COMPLIANCE REPORT

(MoEF & CC File No.J-11011/166/2016-IAII (I) dated 31/07/2017)

For the period

OCTOBER-19-MARCH-20

Submitted

TO

MoEF&CC, Regional Office (ECZ), Lucknow

AMMONIA UREA FERTILIZER PLANT

(2200MTPD Ammonia & 3850MTPD Urea)

GORAKHPUR

AUGUST-2020



हिंदुस्तान उर्वरक एवं रसायन लिमिटेड HINDUSTAN URVARAK & RASAYAN LTD. (A joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)



Hindustan Urvarak&Rasayan Limited

(A Joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)

Office of The Project Head, Gorakhpur Project, HURL

Old FCIL Office Complex, PO- Fertilizer Township,

Gorakhpur, Uttar Pradesh-273003, Tel:-0551-2261177

GST Reg. No.: - 20AADCH9368N1Z6

Ref. No.: HURL/GKP/20-21/

Date: 29/08/2020

To,
Dr. Satya
Joint Director
Regional Office (RO)
(Central Zone CZ)
Kendriya Bhavan,5th Floor
Sector-H, Aliganj, Lucknow-226020 (U.P.)

Subject: Ammonia (2200 MTPD) Urea (3850 MTPD) Fertilizer Project at Gorakhpur, Uttar Pradesh of M/s Hindustan Urvarak&Rasayan Limited (HURL)-Compliance Report forOctober-19-March-20, 2020.

Ref:

(i) MoEF&CC, Environmental Clearance Letter No. J-11011/166/2016-IAII (I) dated 31.07.2017.

Dear Sir,

With reference to the subject as mentioned above, please find attached herewith the compliance reportfor the period October-19-March-20.

Yours faithfully

(Subodh Dixit)

Sr. Manager Hindustan Urvarak & Rasayan Ltd. (HURL) Admin Building, Fertilizer Township Gorakhpur PO-Fertilizer Factory, Dist. - Gorakhpur-273007

Telefax - 0551-2261177

S.NO	CONTENT					
1	COMPLIANCE OF EC CONDITIONS FOR THE PERIOD OCTOBER-19- MARCH-20	1				
2	ANNEXURE-1	8				
3	HURL GORAKHPUR AIR QUALITY DATA SEPTEMBER-19-MARCH-20	9				
4	HURL GORAKHPUR AIR QUALITY DATA SEPTEMBER-19-MARCH-20	10				
5	HURL GORAKHPUR GROUND WATER QUALITY DATA SEPTEMBER-19- MARCH-20	11				
6	HURL GORAKHPUR SURFACE WATER QUALITY DATA SEPTEMBER-19- MARCH-20	12				
7	HURL GORAKHPUR NOISE QUALITY DATA SEPTEMBER-19-MARCH-20	13				
8	ANNEXURE II	15				
9	RAINWATER HARVESTING	15-16				
10	ANNEXURE III	17				
11	GREEN BELT DEVELOPMENT & PLANTATION OF TREES	17-18				
12	ANNEXURE IV	19				
13	MONITORING REPORT	19-23				
14	ANNEXURE-5	24				
15	AGREEMENTS & NO OBJECTION CERTIFICATES	24-41				

COMPLIANCE OF EC CONDITIONS FOR THE PERIOD OCTOBER-19-MARCH-20

SI.	SI. COMPLIANCE CONDITIONS Status					
No.						
Α	SPECIFIC CONDITIONS					
1)	Emissions-limits for the pollutants from the Diesel Generator Sets and the stack height shall be in conformity with the extant statutory regulations and/or the CPCB guidelines in this regard.	The electricity is being supplied by UPPCL (Uttar Pradesh Power Corporation Limited) for construction purpose in the Ammonia- Urea Fertilizer Project at HURL Gorakhpur. The statutory emission norms shall be met by using New Generation DG sets during operating phase of the Plant. Stacks are being constructed meeting statutory regulation & guidelines.				
ii)	Scrubber shall be provided to all emissions sources.	This has been addressed in the Feasibility Report of the Project and shall be complied with in the Plant during operation. 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.				
iii)	Fresh water requirement shall not exceed 5.36 cum/ton of Urea production. Fresh water for plant operation shall be sourced only from Chilwa Taal.	Fresh water Consumption norms shall be met during "Normal Plant operation". During construction phase, ground water is used after prior permission in this regard from the concerned regulatory authority. (State Govt.) Ground water withdrawal is envisaged during construction phase through existing tube-wells. Permission from regulatory authority for withdrawal of ground water attached. Refer-Annexure-5				
iv)	Plantation shall be carried out around the Chilwa Taal.	The plantation shall be carried out in consultation with the district forest department by selecting the local Plant species which flourish in the area's climate & supports maximum bio-diversity in the environment.				
v)	As proposed no effluent from plant shall be discharged outside the plant premises and zero discharge shall be adopted. Water consumption shall be reduced by adopting 3R (reduce, reuse and recycle) concept in	As already committed by the project proponent, no waste/treated water shall be discharged outside to ensure ZLD. Water consumption shall be reduced by adopting 3 R's (Reduce, Reuse & Recycle) concept in the process.				

	the process.	
	Enterprise Social Commod ment	The conditions for provision of Green Belt will be
vi)	Industry shall develop Greenbelt with 10m	complied with and will be in place by the time of Commissioning of the Plant.
	width along the plant periphery with three	To start with, plantation will be carried out on
	layers of perennial native plant species.	eastern & northern boundary of plant
	33% of the total project cover area i.e.	approximate-5000 trees.
or other transfer	nearly 130 acres out of 350 acres of area of	However, we are also planning for plantation at
	the Project, shall be developed as green	different patches inside plant when the
	area with plantation of native perennial	available/vacant land is cleared from
	trees.	temporary/old structures. Refer Annexure-iii
	A plan shall be prepared and implemented	Water of chilwa Taal shall be used during
vii)	for the conservation of Chilwa Taal giving	operation of the Plant. Capacity enhancement of
	special emphasis on protection of	Taalhas been taken up with minimum
	conservation of its natural recharge	submergence of upstream areas. The highest
	channels	pond level is being finalized through consultant.
	All the commitments made during Public	All the commitments made during Public
	Hearing/Public Consultation meeting held	Hearing/Public Consultation meeting held on 24 th
viii)	on 24 th April, 2017 shall be satisfactorily	April, 2017 shall be satisfactorily implemented and
VIII)	implemented and adequate budget	adequate budget provision will be made in the
	provision should be made accordingly.	Project accordingly.
	At least 2.5% of the total cost of the project	ESC program will be carried out and adequate
	shall be earmarked towards the Enterprise	budget will be provided in the Project. Detailed
	Social Commitment (ESC) based on local	action plan along with budget will be provided
	needs and action plan with financial and	once the plant becomes operational.
ix)	physical breakup/details shall be prepared	Annexure-2-SC-9
	and submitted to the Ministry's Regional	ECS:
	Office at Lucknow. Implementation of such	20.
	program shall be ensured accordingly in a	ESC: Enterprize Social Commitment
	time bound manner within 5 years. The ECS	The second communities a
	plan will include following activities:	
	b. Up-gradation of existing school	
	with modern education facilities	
	c. 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 Continued	
	d. Safe drinking water facility with RO	
	plant in villages located within 3 Km	
	radius of the plant with maintenance	
	cost.	

