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transforming for good

HINDUSTAN ZINC
Zinc & Silver of India

(Reg. A/D)

HZL/CLZS/ENV/2026-27/53 **Date: 15.09.2026**

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4th Jhalana Institutional Area, Jaipur – 302004

Subject: Submission of Environmental Statement for the year 2025–26 for Chanderiya Lead Zinc Smelter, Chittorgarh (Rajasthan)

Reference Details: Consent Letters

1. **Pyro Plant-** F(HDF)/Chittorgarh(Gangrar)/13(1)/2024-2025/2545-2547 dated 03/11/2025. & F(HDF)/Chittorgarh (Gangrar)/15(1)/2025-2026/2551-2553 dated 03/11/2025.
2. **Ausmelt Lead Plant-** F(HSW)/Chittorgarh(Gangrar)/7068(1)/2024-2025/1355-1357 dated 05.08.2024
3. **Hydro Phase I & II-** F(HDF)/Chittorgarh(Gangrar)/8(1)/2024-2025/1382-1384 dated 05.08.2024. & F(HDF)/Chittorgarh (Gangrar)/12(1)/2024-2025/2542-2544 dated 03/11/2025.
4. **CPP-290 MW-** F(HDF)/Chittorgarh(Gangrar)/9(1)/2024-2025/635-637 dated 30.05.2024 & F(HDF)/Chittorgarh(Gangrar)/10(1)/2024-2025/955-957 dated 27.06.2024
5. **Fumer Plant-** F(HSW)/Chittorgarh(Gangrar)/7069(1)/2024-2025/3611-3613 dated 16/03/2026.

Respected Sir,
With reference to the above, please find enclosed the Environmental Statement for the year **2025–26** pertaining to Chanderiya Lead Zinc Smelter Unit, Chittorgarh, Rajasthan, submitted in compliance with applicable statutory requirements.
The duly completed **Form V Environmental Statement** is enclosed for your kind information and record.

Thanking you.
Yours faithfully,
For Hindustan Zinc Limited

Manisha Bhati

[Manisha Bhati]
Associate General Manager - Environment
Chanderiya Lead Zinc Smelter

Copy to:

- The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderiya, Chittorgarh – 312001
- Head of Office/Scientist-D, Ministry of Environment, Forest and Climate Change, Govt. of India, Sub-Regional Office, Jaipur, (Regional Office, Gandhinagar) Room No. 123, 126, 127 & 128, Arawali Bhawan, Jhalana Institutional Area, Jaipur – 302004.

