Western Boundary, 86°1'18.59"E, 25°24'49.95"N, 48 Southern Boundary, 86°1'37.34"E, 25°24'34.42"N, 47 South-West Boundary, 86°1'13.77"E, 25°24'37.87"N, 48

Sujedh

			<p>South-East Boundary, 86°2'5.80"E, 25°24'30.65"N, 46</p> <p>Source: GPS</p>
5		Address for correspondence	
	A	Address of concerned Project Chief Engineer (with Pin Code & Telephone/Telex/fax nos)	<p>Sh. Ashok Bansal</p> <p>Head of Project (HOP)</p> <p>Hindustan Urvarak & Rasayan Limited (HURL)</p> <p>Barauni Urvarak Nagar,</p> <p>Begusarai-851115</p> <p>BIHAR</p>
	B	Address of Executive Project Engineer (with Pin Code/fax numbers)	<p>Sh. Karanam Manoranjan Babu</p> <p>Vice-President (TS & Production)</p> <p>Hindustan Urvarak & Rasayan Limited (HURL)</p> <p>Barauni Urvarak Nagar,</p> <p>Begusarai-851115</p> <p>BIHAR</p>
6		Salient Features	
	A	Salient features of the project	<p>The Ammonia and Urea plants shall be one of the latest mega capacity plants (2200 MTPD for Ammonia and 3850 MTPD for Urea). The technology suppliers shall consider the latest technological features with an objective to have lowest energy consumption & high reliability of plant having state of the art technology with latest technological features. Ammonia and Urea plants planned shutdown shall be once in two years. One blast proof central control room for location of control & monitoring of operation of all Ammonia/Urea/Offsite & utility plants shall be provided by LSTK Contractor.</p> <p>The ETP facility shall treat all effluents, continuous, intermittent or emergency discharges from ammonia/urea plants. All liquid treated effluent</p>

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		<p>from various sections of the plants shall be collected in final effluent pond made of RCC. The treated effluent shall be pre-treated with chemicals to make it Suitable for feeding to RO plant. The RO plant shall be two stage RO systems. The treated water from RO shall be recycled back to filtered water tank in WTP. The final reject waste water from RO units shall be further treated in thermal evaporation unit using low pressure steam to achieve zero liquid discharge from ETP plant.</p> <p>All Liquid & gaseous effluents generated from various plans & facilities shall be treated before final discharge to meet the requirements of Central/State pollution control board.</p>
b	Of the environmental management plans.	<p>An Environmental Management Plan (EMP) has been prepared keeping in view all possible strategies oriented towards the impact minimization. The EMP for the proposed project is divided into three phases i.e. Planning, Construction and Operational phase.</p> <p>During the planning stage, Energy efficient machines with 5star rating shall be utilised along with LED street lights and use of solar energy. Ultra low NOx burners shall be integrated into the system to reduce NOx emissions. All piping and instrumentation diagrams and plant layout shall be reviewed as a part of HAZOP/HAZAN studies to assess the risks involved. Noise suppression measures such as enclosures and buffers will be used to limit noise levels in areas frequented by personnel to below 85 dB(A).</p> <p>The overall impact of the pollution on the environment during construction phase is localised in nature and is for a short period at all sites. In order to develop effective mitigation plan, all the construction activities shall be undertaken, controlled and managed by LST/Non-LSTK contractor under the guidance of PMC. It is mandatory for these contractors to develop site/project specific HSE Policy, HSE Plan, HSE management system.</p>

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			<p>The environmental management plan during the operational phase of the plant shall be directed towards the following:</p> <ul style="list-style-type: none"> • Ensuring the operation of various process units as per specified operating guidelines/operating manuals. • Strict adherence to maintenance schedule for various machinery/equipment. • Good Housekeeping practices. • Post project environmental monitoring. 	
7		Breakup of the project area		
	A	Project area	349.79 acres	
8		Breakup of project affected population with enumeration of those losing house/dwelling units only, agriculture land only, both dwelling units and agriculture land and landless labours/artisans	No Project Affected Persons are involved as there is no displacement of population. The project is coming up in old plant complex of HFC, Barauni.	
	A	SC, ST/Adivasis	NA	
	B	Others	NA	
9		Financial Details		
	A	Project cost as originally planned and subsequent revised estimates and the years of price reference	<p>Rs.6317 Crores (Feb-2017)</p> <p>Revised Estimate: Rs. 6977.01 crore (Nov-2018)</p> <p>Rs.7043.26 Crores (July-2017)</p> <p>Revised Estimate: Rs. 8387.99 crore (Feb-2021)</p>	
	B	Allocation made for environmental management plans with item wise and year wise breakup	It is included in the project cost.	
	C	Benefit cost ratio/internal rate of return and the years of assessment	Debt Service Coverage Ratio*	1.44
			Internal rate of Return*	9.94
			*As per Project Feasibility Report	

