



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

To,

Date: 29.09.2023

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 2023.

Sir, we are submitting herewith the environmental statement for the financial year ending 31st March 2023 in respect of upcoming Ammonia & Urea production plant. This is for your kind information.

Thanking you.

For & on behalf of
HURL, Barauni.

*Ranjana D
30-9-23*

Karanam

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

Encl: Environmental Statement for the financial year ending 31st March 2023.

ENVIRONMENTAL STATEMENT FOR THE PERIOD 01.04.2022 TO 31.03.2023

(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: Hindustan Urvarak & Rasayan Limited
with address Core-2, 2nd Floor, SCOPE Minar Laxmi Nagar
District Centre, New Delhi, Delhi 110092
Tel.: 011-22502267
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 Statement submitted : 5th environmental statement.

PART - B

Water and Raw Materials Consumption

(1) Water consumption m³/day:

Category	During the previous financial year (2021-22)	During the current financial year (2022-23)
Process (m ³ /Day)	Plant was under Construction Phase	10840
Cooling (m ³ /Day)	Plant was under Construction Phase	8818
Domestic	Plant was under Construction Phase	4213

Water consumption per MT of Product Output:

Name of Product	During the previous financial year (2021-22) (m ³ /MT)	During the current financial year (2022-23) (m ³ /MT)
Urea	Plant was under Construction Phase	5.29

(2) Raw Material Consumption -

* Nature of consumption	Process Raw Material Consumption per unit of product output		
	Quality of product	During the previous financial year (2021-22)	During the current financial year (2022-23)
Natural Gas	Natural Gas	Plant was under Construction Phase	1011 Sm ³ /MT

* 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	Ambient Air Quality Monitoring data near site is attached as Annexure-1.	Ambient Air Quality Monitoring data near site is attached as Annexure-1.	Within prescribed standards (24/8/1 hourly Avg.)

STACK EMISSION TEST:

The Plant is under pre-commissioning / commissioning phase till 31st March 2023 the emission data is attached as Annexure-1.

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	Plant was under Construction Phase	Nil
(b) From pollution control facilities	Plant was under Construction Phase	Nil

PART - E

SOLID WASTE

	Total Quantity	
	During the previous financial year	During the current financial year
a) From process	Plant was under Construction Phase	NA
b) From pollution control facilities	Plant was under Construction Phase	NA
c) Quantity recycled or reutilized within the Unit.	Plant was under Construction Phase	NA
d) Sold	Plant was under Construction Phase	NA
e) Disposed	Plant was under Construction Phase	NA

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 under pre-commissioning / commissioning phase till 31st March 2023. 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 under pre-commissioning / commissioning phase till 31st March 2023. 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 under pre-commissioning/commissioning phase till 31st March 2023. Some of the measures adopted in the design stage itself of the project are mentioned below:

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

PART - I

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

HURL Barauni fertilizer plant is under pre-commissioning / commissioning phase till 31st March 2023. 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 required 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 2022-2023 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE-I

Period of Monitoring: Financial Year: 2022-2023
Location: Admn. Building-HURL (Near Construction Site)

PERIOD	No. of Observations	Parameters (Average Concentration)								
		PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	Ammonia (µg/m ³)	Ozone (µg/m ³)		
NAAQ Standards	→	60/100	40/60	50/80	40/80	02/04	100/400	100/180		
April 2022	9	79.8	42.5	12.0	25.8	0.50	BDL	17.3		
May 2022	9	76.5	41.1	10.6	22.6	0.44	BDL	16.4		
June 2022	8	70.9	38.1	10.3	20.4	0.36	BDL	13.9		
July 2022	9	68.8	34.6	10.6	13.1	0.30	BDL	12.2		
Aug. 2022	9	62.2	31.0	10.3	11.6	0.20	BDL	12.5		
Sept. 2022	8	67.0	33.6	10.2	22.8	0.23	BDL	13.9		
Oct. 2022	8	84.9	42.7	13.3	23.5	0.24	BDL	18.1		
Nov. 2022	8	116.5	61.7	13.1	29.8	0.37	BDL	25.6		
Dec. 2022	9	131.2	66.1	14.5	29.9	0.65	BDL	30.3		
Jan. 2023	9	124.7	63.2	12.6	26.2	0.56	BDL	27.5		
Feb. 2023	8	144.7	70.6	13.2	24.2	0.60	190.1	25.1		
March 2023	8	132.8	64.0	12.1	23.8	0.57	173.4	21.9		
Min. Conc.		62.2	31.0	10.2	13.8	0.20	173.4	12.2		
Max. Conc.	102	144.7	70.6	14.5	25.2	0.65	190.1	30.3		
Average		96.7	49.1	11.9	19.9	0.42	181.8	19.6		
98 th percentile		142.1	69.6	14.2	25.1	0.64	189.8	29.7		