HINDUSTAN ZINC

Zinc & Silver of India

Environmental Statement

of

Chanderiya Lead Zinc Smelter,

M/s Hindustan Zinc Limited,

Village – Putholi, District- Chittorgarh- 312021,

Rajasthan

For the period: April-2025 to March-2026

September - 2026

FORM – V

ENVIRONMENT STATEMENT

FOR THE FINANCIAL YEAR ENDING 31st MARCH 2026

PART – A

(1)	Name and address of the owner/occupier of the industry, operation and process	**Sh. Amarendu Prakash** Chief Executive Officer and Whole Time Director, M/s. Hindustan Zinc Limited, Udaipur, Rajasthan - 313004	
(2)	Industry Category Primary (STC) Secondary (SIC)	Red/Large [Category A] F.LRJ-17425 SL NO.20120 of Industrial (Development & Regulation Act 1951) IDR 157(91)15.07.1991 --	
(3)	Production capacity	**PYRO PLANT**	**AUSMELT PLANT**
	A. Zinc	105,000 MTPA	------
	B. Lead	35,000 MTPA	60,000 MTPA
	C. Silver	74 MTPA	94.71 MTPA
	D. Copper Sulphate	2100 MTPA	7920 MTPA
	E. Sulphuric Acid	1,76,000 MTPA	5050 MTPA
	F. Cadmium	375 MTPA	------
	G. Zinc Rich Dust	------	6600 MTPA
		HYDRO PHASE- I & II	**FUMER**
	A. Zinc	504,000 MTPA	------
	B. Sulphuric Acid	615,548 MTPA	------
	C. Cadmium Sponge	1360 MTPA	------
	D. Copper Cement	1020 MTPA	------
	E. Low grade Lead Conc.	30,000 MTPA	------
	F. Lead Silver Cake	16,000 MTPA	16,000 MTPA
	G. Calomel	40 MTPA	------
	H. Sodium Chloride	500 MTPA	------
	I. Sodium Sulphate	1250 MTPA	------
	J. Copper Speiss	700 MTPA	700 MTPA
	K. Slag	------	150,000 MTPA
	L. Electric Power	------	21 MWH
		CPP UNIT- I, II & III	
	A. Electric Power	290 MW	
	B. BPTG	6 MW	
(4)	Year of establishment	PYRO	1990-91
		HYDRO I	2003-04
		AUSMELT	2004-05
		HYDRO II	2006-07
		FUMER	2024-25
(5)	Date of last Environment Statement submitted	**29.09.2025**	

PART – B

Water and Raw Material consumption

1. **Water consumption m^3/d for entire location for 2025-2026 (including colony)**

Process, cooling & domestic (factory) = 27617 m^3/day
Domestic (Zinc Colony) = 427 m^3/day
Total = 28044 m^3/day

- **Pyro & Ausmelt Plant – Water Consumption**

Name of product	Process Water consumption per unit of product output, M^3/MT	
	2024-2025	2025-2026
Furnace metal	9.90	9.32

- **Hydro Plant Phase I- Water consumption**

Name of product	Process Water consumption per unit of product, M^3/MT	
Zn Ingots	2024-2025	2025-2026
	3.28	3.47

- **Hydro Plant Phase II - Water consumption**

Name of product	Process Water consumption per unit of product, M^3/MT	
Zn Ingots	2024-2025	2025-2026
	9.66	9.30

- **Captive Power Plant –Water Consumption**

Name of product	Process Water consumption per unit of product, M^3/MWH	
Power (Electricity)	2024-2025	2025-2026
	2.31	2.26

2. **Raw material consumption**

- **Raw material consumption –Pyro + Ausmelt Plant**

Name of raw material	Name of Product	Consumption of Raw material per unit of output During 2024-2025	Consumption of Raw material per unit of output During 2025-26
Zinc concentrate	Zinc	1.90	3.44
Lead concentrate	Lead	1.67	1.03

- **Raw material consumption -Hydro I**

Name of raw material	Name of Product	Consumption of Raw material per unit of output (excluding Calcine)	
		2024-2025	2025-2026
Zinc concentrate	Zinc	1.34	1.49

- **Raw material consumption -Hydro II**

Name of raw material	Name of Product	Consumption of Raw material per unit of output - (excluding Calcine)	
		2024-2025	2024-25
Zinc concentrate	Zinc	1.32	1.28

PART – C
Discharge to environment /unit of output
(Specified if the consent issued)

Pollutants	Concentration of pollutants in discharge (mass/volume)	Percentage of variation from prescribed standards with
Water	Zero discharge is maintained. ETP & STP treated water analysis report is attached as Annexure I & II	No Variation from the prescribed norms
Air (Stack Emission)	Report is attached as per annexure III	No Variation from the prescribed norms. SO_2 emissions from CPP are in compliance with the MOEF&CC notification dated, 11.07.2025.