x)	A regular environment manager having post graduate qualification in environmental sciences/environmental engineering to be appointed for looking	The EC conditions relating to establishment of Environmental Cell will be complied during operation of the Plant.
	after the environmental management activities of the proposed plant.	
xi)	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.	This will be implemented during operation phase.
xii)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms. The ammonia storage shall be limited to 2 days.	This has been addressed in the Feasibility Report and RRA conducted for the Project and recommendation shall be complied with in the Plant during operation.
xiii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Regular health check-up/monitoring of the construction labourers is being done and records are being maintained for the same. We have also started with covid-19 related safety & health measures by adoptingsanitization; thermal scanning guidelines for workers, compulsory PPE like face masks etc. All the construction workers are ensured to be equipped with PPEs such as helmets, hand gloves, boots etc. before entering into construction site.
	Storage of hazardous raw material shall not	The same shall also be complied with in the plant during operation phase. The raw material required for construction
xiv)	exceed more than 7 days.	activities are being stored in the designated place isolated from the construction area. The storage of raw materials has been addressed in the Feasibility Report and EIA report of the Project and shall be complied with in the plant
xv)	Urea dust shall be controlled by prescribed standard technique.	during operation. This has been addressed in the Feasibility Report and EMP of the Project and shall be complied with

	iı	in the plant during operation.		
В	GENERAL CONDITIONS			
i) -	The Project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.	laid by UPPCB, UP State Government and any		
ii)	No further expansion or modifications in the Plant shall be carried out without prior approval of the MoEF&CC. In case of	This condition will be complied with.		
l	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.			
iii)	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.	The locations of ambient air quality monitoring have been decided in consultation with the UP State Pollution Control Board (UPPCB) and HURL officials for monitoring of Air Quality during construction phase. 6Nos. of AAQMS have been installed in the project area out of which two stations are selected in up-wind and two stations are selected in down-wind directions. Refer Annexure-1		
iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated is November, 2009 shall be followed.	All efforts are being made to contain the fugitive dust emission within the standard limits at construction site. This will also be complied with during operation phase. Refer Annexure-1		
V)	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,	All efforts are being made to contain the noise levels within the standard limits at construction site round the clock. All construction equipment's deployed at site are ensured to have acoustic hoods and silencers/enclosures on sources of noise generation. The construction workers at site are equipped with		

	1989 viz. 75 dBA (day time) and 70 dBA (night	ear muffs.
	time).	This condition will also be complied with during operation phase of the plant.
vi)	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.	This condition will be complied with as given in Annexurell) attached, while designing the buildings.
vii)	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.	Safety training is given to each worker in plant after their gate pass is issued. Workers are allowed to work after their medical examination and regular routine health check-up is conducted every year.
viii)	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 to be implemented.	Environmental monitoring for air, water & noise parameter's is being conducted at construction site and nearby area. Dust suppression is being done regularly by sprinkling water at construction site to minimise fine dust emission and its ill effects in the vicinity. Environmental protection, risk mitigation measures & public hearing comments as per EIA/EMP and its recommendation shall also be implemented during operation phase.
ix)	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.	Once the plant becomes operational, CSR activities will be undertaken by involving local villages and administration as per rules and government guidelines.
x)	The company shall undertake all eco- developmental measures including community welfare measures for overall improvement of the environment.	Once the plant becomes operational, CSR activities will be undertaken by involving local villages and administration as per rules and government guidelines.
xi)	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	This has been addressed in the Feasibility Report of the Project and shall be complied with in the Plant during operation.
xii)	The company shall earmark sufficient funds towards capital cost and recurring cost per	This has been addressed in the Feasibility Report of the Project and shall be complied with

	annum to implement the conditions	in the Pant during operation.
	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 proponent to concerned Panchayat,	
	ZilaParisad/Municipal Corporation, Urban	
*	local Body and the local NGO, if any, from	
	whom suggestions, representations, if any,	
	were received while processing the proposal.	
xiii)	A copy of the clearance letter shall be sent by	The copy of Environment Clearance letter
	the project proponent to concerned	issued by MoEF&CC have been uploaded to
	Panchayat, ZilaParisad /Municipal	company website <u>www.hurl.net.in</u> and also
	Corporation, Urban local Body and the local	advertised in the local editions of English and
	NGO, if any, from whom suggestions,	Hindi newspapers.
	representations, if any, were received while	
	processing the proposal.	
xiv)	The project proponent shall also submit six	Environmental monitoring w.r.t. Air, Water &
	monthly reports on the status of compliance	Noise during construction phase is being carried
	of the stipulated Environmental Clearance	out by the CPCB recognised Laboratory in
	conditions including results of monitored data	consultation with UPPCB since February 2018
	(both in hard copies as well as by mail) to the	by M/s PDIL and the results of monitoring data
	respective Regional Office of MoEF& CC, the	from 16 th September 2019 to 15 th March 2020
	respective Zonal Office of Environmental	have been provided in the six-monthly
	Clearance and six-monthly compliance status	compliance report which is attached as
	reports shall be posted on the website of the	Annexure-I.
	company.	
xv)	The environmental statement for each	The Environment Statement is submitted in
	financial year ending 31st March in Form-V as	each financial year ending 31 st March in From-V.
	is mandated shall be submitted to the	
	concerned State Pollution Control Board as	Details are furnished in the annexure-4
	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.	

xvi)	The project proponent shall inform the public	Environment Clearance granted by Ministry vide		
	that the project has been accorded	MoEF& CC letter no J-11011/166/2016-IA II(I)		
	environmental clearance by the Ministry and	DATED 31/07/2017 has already been updated		
	copies of the clearance letter are available	on Company website www.hurl.net.in. The		
	with the SPCB/Committee and may also be	same was also advertised on 16.09.2017 on		
	seen at Website of the Ministry at	page .13 in Hindustan in (Hindi) and page 09 in		
	http://moef.nic.in. This shall be advertised	Hindustan Times in (English) published from		
	within seven days from the date of issue of	Gorakhpur, UP and submitted herewith as		
	the clearance letter, at least in two local	Annexure- VI along with the Compliance Report		
	newspapers that are widely circulated in the	November 2018.		
	region of which one shall be in			
	The vernacular language of the locality			
	concerned and a copy of the same shall be	*		
	forwarded to the concerned Regional Office			
	of the Ministry.			
xvii)	The project authorities shall inform the	This shall be complied with and requisite		
	Regional Office as well as the Ministry, the	information will be furnished.		
	date of financial closure and final approval of			
	the project by the concerned authorities and			
	the date of start of the project.			

(Subodh Dixit) Sr. Manager

Hindustan Urvarak & Rasayan Ltd. (HURL) Admin Building, Fertilizer Township Gorakhpur PO-Fertilizer Factory, Dist. - Gorakhpur-273007 Telefax – 0551-2261177

Annexure-1

Compliance of EC conditions for the period 16th September 2019 – 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

ANNEXURE- I

This Compliance Report is the fulfillments of the condition of the Environmental Clearance (EC) vide F. No. IA/UP/IND2/54269/2016, J-11011/166/2016- IA II(I) and amendment J-11011/166/2016-IA-II(I) dtd 15.03.2018 for the period of 16th September 2019 to 15th. March 2020. This report has been prepared by Projects and Development India Limited (PDIL) and Hubert Enviro Care Pvt. Ltd. by collecting respective samples in consultation with the State Pollution Control Board (SPCB) officials and Hindustan Urvarak and Rasayan Limited (HURL) officials. During the above mentioned period the analysis of the environmental parameters has been conducted by the CPCB recognized Laboratory of M/s Hubert Enviro Care Pvt. Ltd. under the strict supervision of the Government Analyst.

The proposed project is located at Gorakhpur with the capacity of 2200MTPD Ammonia and 3850MTPD Urea in the District Gorakhpur in the state of Uttar Pradesh. The area falls in the agricultural belt of the Uttar Pradesh.

The compliance report fulfills the 15 Nos. of Specific Conditions and 17 Nos. of General Conditions led by Ministry of Environment, Forests and Climate Change. Rainwater Harvesting and Ground Water charging has been proposed as per Standard Guidelines:

Guidelines on Artificial Recharge of Water, Central Water Ground Board, Ministry of Water Resources, Gol (2000)

Manual on Artificial Recharge of Ground Water, Central Ground Water Board, Ministry of Water Resources, Gol (2007)

Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, Gol (2002)

The green belt proposed by MoEF&CC is under review for selection of suitable plant species in consultation with local experts of the area.