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	D	Whether © includes the cost of environmental management as shown in (b) above	Yes
	E	Total expenditure on the Project so far	Rs. 6556.92 crore
	F	Actual expenditure incurred on the environmental management plans so far	Rs. 1.38 Crore (For environmental monitoring job at HURL Barauni)
10		Forest land requirement	No Forest Land is involved
	a	The status of approval for a diversion of forest land for non-forestry use	NA
	b	The status of compensatory afforestation, if any	NA
	c	The status of clear felling	NA
	d	Comments on the viability and sustainability of compensatory afforestation in the light of actual field experience so far	NA
11		The status of clear felling in no-forest area (such as submergence area of reservoir, approach road) if any with quantitative information	NA
12		Status of Construction	Commissioning is in progress. Overall progress of the project is around 97.29% up to 25 th October-2022.
	a	Date of commencement	1 st April 2018
	b	Date of completion (actual and / or planned)	36 months from 1 st April 2018 (Planned)
13		Reasons for the delay if the project is yet to start	NA
14		Date of site visit	

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	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	Project site was visited by Regional office on 09.01.2019.
	b	Date of site visit for this monitoring report	HUBERT's & PDIL's environmental monitoring team visit the monitoring locations as per schedule of monitoring.

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Specific Condition No. → 10.



Government of India
भारत सरकार
Central Water Commission
केन्द्रीय जल आयोग
Inter State Matters-2 Dte.
अंतरराज्यीय मामले निदेशालय



5th Floor (S), Sewa Bhawan
5th Floor (द.), सेवा भवन
R.K.Puram, New Delhi-66
रामा कृष्ण पुरम, नई दिल्ली -६६
Telephone No: 011-29583207
Email: ism2dte@gmail.com

Dt. 21.12.2017

F.No.2/4/ISM-2/2017/316-17

To

Commissioner (FM)
Ministry of Water Resources, RD & GR
Block-2, CGO Complex
Lodhi Road
New Delhi-110003.

Sub: Ratification of 0.403 Cumecs (12.7 MCM) water allocation from river Ganga for Industrial and Drinking use of Hindustan Fertiliser Plant, Barauni under Hindustan Urwarak & Rasayan Ltd., Delhi -Reg

Sir,

WRD, Govt. of Bihar vide letter dated 26.09.2017 (Copy enclosed) conveyed its consent to allocate 0.403 Cumec (12.7 MCM) water from river Ganga for Industrial and Drinking use of Hindustan Fertiliser Plant, Barauni under Hindustan Urwarak & Rasayan Ltd., Delhi subject to certain conditions, for ratification of CWC. In response, this Directorate had commented vide letter dated 30.10.2017 (Copy enclosed) that in view of Indo-Bangladesh international Treaty on Ganga Water sharing, 1996, no withdrawal is permitted from Ganga or its tributaries during lean period (i.e. from 1st January to 31st May) and the project authority may create the ponds for storing sufficient flood water during monsoon to meet their water requirements during the lean season. Further, it was mentioned that as there exists no inter-State agreement over sharing of waters from main Ganga stream amongst co-basin States, proposed allocation will have to be counted against the share of Bihar as and when some agreement is reached with the other co-basin States.

WRD, Govt. of Bihar vide letter dated 28.11.2017 (copy enclosed) has now proposed to offset the water requirement of Hindustan Fertilizer Plant, Barauni against water saving from 'Restoration of West Gandak Canal System (Saran Main Canal & its Distribution System)' in addition to approved allocation of 120 cusec (107.17 MCM) and 160 cusec (142.87 MCM) from river Ganga to Bihar State Power (Holding) Company Ltd. Patna for 4000 MW TPS at Dist. Banka and Nuclear Power Plant at Rajauli respectively conveyed through MoWR, RD & GR letter No.22/1/2012-Ganga/2117-22 dated 21.04.2015.