- **Annexure I** – ETP treated water analysis, year **2025-2026**
- **Annexure II** – STP treated water analysis, year **2025-2026**
- **Annexure III** - Stack Emissions (PM, SO_2, NO_X), year **2025-2026**
- **Annexure IV** - Ambient Air Emission inside Plant, year **2025-2026**
- **Annexure V** - Ambient Air Emission nearby Villages, year **2025-2026**
- **Annexure VI**- Ambient Noise Emission – Plant, year **2025-2026**
- **Annexure VII** - Form No. 4, year **2025-2026**
- **Annexure VIIII** - HW Authorization for entire location

PART – D

HAZARDOUS WASTES
(As specified under Hazardous Waste Management & Handling and Transboundary and other waste rules, 2016)
(UNIT –MTA)

1. From Process-

S. No	Type of Hazardous Waste	Category		Generation/ Sale/Disposal	2024-2025	2025-2026
		Sch	Code		MTA	MTA
1.	Spent Catalyst	I	17.2	Generation	20.04	6.70
				Sale	0.0	0.0
				Disposal/Reuse	20.04	6.70
2.		I	33.1	Generation	102	32.0
				Sale	0.0	0.0

	Empty barrels/containers contaminated with hazardous chemical/waste			Disposal/Reuse	102	32.0
3.	Used or spent oil	I	5.1	Generation	64.54	62.27
				Sale	60.03	54.47
				Disposal/Reuse	3.44	1.23
4.	Waste Oil	I	5.2	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
5.	Anode Mud	I	7.2	Generation	156.43	779.53
				Sale	76.51	779.53
				Disposal/Reuse	79.92	0.0
6.	Cobalt Cake	I	7.2	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
7.	Cooler Cake	I	7.2	Generation	5896.48	5805.83
				Sale	0.0	0.0
				Disposal/Reuse	5896.48	5805.83
8.	Copper Bearing lead residue/process residue	I	7.2	Generation	16068.06	0.0
				Sale	16068.06	0.0
				Disposal/Reuse	0.0	0.0
9.	HGP Dust	I	7.2	Generation	2967.04	3911.88
				Sale	430.48	2238.33
				Disposal/Reuse	1982.2	2637.64
10.	Purification Cake	I	7.2	Generation	6057.42	5758.0
				Sale	5868.24	5402.02
				Disposal/Reuse	0.0	0.0
11.	Filter contaminated with oil	I	5.2	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
12.	Oil soaked Material	I	5.2	Generation	7.46	6.92
				Sale	0.0	0.0
				Disposal/Reuse	7.46	6.92
13.	Process residues (ISF Dross)	I	7.2	Generation	7305.95	4568.7
				Sale	7305.95	4568.7
				Disposal/Reuse	0.0	0.0
14.	Process residues (De-Fluorination cake)	I	7.2	Generation	0.0	101.86
				Sale	0.0	0.0
				Disposal/Reuse	0.0	101.86
15.	Process residue (Lead Dross/ Lead bearing residues/Lead Scrap)	I	7.2	Generation	5506.38	15039.61
				Sale	5323.23	14852.07
				Disposal/Reuse	152	72.0
16.	Process residue (Zinc Dross)	I	7.2	Generation	0.0	62.96
				Sale	0.0	62.96

				Disposal/Reuse	0.0	0.0
17.	Process Residues and Wastes (Geothite Cake)	I	7.2	Generation	7095.4	5955.20
				Sale	0.0	0.0
				Disposal/Reuse	7095.4	5955.20

2. From pollution Control facilities

S. No	Type of Hazardous Waste	Category		Generation/ Sale/Disposal	2024-2025	2025-2026
		Sch	Code		MTA	MTA
1	Non-Ferrous Sludge from ETP and scrubbers (ETP Sludge)	I	7.4	Generation	14869.54	18378.07
				Sale	0.0	1248.87
				Disposal/Reuse	14869.54	17129.2
2	Water Purification Resin	I	34.2	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
3	Exhaust Air or Gas cleaning residue	I	35.1	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
4	Spent ion exchange resin containing toxic metals	I	35.2	Generation	0.0	0.0
				Sale	0.0	0.0
				Disposal/Reuse	0.0	0.0
5	Ash from incinerator and flue gas cleaning residues (bag filters)	I	37.2	Generation	1.53	1.54
				Sale	0.0	0.0
				Disposal/Reuse	1.53	1.54
6	MEE Salt	I	37.3	Generation	1897.33	832.14
				Sale	0.0	0.0
				Disposal/Reuse	1897.33	832.14