The Environmental Monitoring report of 6 months w.r.t Air, Water and Noise have been presented separately with the average values. The environmental conditions and the compliance have been found normal as per the Standards. The Air Quality results have been presented through a self explanatory table with the NAAQ Standards w.r.t the parameter PM₁₉, PM _{2.5}, NO_x, SO₂. 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 five No. of physical parameters, thirteen No. of chemical parameters, nine No. of Heavy metals and three No. of miscellaneous parameters. Noise Quality has also been measured at six different locations in the periphery of the project area. The results have been presented through self explanatory table consisting of the Standard NAAQS w.r.t. noise.

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 16th September 2019 to 15th. March 2020.



HURL Gorakhpur Air Quality Data September-19-March-20

Compliance of EC conditions for the period 16th September 2019 – 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

ANNEXURE- I

HURL, GORAKHPUR, AIR QUALITY DATA-2019-20

MONTH	Parameters	Main Gate HURL Plant (SA1)	Admin Building HURL (SA2)	HURL Residential Campus Quarter No B-9 (SA3)	HURL Residential Campus Quarter No E- 13 (SA4)	Karmaha Village (SA5)	Bargadwah (SA6)	NAAG Standard
	PM10	108.7	101.5	94.4	92.6	97.6	98.3	100
	PM 2.5	56.8	59.3	52.1	50.3	55.4	50.1	60
	502	11.7	12.4	11.9	10.5	10.1	11.4	80
16 th	NOx	25.1	22.3	23.9	22.3	19.2	21.9	80
September	CO	0.55	0.63	0.53	0.6	0.56	0.59	.02
to 15 th October	NH3	BDL	8DL	BDL	BDL	BDL	BDL	400
2019	NMHC	2.28	2.46	2.38	2.7	2.68	3.01	
	MHC	3,96	4.25	3.52	3.85	3.82	3.3	
	VOC	3.31	3.71	3.27	3.18	3.33	2.99	
	PM10	119.4	110.3	103	103.3	96	103.5	100
	PM 2.5	63.1	62.4	59	59	55.1	59.5	60
	802	20.1	16.3	14.2	15.1	11.3	14	80
16 th October	NOx	32.4	25.9	24.6	24.9	19.1	21.4	80
to 15th Nov.	CO	2.38	1.79	1.36	1,27	0.86	1,43	02
2019	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	NMHC	3.3	2.38	2.24	2.33	2.17	2.46	
	MHC	4.38	3.38	3.35	3.34	3.27	3.51	-
	VOC	4.35	3.75	3.65	4.15	3.49	3.77	-
	PM10	118.1	109.4	103.8	114.5	95.5	107.8	100
	PM 2.5	64.8	60.5	60.8	63.1	56.4	62.3	60
	SO2	21	16.9	16.8	18.5	14.7	19.6	80
16 th	NOx	31.9	27.7	28	29.2	23.4	28.2	80
November to	CO	2.67	1.8	1,46	1.81	0.85	1.76	02
December	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
2019	NMHC	3.7	2.53	2.61	2.66	2.18	2.58	(*)
	MHC	4.83	3.62	3.6	3.66	3.4	3.73	
	VOC	4.96	4.24	3.7	3.97	3.79	3.76	-
	PM10	121.6	113.9	106.3	115	99.1	111.6	100
	PM 2.5	68	64.6	61,4	63.1	57.7	63.5	60
	SO2	22.5	19.9	17.1	19.6	17.5	18.8	80
16 th	NOx.	33.1	28.9	26.1	28.4	27.1	26.9	86
December	co	2.46	2.33	1.6	1.96	1.19	1.87	0.2
2019 to 15" Jan. 2020	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
NOT LOW	NMHC	3.53	2.45	2.39	2.77	2.3	2.67	
	MHC	4.43	3.32	3.38	3.43	3.25	3.65	
	VOC	5.42	4.49	4.47	4.2	3.66	4.07	
	PM10	119.5	112.8	111	117.4	100.9	114.8	100
	PM 2.5	66.6	63.6	63.6	66.1	58.9	65.9	60
	SO2	23.1	20.7	16.6	18.9	17.3	23.3	80
16 th Jan. to	NOx	33.1	31.5	28	30.3 *	25.2	32.7	80
15 Jan. to 15 Feb.	CO	2.52	2,37	2.12	2.43	1.52	2.37	02
2020	NH3	BOL	BDL	BDL	BDL	BDL	BDL	400
	NMHG	3.52	2.7	2.62	3.28	2.32	2.58	
	MHC	4.61	3,72	3.45	4.29	3.25	3.54	
	voc	5.61	4.49	4.69	5.15	4.39	4.38	

a Tradue





HURL Gorakhpur Air Quality Data September-19-March-20

Compliance of EC conditions for the period 16th September 2019 – 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

- Income and the	AND DESCRIPTION OF THE PERSON NAMED IN	the state of the s						
	PM10	111.4	116.1	106.1	102.4	90.9	101.3	100
	PM 2.5	63.1	64.6	60	58.6	53.3	59.3	60
	SO2	14.3	14.7	12.9	12.3	10.4	12.7	80
16 th Feb. to	NOx	26.2	25.1	26.6	22	19.5	22	80
15th March	CO	1.93	1.30	1.07	1.05	1.1	1.23	02
2020	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	NMHC	2.56	2.3	2.3	2.38	2.27	2.29	-
	MHC	3.28	3.3	3.23	2.78	3.47	3.31	-
	VOC	4.27	4.26	3.72	3.15	3.31	3.97	-
	PM10	116.5	110.7	104.1	107.5	96.7	106.2	100
	PM 2.5	63.7	62.5	59.5	60.0	56.1	60.1	60
	SO2	18.8	16.8	14.9	15.8	13.6	16.6	80
AVG.	NOx	30.3	26.9	26.2	26.2	22.3	25.5	80
16th Sept.	CO	2.1	1.7	1.4	1.5	1.0	1.5	02
2019 to 15 th March, 2020	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	NMHC	3.1	2.5	2.4	2.7	2.3	2.6	-
	MHC	4.2	3.6	3.4	3.6	3.4	3.5	-
	VOC	4.7	4.2	3.9	4.0	3.7	3.8	-

NOTE: BDL = Below Detection Limit (pg/m²)= PM₁₀, PM₂₃, SO₂, NO₄, NH₃ (ppm) = NMHC, MHC (mg/m²)= CO, VOC





HURL Gorakhpur Ground Water Quality Data September-19-March-20

Compliance of EC conditions for the period 16th September 2019 − 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

ANNEXURE- I

HURL, GORAKHPUR, GROUND WATER QUALITY DATA-2019-20 AVG. (16th SEPTEMBER 2019 TO 15th MARCH 2020)