NOTE: BDL = Below Detection Limit
C₆H₆ & Benzo(a)pyrene = <0.01 µg/m³
Ni, As, Pb (ng/m³) = BDL
NH₃ (µg/m³) = BDL = <20 µg/m³

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सिंहलाल कुमार
असिस्टेंट प्रोडक्शन ऑफिसर
राजस्थान प्रोडक्शन कॉन्ट्रोल बोर्ड
(राजस्थान प्रोडक्शन कॉन्ट्रोल बोर्ड)
असिस्टेंट प्रोडक्शन ऑफिसर

Environment statement for the financial year 2022-2023 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE-I

Period of Monitoring: Financial Year: 2022-2023
Location: Simariya Village

PERIOD	No. of Observations	Parameters (Average Concentration)							
		PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	Ammonia (µg/m ³)	Ozone (µg/m ³)	
NAAQ Standards	→	60/100	40/60	50/80	40/80	02/04	100/400	100/180	
April 2022	9	62.4	31.4	9.4	12.4	0.62	BDL	19.4	
May 2022	9	127.8	65.3	14.2	25.7	0.52	BDL	18.2	
June 2022	8	93.2	47.5	12.1	19.9	0.42	BDL	15.1	
July 2022	9	127.5	65.0	14.0	25.5	0.34	BDL	13.3	
Aug 2022	9	62.4	31.4	9.4	12.4	0.18	BDL	11.5	
Sept 2022	8	127.8	65.3	14.2	25.7	0.20	BDL	12.8	
Oct 2022	8	93.2	47.5	12.1	19.9	0.22	BDL	18.1	
Nov 2022	8	127.5	65.0	14.0	25.5	0.37	BDL	26.8	
Dec 2022	9	62.4	31.4	9.4	12.4	0.64	BDL	32.3	
Jan. 2023	9	127.8	65.3	14.2	25.7	0.52	BDL	29.2	
Feb 2023	8	93.2	47.5	12.1	19.9	0.55	<20	25.9	
March 2023	8	127.5	65.0	14.0	25.5	0.49	<20	23.4	
Min. Conc.		62.4	31.4	9.4	12.4	0.18	<20	11.5	
Max. Conc.		127.8	65.3	14.2	25.7	0.64	<20	32.3	
Average	102	93.2	47.5	12.1	19.9	0.42	<20	20.5	
98 th percentile		127.5	65.0	14.0	25.5	0.64	<20	31.6	

NOTE: BDL = Below Detection Limit
C₆H₆ & Benzo(a)pyrene = <0.01 µg/m³
Ni, As, Pb (ng/m³) = BDL
NH₃ (µg/m³) = BDL = <20 µg/m³

Signature
 Director, HURL
 Barauni, Bihar
 (Seal of HURL)
 HURL, Barauni, Bihar

Environment statement for the financial year 2022-2023 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE-I

Period of Monitoring: Financial Year: 2022-2023
Location: Chakballi - Mahana Road

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)	Ammonia ($\mu\text{g}/\text{m}^3$)	Ozone ($\mu\text{g}/\text{m}^3$)	
NAAQ Standards	→	60/100	40/60	50/80	40/80	02/04	100/400	100/180	
April 2022	9	84.7	43.4	11.1	18.7	0.51	BDL	19.7	
May 2022	9	82.4	42.4	11.0	16.9	0.44	BDL	18.3	
June 2022	8	70.8	36.8	10.9	14.8	0.36	BDL	15.9	
July 2022	9	69.3	34.5	11.1	14.4	0.32	BDL	14.6	
Aug. 2022	9	61.5	30.4	9.9	12.1	0.19	BDL	13.2	
Sept. 2022	8	58.1	29.3	10.1	13.0	0.19	BDL	14.4	
Oct. 2022	8	74.1	38.1	13.3	18.0	0.23	BDL	18.4	
Nov. 2022	8	104.0	55.0	13.7	26.2	0.40	BDL	27.8	
Dec. 2022	9	119.0	60.3	14.5	27.4	0.66	BDL	33.0	
Jan. 2023	9	108.9	56.5	13.1	27.8	0.53	BDL	29.4	
Feb. 2023	8	162.5	75.3	13.6	26.8	0.56	168.8	26.9	
March 2023	8	142.8	68.9	12.6	21.6	0.49	152.5	22.7	
Min. Conc.		58.1	29.3	9.9	12.1	0.19	152.5	13.2	
Max. Conc.	102	162.5	75.3	14.5	27.8	0.66	168.8	33.0	
Average		94.8	47.6	12.1	19.8	0.41	160.7	21.2	
98 th percentile		158.2	73.9	14.3	27.7	0.64	168.5	32.2	