As per WRD, Govt. of Bihar there is still a saving of 1701.94 MCM of water under West Gandak Canal Scheme and the water requirement of 0.403 cumec (12.7 MCM) is proposed to be offset against this saving and as such current proposal would not have any bearing upon the Indo-Bangladesh International Treaty on Ganga water sharing. Govt. of Bihar had earlier submitted detailed analysis to establish water availability through saving done from the proposal of 'Restoration of Western Gandak Canal System (Saran Main Canal & its Distribution System)' duly approved by TAC of the Ministry. It was established that water requirement of 120 cusec (107.17 MCM) and 160 cusec (142.87 MCM) for 4000 MW TPS at Banka and Rajauli respectively could be met without affecting the water requirement of 67 cusecs of 67 cusecs could be met without affecting the water requirement of 67 cusecs.

As per the said analysis, evaporation loss from river Gandak upto its confluence with Ganges was worked out using Meyer's formula and seepage losses were calculated based on ISI code of practice IS:9452(Part II)-1980. Total loss for a flow of 280 cusecs was calculated as 67 cusecs. On proportional basis, losses on water allocation of 0.403 cumec (14.23 cusec) comes to be 3.41 cusec. Therefore, total water requirement from river Ganga for Industrial and Drinking use of Hindustan Fertiliser Plant, Barauni including transition losses is 17.64 cusecs (0.5 cumec).

Monthly net water saving after meeting the requirement of Banka TPS & Rajauli Nuclear Power Plant and water requirement of Hindustan Fertilizer Plant, Barauni proposed to set off against water saving is calculated as under:

Month	Saving of Water due to lining after meeting irrigation requirement		Water Requirement for Banka TPS & Rajauli NPS		Water Requirement for Hindustan Fertilizer Plant, Barauni		Net Saving of Water	
	Cusec	MCM	Cusec	MCM	Cusec	MCM	Cusec	MCM
Jan	1265.68	96.00	347	26.32	17.64	1.34	901.04	68.34
Feb	363.74	24.92	347	23.77	17.64	1.21	-0.9	-0.06
Mar	1233.54	93.55	347	26.32	17.64	1.34	868.9	65.89
Apr	2811.05	206.33	347	25.47	17.64	1.29	2446.41	179.57
May	3047.66	231.14	347	26.32	17.64	1.34	2683.02	203.48
June	3002.81	220.39	347	25.47	17.64	1.29	2638.17	193.63
July	517.71	39.27	347	26.32	17.64	1.34	153.07	11.61
Aug	2631.3	199.55	347	26.32	17.64	1.34	2266.66	171.89
Sep	2308.17	169.41	347	25.47	17.64	1.29	1943.53	142.65
Oct	2487.57	188.68	347	26.32	17.64	1.34	2122.93	161.02
Nov	3569.61	262.00	347	25.47	17.64	1.29	3204.97	235.24
Dec	3491.92	264.84	347	26.32	17.64	1.34	3127.28	237.18
Total		1996.10		309.89		15.75		1670.44

As there appears to be shortfall of water during the month of February, the project authority may be asked to make provision for storing sufficient water to make up the deficit of 0.06 MCM water during the month of February.

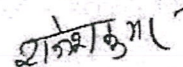
Since the water proposed to be utilized is from Bihar share of Western Gandak Canal, it doesn't affect the existing inter-State agreement between Uttar Pradesh and Bihar subject to the condition that Govt of Bihar gives intimation to Govt. of Uttar Pradesh for further curtailment of 17.64 cusecs of water (in addition to approved quantum of 347 cusecs of water for Banka TPS and Rajauli nuclear power plant) from the share of Bihar in Western Gandak Canal and Govt. of Uttar Pradesh issues modified release order for releasing additional quantum of 17.64 cusecs from Gandak Barrage directly into Gandak river.

The proposal is referred to MoWR, RD & GR for according necessary clearance from international angle so that the same may be conveyed to Govt. of Bihar.

This issues with approval of Member (W.P.S.P.)