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

		Analysis Res	Requirement		
SI. No	Parameters	Hand Pump Adm. Bldg. (Project Site) (GW1)	Hand Pump Quarter No B-8 (GW2)	Hand Pump Bargadwah (GW3)	(Acceptable) / Permissible Limits (IS:10500:2012)
PHY	SICAL			7.6	6,5-8,5
1	pH	7.6	7.6	7.6	
2	Temperature (°C)	26.3	26.5	25.9	5/15
3	Colour, HU	<5	<5	<5	Unobj.
4	Odour	Unobj.	Unobj.	Unobj.	Agreeable
5	Taste	Agreeable	Agreeable	Agreeable	
6	Turbidity (NTU)	<5	<5	<5	1/5
7	Total Suspended Solid	19.2	21.2	18.5	*
8	Total Dissolved Solids	369.3	393,7	390.2	500/2000
-10			MICAL		
1	P- Alkalinity as CaCO ₃	NIL	NIL	NIL	- nnnicho
2	Total Alkalinity as CaCO3	242.0	259.0	262.0	200/600
3	Chloride as Cl	39.2	36.5	33.8	250/1000
4	Sulphate as SO ₄	20.2	22.8	27.2	200/400
5	Nitrate as NO ₃	3.4	3.9	3.7	45/NR
6	Fluoride as F	< 0.4	<0.4	<0.4	1.0/1.5
7	Total Hardness as CaCO ₃	316.0	294.8	295.8	200/600
8	Ca. Hardness as CaCO ₃	232.0	198.8	213.5	75/200
9	Mg. Hardness as CaCO ₃	84.0	96.0	82.3	30/100**
10	Sodium as Na	21.0	27.7	23.3	
11	Potassium as K	8.5	8.7	7.3	-
12	Silica as SiO ₂	13.0	14.5	14.8	*
13	Iron as Fe	1.2	0.2	0.2	0.3/NR
HE	AVY METALS				
1	Manganese as Mn	< 0.05	< 0.05	< 0.05	0.1/0.3
2	Total Chromium as Cr	< 0.01	< 0.01	<0.01	0.05/NR
3	Lead as Pb	< 0.01	< 0.01	< 0.01	0.01/NR
4	Zinc as Zn	0.30	0.30	0.30	5.0/15
5	Cadmium as Cd	< 0.003	< 0.003	< 0.003	0.003/NR
6	Copper as Cu	<0.01	<0.01	<0.01	0.05/1.5
7	Nickel as Ni	< 0.01	< 0.01	< 0.01	0.02/NR
8	Arsenic as As	< 0.01	<0.01	< 0.01	0.01
9	Selenium as Se	< 0.01	< 0.01	< 0.01	0.01/NR
	HERS				
1	Oil & Grease	< 0.01	< 0.01	< 0.01	0.01/0.03
2	Ph.Compound as	<0.001	<0.01	<0.01	0.001/0.002
	Californi (MDN/400ml)	<50	<50	<50	-
3	Coliform (MPN/100ml)	400	-00		

2 Total



(m)

HURL Gorakhpur Surface Water Quality Data September-19-March-20

Compliance of EC conditions for the period 16th September 2019 – 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

ANNEXURE- I

HURL, GORAKHPUR, SURFACE WATER QUALITY DATA-2019-20 AVG. (16th SEPTEMBER 2019 to 15th MARCH 2020)

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

SI. No	Parameters	Rohini River (SW1)	Dismantled Pump House ChilwaTaal (SW2)	Near New Bridge ChilwaTaai (SW3)	Requirement (Acceptable) / Permissible Limits(IS:1056 0:2012)
	YSICAL			11-11-	1 4 1 1 4 1 1 1
1	Temperature (°C)	23.3	22.3	22.4	
2	Colour, HU	24.8	29.2	27.7	5/25
3	Turbidity (NTU)	51.5	52.2	54.2	5/10
4	pH	7.6	7.6	7.6	6.5-8.5
5	Total Dissolved Solids	262.7	244,7	251.2	500/2000
6	Suspended Solids	56.5	50.2	50.5	300/2000
		CHEMIC		00.0	
1	Total Alkalinity as CaCO ₃	172	156	150	200/600
2	Chloride as Cl	22.5	24.7	23.0	250/1000
3	Sulphate as SO ₄	26.8	25.2	29.7	200/400
4	Nitrate as NO ₂	3.3	3.1	3.3	45/NR
5	Fluoride as F	<4	<4	<4	1.0/1.5
6	Total Hardness as CaCO ₃	205	208	188	200/600
7	Calcium Hardness as CaCO	116	121	109	75/200
8	Magnesium Hardness as CaCO ₃	89	87	78	30/100
9	Dissolve Oxygen	6.6	6.5	6.4	*
10	COD	11.9	12.7	12.4	
11	BOD (3-steps of 27 ° C)	5.3	5.9	6.1	
2	Sodium as Na	26.8	25.2	26.3	
3	Potassium as K	6.8	8.0	9.0	
	VY METALS			0.0	-
	Iron as Fe	0.2	0.2	0.2	0.3/NR
	Manganese as Mn	< 0.05	< 0.05	<0.05	0.1/0.3
	Total Chromium as Cr	< 0.01	<0.01	<0.01	0.05/NR
	Lead as Pb	<0.01	<0.01	<0.01	0.01/NR
	Zinc as Zn	0.26	0.29	0.26	5.0/15
	Cadmium as Cd	< 0.003	<0.003	<0.003	0.003/NR
	Copper as Cu	< 0.01	<0.01	<0.01	0.05/1.5
	Nickel as Ni	<0.01	<0.01	-	0.02/NR
1	Arsenic as As	< 0.01	<0.01	-	0.02/NR
	Selenium as Se	< 0.01	<0.01		0.01/NR
THE			0.01	-0.01	O'O IVAIK
(Oil & grease	< 0.01	<0.01	<0.01	0.04/0.02
F	Phenolic Compound	< 0.01	<0.01		0.01/0.03
10	Coliform Organisms MPN/100ml)	874	768	689	0.001/0.002

a longer

Chennal Con 083 00

ANNEXURE- I

HURL Gorakhpur Noise Quality Data September-19-March-20

Compliance of EC conditions for the period 16th September 2019 – 15th March 2020 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Gorakhpur

HURL, GORAKHPUR, NOISE QUALITY DATA-2019-20 AVG. (16th SEPTEMBER 2019 to 15th MARCH 2020)

MONTH	Parameters	Main Gate HURL Plant (SA1)	Admin Building HURL (SA2)	HURL Residential Campus Quarter No B-9 (SA3)	HURL Residential Campus Quarter No E-13 (SA4)	Karmaha Village (SA5)	Bargadwah (SA6)	Prescribed Limits in dB(A) as per NAAQS (Ind. / Res. Area)
16 th	24-hrs Avg Les Value dB(A)	64.5	63.2	52.1	52.2	51.1	56.6	
September to 15 th	Day time Leg Value dB(A)	65.8	64.5	53.5	53.4	52.5	58	75/55
October 2019	Night time Les Value dB(A)	58.6	57.6	46	46.1	45.3	50.5	70/45
	24-hrs Avg L _{es} Value dB(A)	58.2	57.6	51,3	50.5	50.3	55	
16 th	Day time Lea Value dB(A)	64.1	62.3	52.4	54.1	53.6	58.7	75/55
October to 15 th Nov. 2019	Night time Lec. Value dB(A)	52.3	52.8	47.2	47.1	46.9	51.2	70/45
16 th	24-hrs Avg L _m Value dB(A)	57.3	57.3	51.3	51.4	51.6	56	
November to 15 th	Day time Let. Value dB(A)	62.3	61.1	51.8	55.4	54.9	60.1	75/55
December 2019	Night time L _{ss.} Value dB(A)	52.3	53.4	47.8	47.3	48.2	51.8	70/45
16 ⁸⁹	24-hrs Avg Lec Value dB(A)	59.1	57.4	51.3	52	52.9	57.3	
December 2019 to 15 th	Day time Les. Value dB(A)	63.9	60.4	52.3	56.8	56.2	61.9	75/55
Jan. 2020	Night time L _{ea.} Value dB(A)	54.2	54.6	48.6	47.2	49.5	52.7	70/45
	24-hrs Avg L _{es.} Value dB(A)	60.6	56.8	51.3	52.9	54	58.2	
16 th Jan. to 15 th Feb. 2020	Day time L _{eb} Value dB(A)	65.3	58.3	53.1	57.9	57.2	63.5	75/55
2020	Night time L _m , Value dB(A)	55.9	55.3	48.9	47.8	50.7	52.8	70/45
intro.	24-hrs Avg L _{es.} Value dB(A)	61.6	60.2	49	49.1	48.3	53.2	-
16 th Feb. to 15 th March	Day time Les Value dB(A)	64.9	63.2	52,4	52.3	51.6	56.8	75/55
2020	Night time L _{ML} Value dB(A)	58.2	57.1	45.5	45.9	44.9	49.6	70/45
	24-hrs L _{ss.} Value dB(A)	60.2	58.8	51.1	51.4 🐷	51.4	56.1	
AVG. 16 th Sept. 2019 to 15 th	Day time Leg. Value dB(A)	64.4	61.6	52.6	55.0	54.3	59.8	75/55
March. 2020	Night time L _{sc} Value dB(A)	55.3	55.1	47.3	46.9	47.6	51.4	70/45