NOTE: BDL = Below Detection Limit C₆H₆ & Benzo(a)pyrene = <0.01 $\mu\text{g}/\text{m}^3$
Ni, As, Pb (ng/m^3) = BDL NH₃ ($\mu\text{g}/\text{m}^3$) = BDL = <20 $\mu\text{g}/\text{m}^3$

Handwritten signature and date: 15/03/23
 Director, HURL
 Barauni, Bihar

Environment statement for the financial year 2022-2023 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE-I

Period of Monitoring: Financial Year: 2022-2023
Location: Chakiya Village

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)	Ammonia ($\mu\text{g}/\text{m}^3$)	Ozone ($\mu\text{g}/\text{m}^3$)	
NAAQ Standards	→	60/100	40/60	50/80	40/80	02/04	100/400	100/180	
April 2022	9	86.1	45.6	12.9	25.3	0.60	BDL	21.1	
May 2022	9	85.0	43.8	12.7	22.8	0.52	BDL	19.5	
June 2022	8	73.9	39.4	12.6	19.9	0.42	BDL	17.0	
July 2022	9	71.7	36.6	13.0	19.2	0.38	BDL	15.8	
Aug. 2022	9	65.2	32.8	11.6	16.3	0.22	BDL	14.4	
Sept. 2022	8	60.8	31.5	11.6	15.3	0.23	BDL	15.8	
Oct. 2022	8	81.5	41.6	14.8	21.1	0.27	BDL	20.8	
Nov. 2022	8	113.4	60.8	15.1	31.0	0.48	BDL	31.3	
Dec. 2022	9	124.8	65.6	16.1	32.1	0.69	BDL	34.7	
Jan. 2023	9	110.3	56.9	14.2	32.0	0.59	BDL	31.2	
Feb. 2023	8	115.9	58.5	14.4	31.9	0.64	38.7	28.6	
March 2023	8	105.4	54.5	13.4	25.4	0.57	35.2	23.8	
Min. Conc.		60.8	31.5	11.6	15.3	0.22	35.2	14.4	
Max. Conc.	102	124.8	65.6	16.1	32.1	0.69	38.7	34.7	
Average		91.2	47.3	13.5	24.4	0.47	37.0	22.8	
98 th percentile		122.8	64.5	15.9	32.1	0.68	38.6	34.0	

NOTE: BDL = Below Detection Limit C₆H₆ & Benzo(a)pyrene = <0.01 $\mu\text{g}/\text{m}^3$
Ni, As, Pb (ng/m³) = BDL NH₃ ($\mu\text{g}/\text{m}^3$) = BDL = <20 $\mu\text{g}/\text{m}^3$

(Handwritten signature)
 Director, Environment
 Barauni, Bihar
 (Stamp: Director, Environment, Barauni, Bihar)

Environment statement for the financial year 2022-2023 for proposed Ammonia - Urea
(2200MTPD & 3850MTPD) Plants of HURL at Barauni, Bihar

ANNEXURE-I

Period of Monitoring: Financial Year: 2022-2023
Location: Bihat Village

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)	Ammonia ($\mu\text{g}/\text{m}^3$)	Ozone ($\mu\text{g}/\text{m}^3$)	
NAAQ Standards	→	60/100	40/60	50/80	40/80	02/04	100/400	100/180	
April 2022	9	83.7	42.7	12.1	24.4	0.65	BDL	25.1	
May 2022	9	82.5	42.1	11.9	22.0	0.53	BDL	20.9	
June 2022	8	74.7	38.5	12.0	19.0	0.43	BDL	17.7	
July 2022	9	73.4	36.3	12.4	18.7	0.41	BDL	16.6	
Aug. 2022	9	66.9	33.1	11.1	15.6	0.24	BDL	15.1	
Sept. 2022	8	60.7	30.2	10.9	14.8	0.22	BDL	16.3	
Oct. 2022	8	83.9	41.8	13.6	20.8	0.26	BDL	21.4	
Nov. 2022	8	117.4	60.8	14.8	29.9	0.45	BDL	31.8	
Dec. 2022	9	127.1	65.0	15.7	30.9	0.70	BDL	35.1	
Jan. 2023	9	109.9	53.7	14.1	30.1	0.61	BDL	31.1	
Feb. 2023	8	118.0	56.6	14.2	29.9	0.70	45.0	28.6	
March 2023	8	107.8	53.1	13.0	23.9	0.60	40.3	23.8	
Min. Conc.		60.7	30.2	10.9	14.8	0.22	40.3	15.1	
Max. Conc.	102	127.1	65.0	15.7	30.9	0.70	45.0	35.1	
Average		92.2	46.2	13.0	23.3	0.48	42.7	23.6	
98 th percentile		125.1	64.1	15.5	30.7	0.70	44.9	34.4	