Encl: As above

Yours faithfully,


(Rajesh Kumar)
Director

Copy for information and necessary action to :

1. Shri Arun Kumar Dwivedi, Joint Secretary, Water Resources Department, Govt. of Bihar.



HINDUSTAN URVARAK & RASAYAN LIMITED

URVARAK NAGAR, BARAUNI - 851115

Display of information related to Air, Water and Hazardous waste generation



(i) Name of the Industry/Facility with contact details : HINDUSTAN URVARAK & RASAYAN LIMITED
 (as per the Consent to Establish/Operate) : URVARAK NAGAR, BARAUNI - 851115
 (ii) Date of update of display : 04 NOVEMBER 2022
 (iii) Details of updated consent to Operate and Authorization with validity : PLANT UNDER CONSTRUCTION
 (iv) Date of operational status : NON-OPERATIONAL
 (v) Production Details : AMMONIA - UREA FERTILIZER PLANT

S.No.	Products Manufactured (including Recycling / Utilization)	Details of Hazardous Chemicals Used with quantity and purpose	Type of HW generated with category as per HWM Rules, 2016	Quantity of HW generated, stored and disposed	Mode of treatment and disposal (Pre-processing, Co-processing, recycling / Utilizing / reuse / SLF/incinerator etc.)
1.	AMMONIA - 2200 MTPD	NIL			
2.	UREA - 3850 MTPD	NIL			

(vi) Air Emission :

S.No.	Source of Air Pollution (Ex. Boiler/DG sets / Furnace with Capacity in ltr/kg. type of fuel etc).	Air Pollution Control Devices (APCD devices with Stack height)	Parameters monitored w.r.t. Air Pollution (PM, CO, SO2, Nox, etc.)	
			Monitored Data	Limits/Standard Prescribed by SPCB/CPCB
1.	DG Sets & Other Construction Equipment	Plant Premises	PM10	79.6 / 100 µg/m3
2.	''	''	PM2.5	39.5 / 60 µg/m3
3.	''	''	SO2	13.2 / 80 µg/m3
4.	''	''	NOx	17.4 / 80 µg/m3
5.	''	''	CO	0.35 / 04 mg/m3
6.	''	''	O3	19.5 / 180 µg/m3
7.				
8.				
9.				
10.				

* OCEMS Connectivity details (Date of Installation and operational Status) :

(vii) Effluent Discharge : Nil

S.No.	Source of Effluent Discharge with Quantity (ex : process waste water, domestic effluent etc.)	Treatment method (ETP with capacity of any other method)	Mode of disposal of treatment effluent (Drain/sewer/land etc.)	Effluent discharge Monitoring (pH, COD, BOD, TSS, etc.)	
				Inlet	Outlet
1.					
2.					
3.					

OCEMS Connectivity details (Date of Installation and operational Status) :

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General Condition No-5



HINDUSTAN URVARAK & RASAYAN LIMITED
(A JV of NTPC, CIL, IOCL, FCIL & HFCL)
Barauni Urvarak Nagar, Begusarai-851115

23.05.2022

TO,

Regional officer,
Bihar State Pollution Control Board
Barauni Industrial area
Begusarai.

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

Sub: Environmental Statement for the financial year ending 31st March 2022.

Sir, we are submitting herewith the environmental statement for the financial year ending 31st March 2022 in respect of upcoming Ammonia & Urea production plant. This is for your kind information.

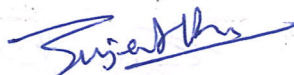
Thanking you.

For & on behalf of
HURL, Barauni.


Karanam Manoranjan Babu
V.P.(TS & Production) 23.5.2022

Karanam Manoranjan Babu
Vice President (Technical Services)
Hindustan Urvarak & Rasayan Ltd.
Urvarak Nagar, Barauni, Begusarai
(Bihar) 851115

Encl: Environmental Statement for the financial year ending 31st March 2022.