Period Of Monitoring: Financial Year April-2019-March-2020

ANNEXURE-I

Period of Monitoring: Financial Year April, 2019- March, 2020 Location: Main Gate HURL Plant Gorakhpur(Construction Site)

Observations PM₁₁ PM₂₂ SO₂ NO, CO NH3 PM₂₂ SO₂ NO, CO NH3 PM₂₂ PM₂₂	COBBO	No. of			ě.	Parameters (Average Concentration)	werage Co	ncentration	10		
60/100 40/80 50/80 40/80 02/04 100/400 115.4 65.9 12.2 26.7 0.62 BDL 117.6 67.2 12.2 27.5 0.64 BDL 117.6 65.2 12.1 26.8 0.63 BDL 114.3 65.2 11.4 24.7 0.54 BDL 118.1 64.8 21 33.1 2.67 BDL 118.1 66.6 23.1 33.1 2.67 BDL 119.5 66.6 23.1 33.1 2.67 BDL 111.4 63.1 14.3 26.2 1.93 BDL 111.4 63.1 14.3 26.2 1.93 BDL 111.4 63.1 14.3 26.2 1.93 BDL 111.4 68.0 23.1 33.1 2.67 BDL 115.6 68.3 15.4 24.7 0.54 BDL 115.6 68.0 23.1 23.1 2.67 BDL 115.6 68.3 23.1 2.67 BDL 115.6 68.3 23.1 2.6.7 BDL 115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL		Observations	PMin	PM25		NO,	00	NH3		MHC	VOC
115.4 65.9 12 26.7 0.62 BDL 115.4 65.9 12.3 27.5 0.64 BDL 115.8 67.2 12.2 27.5 0.64 BDL 116.3 66.2 12.1 26.8 0.63 BDL 116.3 66.2 12.1 26.8 0.63 BDL 106.6 56.3 11.4 24.7 0.54 BDL 108.7 56.8 11.7 25.1 0.55 BDL 118.1 64.8 21 32.4 2.36 BDL 118.1 64.8 21 31.9 2.67 BDL 119.5 66.6 23.1 33.1 2.52 BDL 111.4 63.1 14.3 26.2 1.93 BDL 115.6 64.3 15.4 28.4 1.4 BDL 115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 3	AAQ Standards	4	50/100	(HEALT)	(major)	(mgim.)	(mg/m²)	(hg/m3)	(mdd)	(mdd)	(maym)
118.8 67.9 12.3 26.7 0.62 BDL 117.6 67.2 12.2 27.5 0.64 BDL 116.3 66.2 12.1 26.8 0.63 BDL 116.3 66.2 12.1 26.8 0.63 BDL 106.6 56.3 11.4 24.7 0.63 BDL 108.7 56.8 11.7 25.1 0.54 BDL 119.4 63.1 20.1 32.4 2.38 BDL 118.1 64.8 21 31.9 2.67 BDL 119.5 66.6 23.1 26.2 19.0 BDL 111.4 63.1 14.3 26.2 19.0 111.4 63.1 14.3 26.2 19.0 111.4 68.0 23.1 24.7 0.54 BDL 115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6	April 2019	0.08	446.4	0 0 0 0	20000	40/80	02/04	100/400	ŧ		
176.8 67.9 12.3 27.5 0.64 BDI. 116.3 66.2 12.1 26.8 0.63 BDI. 116.3 66.2 12.1 26.8 0.63 BDI. 106.6 56.3 11.4 24.7 0.63 BDI. 108.7 56.8 11.7 25.1 0.55 BDI. 108.7 56.8 11.7 25.1 0.55 BDI. 119.4 63.1 20.1 32.4 2.36 BDI. 118.1 64.8 21 31.9 2.67 BDI. 121.6 68 22.5 33.1 2.52 BDI. 111.4 63.1 14.3 26.2 193 BDI. 121.6 68 23.1 33.1 2.67 BDI. 115.6 64.3 15.4 28.4 1.4 BDI. 121.1 68.0 23.0 33.1 2.6 BDI.	May 2010	200	1 0	8,00	7.5	26.7	0.62	BOL	2.62	4 50	207
117.6 67.2 12.2 27.2 0.64 BDL 116.3 66.2 12.1 26.8 0.63 BDL 116.3 66.2 12.1 26.8 0.63 BDL 108.6 56.3 11.4 24.7 0.63 BDL 108.7 56.8 11.7 25.1 0.55 BDL 108.7 56.8 11.7 25.1 0.55 BDL 119.4 63.1 20.1 32.4 2.38 BDL 121.6 68 22.5 33.1 2.67 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68 23.1 33.1 2.67 BDL 121.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	Dio Store	200	118.8	67.3	12.3	27.50	0 Rd	- FOR	0000	4 400	20.00
116.3 66.2 12.1 26.8 0.63 BDI 114.3 66.2 12.1 26.8 0.63 BDI 106.6 56.3 11.4 24.7 0.63 BDI 108.7 56.8 11.7 24.7 0.63 BDI 108.7 56.8 11.7 25.1 0.55 BDI 119.4 63.1 20.1 32.4 2.36 BDI 121.6 68 22.5 33.1 2.46 BDI 111.4 63.1 14.3 26.2 1.93 BDI 106.6 56.3 11.4 24.7 0.54 BDI 121.6 68 23.1 33.1 2.67 BDI 121.1 68.0 23.0 33.1 2.6 BDI	June 2019	08	117.6	67.2	42.5	070	*00		80 V	00.4	0.10
114.3 65.2 14.1 20.8 0.63 BDL 106.6 56.3 11.4 24.7 0.54 BDL 108.7 56.8 11.7 25.1 0.55 BDL 119.4 63.1 20.1 32.4 2.36 BDL 119.4 63.1 20.1 32.4 2.36 BDL 121.6 68 22.5 33.1 2.46 BDL 111.4 63.1 14.3 26.2 1.93 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68 23.1 33.1 2.67 BDL 121.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	July 2019	60	118.2	680	404	2000	10.04	DOD!	N.67	4.6	(C)
106.6 56.3 11.4 24.7 0.63 BDL 108.7 56.8 11.7 24.7 0.54 BDL 108.7 56.8 11.7 25.1 0.55 BDL 119.4 63.1 20.1 32.4 2.36 BDL 121.6 68 22.5 33.1 2.46 BDL 111.4 63.1 14.3 26.2 1.93 BDL 106.6 56.3 11.4 24.7 0.54 BDL 121.6 68 23.1 33.1 2.67 BDL 121.6 68.0 23.1 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	August 2019	60	1123	200	140	200	0.63	BDL	2.64	4.59	3.16
108.7 56.8 11.7 25.1 0.54 BDL 119.4 63.1 20.1 32.4 2.38 BDL 119.5 66.6 23.1 33.1 2.46 BDL 119.5 66.6 23.1 33.1 2.52 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68.2 23.1 33.1 2.67 BDL 121.6 68.0 23.0 33.1 2.67 BDL 121.1 68.0 23.0 33.1 2.6 BDL	September 2019	08	108.8	E 23	2 4 4 4	7.07	0.63	BDL.	2.59	4.49	4.€
119.4 63.1 20.1 32.4 2.38 BDL 118.1 64.8 21 31.9 2.67 BDL 121.6 66.6 23.1 33.1 2.46 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68.3 11.4 24.7 0.54 BDL 121.1 68.0 23.0 33.1 2.67 BDL	October 2019	60	108.7	0.000	10 0 0	4.00	0,54	BDL	2.23	3,86	(N)
118.1 64.8 21 31.9 2.38 BOL 121.6 68 22.5 33.1 2.67 BDL 119.5 66.6 23.1 33.1 2.52 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68 23.1 33.1 2.67 BDL 121.1 68.0 23.0 33.1 2.6 BDL 121.1 68.0 23.0 33.1 2.6 BDL	Vovernber 2019	088	110.4	7 000	1.1.0	20.1	0.00	BDI.	2.28	3.96	3.31
121.6 68 22.5 33.1 2.46 BDL 119.5 66.6 23.1 33.1 2.52 BDL 111.4 63.1 14.3 26.2 1.93 BDL 121.6 68.3 23.1 33.1 2.67 BDL 121.1 68.0 23.0 33.1 2.6 BDL	Jecember 2019	0.08	1 0 1 7	0.00	20.1	52.4	2.38	904	63	4.38	4.35
119.5 66.6 23.1 33.1 2.46 BDL 111.4 63.1 14.3 26.2 1.93 BDL 106.6 56.3 11.4 24.7 0.54 BDL 121.6 68.3 23.1 33.1 2.67 BDL 121.1 68.0 23.0 33.1 2.6 BDL	January 2020	200	0 000	0.4.0	17	31.9	2.67	BDL	2.7	4,83	4.96
111.4 65.1 14.3 26.2 1.93 BDL 106.6 56.3 11.4 24.7 0.54 BDL 121.6 68.3 23.1 33.1 2.67 BDL 121.1 68.0 23.0 33.1 2.6 BDL	Eahnian 2020	000	0.121	000	22.5	33,1	2.46	BDL	3.53	4.43	678
111.4 68.0 23.0 14.3 26.2 1.93 BDL 121.6 68.3 23.1 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	Manch 2020	000	0.0	66.6	23.4	33,1	2.52	BDL	3.52	4.61	100
121.6 68 23.1 33.1 2.67 BDL 115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	In Carried Cutto	000	111.4	63.1	14.3	26.2	1.93	BDI	3.08	20 50	700
121.6 68 23.1 33.1 2.67 BDL 115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	III. CODC.		106,6	56.3	77.	24.7	0.54	Ca	0000	200	4.01
115.6 64.3 15.4 28.4 1.4 BDL 121.1 68.0 23.0 33.1 2.6 BDL	lax, Conc.	*0*	121.6	89	23.1	T (C)	Lu c	300	2.40	40.0	3.07
121.1 68.0 23.0 33.1 2.6 BDL	verage		115,6	64.3	15.4	20.4	20.00	700	2.0	4.83	5,61
2.6 BD	8th percentille	-	434 4	0 00	2000	1000	t :	BDL	2.9	4.4	ත ආ
	STE MIN - Maline	Section of Section	14.1.1	0,00	63.0	53.1	2.6	BOL	5.4	60,47	e e