NOTE: BDL = Below Detection Limit C₆H₆ & Benzo(a)pyrene = <0.01 $\mu\text{g}/\text{m}^3$
Ni, As, Pb (ng/m^3) = BDL NH₃ ($\mu\text{g}/\text{m}^3$) = BDL = <20 $\mu\text{g}/\text{m}^3$

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 (Name of the person)
 (Designation)
 (Address)
 (Contact No.)

HINDUSTAN URVARAK & RASAYAN LTD - BARAUNI (BIHAR)				
DATE	SAMPLE POINT NAME	SOx	NOx	SPM
		(mg/Nm3)	(mg/Nm3)	(mg/Nm3)
18.10.2022	HRSO - 1 Stack	ND	42.7	< 5.0
	HRSO - 2 Stack	ND	47.2	< 5.0
	Primary Reformer. Stack	ND	32.6	< 5.0
01.11.2022	HRSO - 1 Stack	ND	62.5	< 5.0
	HRSO - 2 Stack	ND	55.1	< 5.0
	Primary Reformer. Stack	ND	60.1	< 5.0
08.11.2022	HRSO - 1 Stack	ND	55.5	< 5.0
	HRSO - 2 Stack	ND	53.1	< 5.0
	Primary Reformer. Stack	ND	46.5	< 5.0
17.11.2022	HRSO - 1 Stack	ND	29.1	< 5.0
	HRSO - 2 Stack	ND	31.2	< 5.0
	Primary Reformer. Stack	ND	52.3	< 5.0
06.12.2022	HRSO - 1 Stack	ND	30.8	< 5.0
	HRSO - 2 Stack	ND	76.2	< 5.0
	Primary Reformer. Stack	ND	52.3	< 5.0
14.12.2022	HRSO - 1 Stack	ND	33.3	< 5.0
	HRSO - 2 Stack	ND	68.2	< 5.0
	Primary Reformer. Stack	ND	42.3	< 5.0
26.12.2022	HRSO - 2 Stack	ND	71.9	< 5.0
	HRSO - 1 Stack	ND	34.3	< 5.0
	Primary Reformer. Stack	ND	62.1	< 5.0
12-Jan-23	HRSO - 1 Stack	ND	25.8	< 5.0
	HRSO - 1 Stack	ND	20.3	< 5.0
	Primary Reformer. Stack	ND	44.5	< 5.0
18-Jan-23	HRSO - 1 Stack	ND	24.1	< 5.0
	HRSO - 2 Stack	ND	72.8	< 5.0
	Primary Reformer. Stack	ND	41.3	< 5.0
22-Jan-23	HRSO - 2 Stack	ND	39.5	< 5.0
	Primary Reformer. Stack	ND	44.6	< 5.0
	HRSO - 2 Stack	ND	61.2	< 5.0
28-Jan-23	HRSO - 1 Stack	ND	45.3	< 5.0
	HRSO - 2 Stack	ND	40.8	< 5.0
01-Feb-23	Primary Reformer. Stack	ND	23.8	< 5.0
11-Feb-23	HRSO - 2 Stack	ND	55.6	< 5.0
16-Feb-23	HRSO - 1 Stack	ND	46.9	< 5.0
18-Mar-23	HRSO - 2 Stack	ND	65.3	< 5.0
18-Mar-23	HRSO - 1 Stack	ND	48.1	< 5.0
18-Mar-23	Primary Reformer. Stack	ND	37.6	< 5.0
24-Mar-23	HRSO - 1 Stack	ND	96	< 5.0


SRINU PITTA
MANAGER (E&OC)
HINDUSTAN URVARAK & RASAYAN LTD.
 (A Joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)
 Project Office- Urvarak Nagar, Barauni