ENVIRONMENTAL STATEMENT FOR THE PERIOD 01.04.2021 TO
31.03.2022

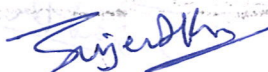
(Submitted as per Rule-14 of the Environment (Protection) Amendment Rules, 1993 of the Environment (Protection) Act, 1986 (29 of 1986) published vide Notification dated 22.04.1993-G.S.R. 386(E) in the Gazette of India (Extraordinary) Part-II Section-3 Subsection (i). No.155 dated 28.04.1993 by the Ministry of Environment and Forests, Government of India: read with the Notification dated 13.02.1993 G.S.R. 329 (E) of the Gazette of India (Extraordinary) Part-II Section-3 Subsection (i) No. 120 dated 13-03-1993)

"FORM - V"
(See Rule 14)

PART-A

GENERAL INFORMATION

1. Company Name : Hindustan Urvarak & Rasayan Limited
2. Occupier's Name: Hindustan Urvarak & Rasayan Limited
3. Registered Office of the Company: Coal Bhawan, Coal India Limited, 7th Floor,
With address Plot No. AF-III,
Action Area-1A, Newtown, Kolkata 700 156,
West Bengal, India
Tel.: 033-2324 6526
4. Factory Address: Hindustan Urvarak & Rasayan Limited
Barauni Urvarak Nagar, Begusarai-851115
5. Production capacity: Ammonia- 2200 MTPD
Urea-3850 MTPD
6. Establishment Year: Hindustan Urvarak & Rasayan Limited (HURL) was
incorporated on 15th June, 2016 as joint venture company
by CIL, NTPC, IOCL as the lead promoters with HFCL &
FCIL as two other partners.
7. Date of Last Environmental: 4th environmental statement.
Statement submitted



PART - B

Water and Raw Materials Consumption

(1) Water consumption m³/d.

Process : NA
Cooling : NA
Construction : 250 to 450 m³/d

(Plant is in construction stage and its schedule commissioning date is expected in August-2022)

(2) Raw Material Consumption - NA

* Nature of consumption	Process Raw Material Consumption per unit of product output		
	Quality of product	During the previous financial year	During the current financial year
	-	-	-
	-	-	-
	-	-	-

(Plant is in construction stage and its schedule commissioning date is expected in August-2022)

* Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART - C

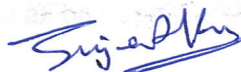
Pollution discharged to environment/unit of output.

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	Nil	NA	NA
(b) Air	NA	NA. However, Ambient Air Quality Monitoring data near construction site is attached as Annexure-1	Within prescribed standards (24/8/1 hourly Avg.)

STACK EMISSION TEST:

As the Plant is in under construction phase there is no source point of emission. However, emissions data from DG sets deployed at site is attached as Annexure-2.



PART - D

HAZARDOUS WASTES

(As specified under Hazardous Wastes/Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (kg)	
	During the previous financial year	During the current financial year
(a) From process	NA	NA
(b) From pollution control facilities	Nil	Nil

(As the plant is in construction phase, there is no generation of hazardous waste as of now.)

PART - E

SOLID WASTE

	Total Quantity	
	During the previous financial year	During the current financial year
a) From process	-	-
b) From pollution control facilities	-	-
c) Quantity recycled or reutilized within the Unit.	-	-
d) Sold	-	-
e) Disposed	-	-

(As the plant is in construction phase, there is no generation of solid waste as of now.)

PART - F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

HURL Barauni fertilizer plant is in construction stage and its schedule commissioning is expected in August-2022. Therefore, there is no generation of hazardous waste as of now. However, HURL has adopted waste management plan conforming to different national and local regulations. Waste categorization will be in line such as hazardous waste, E-wastes, Used Batteries, non-hazardous Solid waste, Solid wastes (biodegradable) etc. and disposal will be done as per regulation during plant operation phase.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

HURL Barauni fertilizer plant is in construction stage and its schedule commissioning is expected in



August-2022. However, HURL is monitoring parameters such as groundwater, surface water and ambient air quality within the plant premises and also outside premise as per EC norms.

PART - H

Additional measures/investment proposed for environmental protection including abatement of pollution, prevention of pollution.

HURL Barauni fertilizer plant is in construction stage and its schedule commissioning is expected in August- 2022.

Some of the measures taken in this project are mentioned below:

- Plant will be based on zero discharge concept i.e. all effluent water will be treated and reused.
- Continuous monitoring of particulate matter, NO_x & SO_x from all stack; particulate matter and NH₃ from prilling tower will be done to control emission as per norms.
- Installation of gas detectors at different locations will be installed to check fugitive emissions.

PART - I

Any other particulars in respect of environment protection and abatement of pollution.