Annexure II

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.

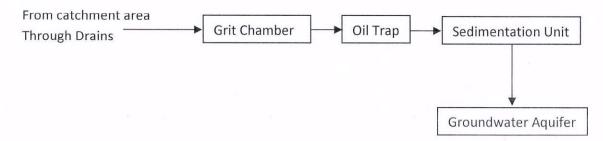
The bores shall be provided within 3 m deep enclosures, which will comprise layers of boulders, gravel and coarse sand so as to separate suspended matter from the rainwater. Three nos. of ground water recharging systems have been proposed to be developed in the township area and three nos. in the factory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



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, GoI (2007);
- c) Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, GoI (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.

(Subodh Dixit)
Sr Manager
Hindustan Urvarak & Rasayan Ltd. (HURL)
Admin Building, Fertilizer Township Gorakhpur
PO-Fertilizer Factory, Dist. - Gorakhpur-273007
Telefax – 0551-2261177

Annexure III

GREEN BELT DEVELOPMENT & PLANTATION OF TREES

The project proponent shall develop greenbelt in an area of 33% i.e., nearly 130 acres out of 350 acres plant area of the project. The greenbelt of 10m 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 pillows:

- 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

Gorakhpur Fertilizer plant shall be established in vacant land in the battery limit of FCI of 350 acres of land. Green-belt development program shall be undertaken in 33% of the plant area including 10 m wide green belt around the battery limit of the plant. There exists a green cover 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 10 m width green belt will have three to four rows of plantations. Thus, a 10 m wide green belt within a plant boundary of 1.0 km will have 1110 plants.
- b) A pit of 45 cm x 45 cm x45 cm must be dug for plantation of saplings which are at least 6 months old.
- c) Samplings must be planted at the onset of monsoon.

Different species in the green belt suggested having 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.
- 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 auri-culiformis, Cassia fistula, C. Siamea, Inga ducis* may also be considered.
- e) In the inner perhiberyBouganvellia 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.

(Subodh Dixit)

Sr. Manager

Hindustan Urvarak & Rasayan Ltd. (HURL) Admin Building, Fertilizer Township Gorakhpur PO-Fertilizer Factory, Dist. - Gorakhpur-273007

Annexure IV

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

MONITORING REPORT

PART I DATA SHEET

File No

1		Project Type	Fertilizer
2		Name of the project	Ammonia-Urea Fertilizer Project
			Hindustan Urvarak&Rasayan Limited, Gorakhpur
3		Clearance letters/Om No. and dated	J-11011/166/2016-IAII(I)
4		Locations	Gorakhpur
	а	Taluk(S)	Gorakhpur
		District	Gorakhpur
	b	State(S)	Uttar Pradesh
	С	Latitudes/Longitudes	Location Longitude Latitude Elevation (m) Northern Boundary,83°21′50″E 26°49′26″N 84 NW Boundary 83°21′50″E 26°49′15″N 83 Eastern Boundary 83°22′10″E 26°49′08″N 87 Western Boundary 83°21′25″E 26°48′58″N 85 South-West Boundary 83°21′27″E 26°48′54″N 84 South-East Boundary 83°21′58″E 26°48′53″N 84 Source: GPS
5		Address for correspondence	
	а	Address of concerned Project Chief Engineer (with Pin Code & Telephone/Telex/fax nos)	Sr. Vice President Hindustan Urvarak&Rasayan Limited (HURL) Old FCIL Office Complex, Gorakhpur PO-Fertilizer township, DistGorakhpur –273007 Telefax –0551-2261177
	b	Address of Executive Project Engineer (with Pin Code/fax numbers)	Senior Manager Hindustan Urvarak & Rasayan Ltd. (HURL) Admin Building, Fertilizer Township Gorakhpur PO-Fertilizer Factory, Dist Gorakhpur-273007 Telefax – 0551-2261177
6		Salient Features	

а	Salient features of the project	The Ammonia and Urea plants shall be one of the
	Sallent reatures of the project	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.
		The ETP facility shall treat all effluents, continuous, intermittent or emergency discharges from ammonia/urea plants. All liquid treated effluent 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.
		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.
b	Of the environmental management plans.	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. 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

		T	
			be reviewed as a part of HAZOP/HAZAN studies to assess the risks involved. Noise suppression measures such as enclosures and buffers will beused to limit noise levels in areas frequented by personnel to below 85 dB(A). 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. The environmental management plan during the operational phase of the plant shall be directed towards the following: 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	
	а	Project area	598.22 Acres (Plant Buildings-272 Acre, Non-plant buildings & Storage-362.22 Acre)
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 FCIL, Gorakhpur.
	a	SC, ST/Adivasis	NA
	b	Others	NA
9		Financial Details	
	а	Project cost as originally planned and subsequent revised estimates and the years of price reference	Rs. 7085 crore (Feb' 2017)