HURL Barauni fertilizer plant is in construction stage and its schedule commissioning is expected in August- 2022.

Plant is based on natural gas as a raw material with state-of-the-art technology to minimize impact on surrounding environment. As per environment management plan (EMP) all pollution control measures are adopted as integral part of the plant in design stage itself.



Name & signature of the Occupier

Seal

ASHOK BANSAL
Sr. VP (Project Head)
Hindustan Urvarak & Rasayan Ltd.
Urvarak Nagar, Barauni, Begusarai
(Bihar) 851115



**Environment statement for the financial year 2021-2022 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar**

ANNEXURE-I

**Period of Monitoring: Financial Year: 2021-2022
Location: Admn. Building-HURL (Near Construction Site)**

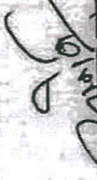
PERIOD	No. of Observations	Parameters (Average Concentration)							
		PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	Ozone ($\mu\text{g}/\text{m}^3$)		
NAAQ Standards →		60/100	40/60	50/80	40/80	02/04	100/180		
April 2021	08	94.7	58.5	14.1	25.8	0.76	16.3		
May 2021	08	84.0	47.1	13.5	22.6	0.49	15.3		
June 2021	08	75.8	42.5	12.2	20.4	0.46	14.1		
July 2021	09	46.8	23.8	10.6	13.1	0.30	13.8		
Aug. 2021	08	32.0	13.3	9.1	11.6	0.20	11.1		
Sept. 2021	08	63.0	27.0	10.7	22.8	0.39	13.6		
Oct. 2021	09	74.5	33.0	13.5	23.5	0.52	16.8		
Nov. 2021	09	115.0	52.3	15.5	29.8	0.97	21.7		
Dec. 2021	08	123.5	55.8	15.1	29.9	1.26	29.0		
Jan. 2022	08	113.0	52.3	15.1	26.2	0.88	21.9		
Feb. 2022	07	101.6	52.4	13.4	24.2	0.69	18.3		
March 2022	08	88.7	50.0	14.2	23.8	0.60	17.1		
Min. Conc.		32.0	13.3	9.1	11.6	0.20	11.1		
Max. Conc.	98	123.5	58.5	15.5	29.9	1.26	29.0		
Average		84.4	42.3	13.1	22.8	0.63	17.4		
98 th percentile		121.6	57.9	15.4	29.9	1.20	27.4		

NOTE: BDL = Below Detection Limit

Ni, As, Pb (ng/m^3) = BDL

C₁H₆ & Benzo(a)pyrene = <0.01 $\mu\text{g}/\text{m}^3$

NH₃ ($\mu\text{g}/\text{m}^3$) = BDL


मनीश कुमार प्रसाद
प्रोजेक्ट्स एंड डेवलपमेंट इंडिया लिमिटेड
(राज्य सरकार का उपकरण)

मिनी स्ला-कंपनी
पी.डी.आर्क.एच. भवन, ए-14, सेक्टर-1
नोएडा-201301 (उ.प्र.), इत


Sujata



GLOBAL TESTING AND RESEARCH LABORATORY

House No. 3222, Ward No. 15, Near RPS More, Next to Capital Suzuki, Distt. Patna (Bihar) - 801503
 Office No.: 7957299140, Ph.: 9795697785 / 8334254100
 E-mail : gtrpatna@gtrl.org.in, Visit us : www.gtrl.org.in

TESTING CERTIFICATE

Issued to: Kamlesh Kumar Singh Engineers Private Limited
Date of Report: 25/11/2021
Report No.: 221121/Civ/07980/III
Date of Field Testing: 23/11/2021
Period of Testing: 23/11/2021 To 24/11/2021
Job S. No.: GTRL/221121/07915
Job Code No.: Civ/221121/07924/III

Name of Customer: M/s Kamlesh Kumar Singh Engineers Private Limited
Customer Ref No. to GTRL: Nil
Customer-Client Agreement No.: Nil
Sample Description: Stack Emission of DG Set; Make – Sudhir, Id. No. – KKS/DG/01
Environmental Condition During Sampling: Temperature – 32°C, RH – 35%, Weather – Clear
Sampling Time: 03:30 a.m.
Name of Work: Environmental Monitoring Work

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
2.	Sampling Duration, min.	32
3.	Stack Height	08 mtrs.
4.	Stack Temperature, °C	120°C
5.	Capacity of DG	250 KVA
6.	Height of Stack from Ground Level	08 meter
7.	Diameter of Stack	06 Inch
8.	Average Flow Rate	20.5 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	10.5 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1996 General Emission Standard – Part – D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00	60.58
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2014)	Not Specified	52.8
3	Oxides of Nitrogen (Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2012)	Not Specified	60.7

End of Report

AUTHORIZED SIGNATORY

ANUJ KUMAR (TM)



Srijan



GLOBAL TESTING AND RESEARCH LABORATORY

House No. 3222, Ward No. 15, Near RPS More, Near to Capital Suzuki, Dist. Patna (Bihar) - 801503
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TESTING CERTIFICATE

Issued to: Kamlesh Kumar Singh Engineers Private Limited

Date of Report: 25/11/2021
Report No.: 221121/Civ/07980/iv
Date of Field Testing: 23/11/2021
Period of Testing: 23/11/2021 To 24/11/2021
Job S. No.: GTRL/221121/07915
Job Code No.: Civ/221121/07924/iv

Name of Customer: M/s Kamlesh Kumar Singh Engineers Private Limited
Customer Ref No. to GTRL: Nil
Customer-Client Agreement No.: Nil
Sample Description: Noise limit for DG Set
Environmental Condition During Sampling: Temperature - 32°C, RH - 35%, Weather - Clear
Sampling Time: 03:30 a.m.
Name of Work: Environmental Monitoring Work

Requirement
Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments vide GSR No 520(E) dated 1st July 2003; GSR 448(E), dated 12th July 2004; GSR 315(E) dated 16th May 2005; GSR 464(E) dated 7th August 2006; GSR 566(E) dated 29th August 2007 and GSR 752(E) dated 24th October 2008; G.S.R. 215 (E), dated 15th March, 2011 under the Environment (Protection) Act, 1986

S. No.	Tests	Test Method	Requirement	Result	Conformity
1	Noise limit for Generator Set (dB)	IS 9989:1981: (RA 2014)	75 dB(A) at 1 meter from the enclosure surface, Max.	70.5	Yes

End of Report

Authorized Signatory
Anuj Kumar
ANUJ KUMAR (TM)



Sujesh



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TESTING CERTIFICATE

Issued to: B P Enterprises
Date of Report: 25/11/2021
Report No.: 2211121/Civ/07980/vi
Date of Field Testing: 22/11/2021
Period of Testing: 23/11/2021 To 24/11/2021
Job S. No.: GTRL/221121/07915
Job Code No.: Civ/221121/07924/vi

Name of Customer: M/s B P Enterprises
Customer Ref No. to GTRL: Nil
Customer-Client Agreement No.: Nil
Sample Description: Noise limit for DG Set
Environmental Condition During Sampling: Temperature - 30°C, RH - 48%, Weather - Clear
Sampling Time: 12:30 a.m.
Name of Work: Environmental Monitoring Work

Requirement
 Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments vide GSR No 520(E) dated 1st July 2003; GSR 448(E), dated 12th July 2004; GSR 315(E) dated 16th May 2005; GSR 464(E) dated 7th August 2006; GSR 566(E) dated 29th August 2007 and GSR 752(E) dated 24th October 2008; G.S.R. 215 (E), dated 15th March, 2011 under the Environment (Protection) Act, 1986

S. No.	Tests	Test Method	Requirement	Result	Conformity
1	Noise limit for Generator Set (dB)	IS 9989:1981: (RA 2014)	75 dB(A) at 1 meter from the enclosure surface, Max.	65.3	Yes

End of Report



Sujata



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TESTING CERTIFICATE

Issued to: B P Enterprises
Date of Report: 25/11/2021
Report No.: 221121/Crv/07980/v
Date of Field Testing: 23/11/2021
Period of Testing: 23/11/2021 To 24/1/2021
Job S. No.: GTRL/221121/07915
Job Code No.: Crv/221121/07924/v

Name of Customer: M/s B P Enterprises
Customer Ref No. to GTRL: Nil
Customer-Client Agreement No.: Nil
Sample Description: Stack Emission of DG Set; Make – Genset India, Id. No. – BPE/DG/01
Environmental Condition During Sampling: Temperature - 30°C, RH – 48%, Weather – Clear
Sampling Time: 12:30 a.m.
Name of Work: Environmental Monitoring Work