			Revised Estimate : Rs. 7085 crore	(May 2019)
	b	Allocation made for environmental management plans with item wise and year wise breakup	It is included in the project cost. be furnished after finalisation details.	
	С	Benefit cost ratio/internal rate of return and the years of assessment	Debt Service Coverage Ratio*	1.68
		Total and the years of assessment	Internal rate of Return*	11.85
			*As per Project Feasibility Report	
	d	Whether © includes the cost of environmental management as shown in (b) above	Yes	
	е	Total expenditure on the Project so far	Rs. 3641.26 crore	
	f	Actual expenditure incurred on the environmental management plans so far	Rs. 25 lakh	
10		Forest land requirement	No Forest Land is involved	
	а	The status of approval for a diversion of forest land for non-forestry use	NA	
	b	The status of compensatory afforestation, if any	NA	
	С	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	Construction of main plant is bei Toyo (TEIPL) and Off sites by contractors. Progress report is att	other non LSTK
	а	Date of commencement	27 February 2018	
	b	Date of completion (actual and / or planned)	36 months	
13		Reasons for the delay if the project is yet to start	NA	

14		Date of site visit	
	а	The dates on which the project was monitored by the Regional Office on previous occasions, if any	Visit to be done.
	b	Date of site visit for this monitoring report	Visit to be done

(Subodh Dixit)

Sr. Manager

Hindustan Urvarak & Rasayan Ltd. (HURL) Admin Building, Fertilizer Township Gorakhpur PO-Fertilizer Factory, Dist. - Gorakhpur-273007

ANNEXURE-5

AGREEMENT & NO OBJECTION CERTIFICATES



उत्तर प्रदेश UTTAR PRADESH

DD 958672

पट्टा विलेख

वार्षिक किराया मु0 10000=00 प्रतिवर्ष प्रति हेक्टेयर औसत वार्षिक किराया (मु0 10,000=00 प्रतिवर्ष X 7.745 हेक्टेयर)= मु0 77450=00 आर्टिकल 35(V) सेड्यूल. 1—बी के अनुसार मूल्यांकन— (औसत वार्षिक किराया मु0 77,450=00 X 6)= मु0 4,64,700=00 यानी मु0 4,65,000=00 मूल्यांकन का 4% अदा स्टैम्य—मु0 18,600=00





नगर निगम, गोरखपुर जरिये श्री रामसूचित, राजस्व निरीक्षक नगर निगम, गोरखपुर।.....पथम पक्ष।



सुबोध दिशित SUBODH DIXIT जीन्छ जनस्क Sr. Manager हिन्दुस्थन उर्वरक एवं रस्थव सिथिटेंड, गोरखप HURL, Gorakhpur 29:8:30 % हिन्द्रस्थान उवटक एक सिक्षत्र क्षिक अध-लक भारत सेकाल दीकिय क्षिक अध-लक







उत्तर प्रदेश UTTAR PRADESH

DD 958637

(2)





व

ग्राम—जंगल बेनी माधव नं0—1, तप्पा—कस्वा, परगना—हवेली, तहसील—सदर, जनपद—गोरखपुर स्थित ताल (सम्पत्ति नगर निगम) जाराजी संख्या—706/258, रकबा— 19.14 एकड़ यानी 7.745 हेक्टेयर को द्वितीय पक्ष अपने कारखाने में जल आपूर्ति के लिये पट्टे पर लेना चाहता है।

ाजस्य निराधक स्वर विवयः बोरुखपुर







23.6.2020 सिन्द्रस्थान . उक्टम. हेव (लाअप एप० गाउठकोरी द्रीपुट् गाउटकोरी





उत्तर प्रदेश UTTAR PRADESH

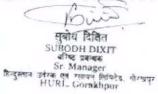
DD 958638

(3)
फर्टिलाइजर कारखाना में जल आपूर्ति सुनिश्चित करने के सम्बंध में मा० मुख्य सचिव, उत्तर प्रदेश शासन द्वारा दिनांक 15.02.2017 को शासन में आहूत बैठक में निर्देश दिया गया है कि नगर निगम गोरखपुर विधि के आलोक में इस सम्बंध में सार्थक विचार करे।

मा0 मुख्य सचिव, उत्तर प्रदेश शासन द्वारा दिये गये निर्देश के अनुसार एवं नगर निगम की धारा—128 में दिये गये प्राविधानों के अनुरूप शासन की स्वीकृति प्राप्त होने के पश्चात् निम्नलिखित शर्तों पर प्रथम पक्ष उक्त ताल को द्वितीय पक्ष को पट्टा पर देने हेतु सहमत है:—

1- यह कि शासन की स्वीकृति संख्या—1164/ नौ-7-2018-7(जनरल)/2017 दिनांक 12 फरवरी, 2020 के क्रम में ग्राम—जंगल बेनी माधव नं0—1, स्थित ताल (सम्पत्ति नगर निगम) आराजी संख्या—706/258, रकबा—19.14 एकड़ यानी 7.745 हेक्टेयर का पट्टा द्वितीय पक्ष के हक में दिनांक







34 (ATO 20 33.



St Var

AGREEMENT & NO OBJECTION CERTIFICATES

Annexure-5



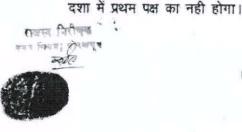
उत्तर प्रदेश UTTAR PRADESH

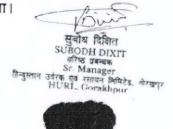
BK 325757

(4)

13 फरवरी 2020 को नगर आयुक्त महोदय द्वारा स्वीकृति प्रदान कर दी गयी है। जिसमें पट्टे की अवधि 30 वर्षों की होगी यानी ताल के पट्टे की अवधि दिनांक 29.06.2020 से प्रारम्भ होकर दिनांक 28.06.2050 तक के लिए मान्य होगी। 30 वर्षों की अवधि समाप्त होने के पश्चात् प्रथम पक्ष की सहमति से अगले 25 वर्षों के लिये उक्त पट्टे का नवीनीकरण कराया जा सकेगा। जिसका रजिस्ट्री कार्यालय सदर, गोरखपुर में पंजीकरण कराया जाना अनिवार्य होगा।

यह कि द्वितीय पक्ष उक्त ताल से 1450 घनमीटर प्रतिघण्टे, जल प्राप्त कर सकेंगा, किन्तु ताल में एक न्यूनतम जल स्तर बनाये रखने का दायित्व द्वितीय पक्ष का होगा, ताकि जलीय जीवन पर कोई दुष्प्रभाव न पड़े। यदि अवर्षण या अन्य किसी कारण से द्वितीय पक्ष को प्रतिघण्टे 1450 घनमीटर जल उपलब्ध नहीं हो पाता है तो उसके पूर्ति का दायित्व किसी भी





- (000 (JTO) 33.