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
3.	Sampling Duration, min.	30
4.	Stack Temperature, °C	118°C
5.	Capacity of DG	62.5 KVA
6.	Height of Stack from Ground Level	05 meter
7.	Diameter of Stack	04 Inch
8.	Average Flow Rate	25.5 LPM
9.	Stack Gas Velocity, m/s as Per IS :11255 (Part – 3)	6.8 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1996 General Emission Standard – Part -D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00	70.82
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2014)	Not Specified	62.2
3	Oxides of Nitrogen (Nox), mg/Nm ³	IS 11255 (Part 7):1985 (RA 2012)	Not Specified	65.4

End of Report



Srijadh



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TESTING CERTIFICATE

Issued to: Technip India Limited
HURL Project, Barauni
Bihar India - 851135

Date of Report: 25/11/2021
Report No: 221121/Civ/07980/i
Date of Field Testing: 23/11/2021
Period of Testing: 23/11/2021 To 24/11/2021
Job S. No.: GTRL/221121/07915
Job Code No.: Civ/221121/06924/i

Name of Customer: M/s Technip India Ltd.
Customer Ref No. to GTRL: Nil
Customer-Client Agreement No.: Nil
Sample Description: Stack Emission of DG Set; Make - RAPower, Id. No. - TFMC/DG/01
Environmental Condition During Sampling: Temperature - 32°C, RH - 34%, Weather - Clear
Sampling Time: 01:30 a.m.
Name of Work: Environmental Monitoring Work

S. No.	Particular	Result
1.	Type of Fuel Used	High Speed Diesel (HSD)
2.	Sampling Duration, min.	40 KVA
3.	Stack Temperature, °C	108°C
4.	Capacity of DG	62.5 KVA
5.	Height of Stack from Ground Level	06 meter
6.	Diameter of Stack	05 Inch
7.	Average Flow Rate	23.2 LPM
8.	Stack Gas Velocity, m/s as Per IS :11255 (Part - 3)	7.2 m/sec

Concentration of Pollutants in Fuel Gas

S. No.	Tests	Test Method	Requirement The Environmental (Protection) Rules, 1996 General Emission Standard - Part -D	Result
1	PM, mg/Nm ³	IS 11255 (Part 1):1985 (RA 2019)	150.00	62.40
2	Sulphur Dioxide (SO ₂), mg/Nm ³	IS 11255 (Part 2):1985 (RA 2014)	Not Specified	53.2
3	Oxides of	IS 11255 (Part 7):1985	Not Specified	61.7

End of Report



Signature



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TESTING CERTIFICATE

Issued to: **Technip India Limited**
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Bihar India - 851135

Date of Report: **25/11/2021**
Report No: **221121/Civ/07980/ii**
Date of Field Testing: **23/11/2021**
Period of Testing: **23/11/2021 To 24/11/2021**
Job S. No.: **GTRL/221121/07915**
Job Code No.: **Civ/250920/07924/ii**

Name of Customer: **M/s Technip India Ltd.**
Customer Ref No. to GTRL: **Nil**
Customer-Client Agreement No.: **Nil**
Sample Description: **Noise limit for DG Set**
Environmental Condition During Sampling: **Temperature - 32°C, RH - 34%, Weather - Clear**
Sampling Time: **01:30 a.m.**
Name of Work: **Environmental Monitoring Work**

Requirement

Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments vide GSR No 520(E) dated 1st July 2003; GSR 448(E), dated 12th July 2004; GSR 315(E) dated 16th May 2005; GSR 464(E) dated 7th August 2006; GSR 566(E) dated 29th August 2007 and GSR 752(E) dated 24th October 2008; G.S.R. 215 (E), dated 15th March, 2011 under the Environment (Protection) Act, 1986)

S. No.	Tests	Test Method	Requirement	Result	Conformity
1	Noise limit for Generator Set (dB)	IS 9989:1981: (RA 2014)	75 dB(A) at 1 meter from the enclosure surface, Max.	65.8	Yes

End of Report



AUTHORIZED SIGNATORY

ANUJ KUMAR (TM)



Signature