उत्तर प्रदेश UTTAR PRADESH

BK 325758

(5)
3- यह कि ग्राम-जंगल बेनी माधव नं0-1, स्थित ताल (सम्पत्ति
नगर निगम) आराजी संख्या-706/258, रकबा-19.14 एकड़
यानी 7.745 हेक्टेयर का लगान रूपया 10,000=00 प्रतिवर्ष प्रति
हेक्टेयर की दर से देय होगा। यदि दरों के सम्बंध में कोई
शासनादेश अथवा अधिनियम में कोई परिवर्तन होता है, तो
उसके अनुसार लगान की दर भी तद्नुसार संशोधित होकर
लगान दर से प्रतिवर्ष देय होगा। प्रत्येक वित्तीय वर्ष के समाप्ति
के पूर्व द्वितीय पक्ष को पट्टा की धनराशि जमा करना अनिवार्य
होगा।

4— यह कि द्वितीय पक्ष उक्त ताल का सौन्दर्यीकरण / सफाई का कार्य अपने व्यय पर करा सकता है। इस सम्बन्ध में सम्बंधित विभाग से अनापत्ति प्राप्त करने की जिम्मेदारी द्वितीय पक्ष की









36 29.6.20.20



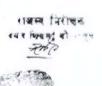


उत्तर प्रदेश UTTAN PRADESH

BK 325759

(6)

- उच्च कि द्वितीय पक्ष, उक्त ताल में जल की उपलब्धता सुनिश्चित कराने के सम्बंध में ताल की खुदाई का कार्य, नगर निगम एवं सम्बंधित विभाग / विभागों से अनापत्ति प्राप्त करने के पश्चात् करा सकता है।
- 6- यह कि द्वितीय पक्ष उक्त ताल में जल आपूर्ति के लिएं, पम्प हाउस या उससे सम्बंधित अन्य कोई निर्माण कार्य नगर निगम एवं सम्बंधित विमाग / विभागों से अनापत्ति प्राप्त करने के पश्चात् करा सकता है। उक्त कार्य के सम्बंध में नगर निगम, गोरखपुर की कोई जिम्मेदारी नहीं होगी।











उत्तर प्रदेश UTTAR PRADESH

AE 412425

(7)

- यह कि द्वितीय पक्ष उक्त ताल में पूर्व से हो रहे किसी भी परम्परागत कार्य में कोई हस्तक्षेप नहीं करेगा।
- 8- यह कि पट्टे की अविध में, आवश्यकता पड़ने पर, प्रथम पक्ष को सम्पूर्ण ताल या उसके किसी भाग का कब्जा लेने का पूर्ण अधिकार होगा।

राषाल विशेषक रपर विषय, होरखन् स्ट्रिकी

200

3000





-35 - HTO 20 33

29 MARKAD 202000950014524

पड्डा विलेखः कब्लियतनामा



बही स॰: ।

रजिस्ट्रेशन स॰: 4293

प्रेतिफरू- ४६५००० स्टाम्प शुल्क- १८६०० बाजारी मूल्य - ० पंजीकरण शुल्क - ४६५० प्रतिसिपिकरण शुल्क - ८० योग : ४७३०

श्री हिन्दुस्तान उर्वरक एवं रसायन लिमिटेड जरिये वरिष्ठ प्रबन्धक द्वारा सुबोध दीक्षित अधिकृत पदाधिकारी/ प्रतिनिधि,

वरिष्ठ प्रबन्धक

व्यवसाय : नॉकरी

निवासी: हिन्दुस्तान उर्वरक एवं रसायन लिमिटेड, गोरखर्पुर

श्री, हिन्दुस्तान उर्वरक एवं रसायन लिमिटेड जरिये वरिष्ठ प्रवन्धक दवारा

तिमिटेड जरियं सुबोध दीक्षित अधिकृत पदाधिकारी/ प्रतिनिधि

ने यह लेखपत्र इस कार्यातय में दिनोंक 29:06/2020

ਹਰ 04:12:12 PM ਵਤੇ

निबंधन हेतु पेश किया।

7 (53)





रजिस्ट्रीकरण अधिकारी के हस्साक्षर

योगेन्द्र प्रताप सिंह उप निबंधक :सदर प्रथम गोरखपुर 29/06/2020

> श्री दिनेश शाही निबंधक विधिक

https://igrsup.gov.in/igrsup/showEndorsReport_html



उत्तर प्रदेश UTTAR PRADESH

CC 269185

(8)

यह कि द्वितीय पक्ष, किसी भी दशा में उक्त ताल या उसके किसी अंश का पट्टा / हस्तान्तरण किसी तीसरे पक्ष के पक्ष में नहीं करेगा। उभय पक्ष उपरोक्त पट्टा विलेख पढ़ कर समझकर और सहमत

होकर अपना-अपना हस्ताक्षर बनाया।

राक्त निरीवक राव क्रिका मोराक्त्



सुबोध दिखित SUBODH DIXIT वरिष्ठ प्रकारक Sr. Manager विन्युस्तान उत्तरक एवं समायन विभिन्ने नेप्यान HURL Gorokhpun



29.6.2120

आवेदन सं॰: 202000950014524

बही स॰: ।

रजिस्ट्रेशन स॰: 4293

वर्ष: 2020

निष्पादन सेखपत्र वाद स्नने व समझने मजम्न व प्राप्त धनराशि रू प्रलेखानुसार उक्त

पट्टा दाताः ।

श्री नगर निगम गोरखपुर जरिये राजस्व निरीक्षक के द्वारा रामसूचित , राजस्व निरीक्षक निवासी: नगर निगम गौरखप्र व्यवसायः नौकरी





पट्टा गृहीताः ।

श्री हिन्द्स्तान उर्वरक एवं रसायन लिमिटेड जरिये वरिष्ठ प्रयम्धक के द्वारा सुबोध दीशिल , वरिष्ठ प्रयम्धक

निवासी: हिन्दुस्तान उर्वरक एवं रसायन तिमिटेड, गोरखपुर व्यवसाय: नॉकरी





ने निष्पादन स्वीकार किया । जिनकी पहचान

पहचानकर्ताः ।

श्री अतुल कुमार , पुत्र श्री सुवाष चन्द्र राय निवासी: ग्राम-द्घरा, पोस्ट-बनियावारी, खलीलाबाद, संतकबीर नगर

< व्यवसाय: मॉकरी





पहचानकर्ता : 2

श्री राजनारायण , पुत्र श्री रामउंग्रह

निवासी रामपुर चक, मानीराम, गोरखपुर





रजिस्ट्रीकरण अधिकारी के हस्लाक्षर

ने की । प्रत्यक्षतः भद्र साक्षियों के निशान अंग्ठे नियमानुसार लिए गए हैं।

टिप्पणी :

योगेन्द्र प्रताप सिंह उप निबंधक : सदर प्रथम गोरखपुर

त्री दिनेश शाही निबंधक लिपिक



उत्तर प्रदेश UTTAR PRADESH

CC 269218

हस्ताक्षर प्रथम पक्ष

राजम्ब विरोज्य क्यन जिल्लाहरू होराजन् (9)

हस्ताक्षर द्वितीय पक्ष_

सुबोग दिसित Sungah usat इंग्डेस

प्रतिकार प्रकार विकास क्षिप्रकार केल्प्स् विन्दुलान उर्वक एक स्थापन विवादिक नेक्स्स्यून संस्थित Gerakhper



साक्षीगणः-

1-अपेष केयार १/०

सुबाधं पत्र रात्र मा० दुधरा पोठवानेपाबारी खलीताबादः, सत्य क्बीर नगर -राजनारामण प्रकेम्हरी०...

गोर सम्पुट् पान प्रेममानीराज

प्रारूपकर्ता

्री*िट* (गोविन्द सिंह) एडवोकेट

कलेक्ट्री कचहरी,गोरखपुर

स्थान—गोरखपुर दिनांक—29.06.2020 40 (JTO う) 33 " 29新知る子記記202000950014524

> बही संख्या । जिल्द संख्या 16010 के पृष्ठ 357 से 382 तक क्रमांक 4293 पर दिनॉक 29/06/2020 को रजिस्ट्रीकृत किया गया।

> > रजिस्ट्रीकार्य अधिकारी के इस्ताक्षर योगन्द रेडिम सिंह उप निबंधक :सदर प्रथम गोरखपुर 29/06/2020

ABO POLICE 1917 Language

Tours

सुबोध दिक्षित SUBODH DIXIT विष्ठ प्रवन्धक Sr. Manager हिन्दुस्तान उर्वरक एवं रसायन तिमिटेड, गोरखपुर HURL Gorakhpur

https://igrsup.gov.in/igrsup/showEndorsReport_html_60