PART – E

SOLID WASTE

S.No	Type of Non- Hazardous Waste	Category	Generation/ Sale/Disposal	2024-2025	2025-2026
				MTA	MTA
1	Jarosite Cake	Non-Hazardous	Generation	397072	366331
			Sale (in Highway)	282580	454350
			Sale (JS in Cement)	25939	33799
			Disposal/Reuse	397072	366331
2	ISF Slag		Generation	93558.50	83159.19
			Sale	84891.88	117713.41
			Disposal/Reuse	5267.76	489.90
3	Ausmelt Slag		Generation	30855.90	31488.10

			Sale	49488.33	7530.97
			Disposal/Reuse	38558.28	18558.21
4	Fly Ash		Generation	260080.09	293966.46
			Sale	260080.09	293966.46
			Disposal/Reuse	0.0	0.0
5	Bottom Ash		Generation	69349.77	68799.99
			Sale	53809.96	75778.62
			Disposal/Reuse	0.0	0.0

PART – F

(Please specify the characteristics, in terms of composition and quantum of Hazardous waste and solid waste and indicate disposal practice for both of these categories of wastes)

- **Hazardous waste:**

S. No.	Type of Hazardous waste	Chemical characteristics	Category		Hazardous Waste
			Sch	Code	Disposal Practice
1	Spent catalyst	V_2O_5- 3-4%	I	17.2	SLF/Sold to registered recycler
2	Anode Mud	Zn – 0.3 - 1 % Pb – 2.5 -5 % Mg – 42-45 %	I	7.2	SLF/Sold to registered recycler
3	Antimony Dross	—	I	7.2	SLF/Sold to registered recycler
4	Cobalt cake	Zn-30-35% Pb-0.2-0.3%	I	7.2	SLF/Sold to registered recycler
5	Cooler cake	Zn-0.5-0.6% Pb-0.05-0.06 %	I	7.2	SLF/Sold to registered recycler
6	Copper bearing lead residue/process residue	—	I	7.2	SLF/Sold to registered recycler
7	Enrichment cake	Zn-20-25 % Cd-35-50% Cu-5-10%	I	7.2	SLF/Sold to registered recycler
8	HGP Dust	—	I	7.2	SLF/Sold to registered recycler
9	Purification Cake	Zn-20-25 % Cd-35-50% Cu-5-10%	I	7.2	SLF/Sold to registered recycler
10	Non-Ferrous Sludge from ETP and scrubbers	—	I	7.4	SLF/Sold to registered recycler

11	Mercury and Mercury compounds	—	II	A6	SLF/Sold to registered recycler
12	Zinc Dross/Zinc Ash/Zinc Skimming/Zinc Scrap/Zinc Residue	—	IV	...	Used as raw material
13	Empty barrels/containers contaminated with hazardous chemicals/wastes	—	I	33.1	SLF/Sold to registered recycler
14	Water Purification Resin	—	I	34.2	SLF/Sold to registered recycler
15	Exhaust Air or Gas cleaning residue	—	I	35.1	Approved Incinerator
16	Spent ion exchange resin containing Toxic metals	—	I	35.2	SLF/Sold to registered recycler
17	Ash from incinerator and flue gas cleaning residues	—	I	37.2	SLF/Sold to registered recycler
18	Used or spent oil	—	I	5.1	Sold To registered recycler
19	Waste Oil	—	I	5.2	Sold To registered recycler

- **Solid waste:**

S. No.	Type of Non- Hazardous Waste	Chemical characteristics	Disposal Practice
1	Jarosite Cake/ Jarofix	Zn-3-5 % Pb- 1-2 % Fe- 22-28 %	Utilization in cement industries and highways project/Disposed off to Jarofix yard landfill
2	ISF Slag	SiO_2- 18.08 % Fe_2O_3- 34.28 % Al_2O_3- 8.17 %	Utilization in cement industries and highways project/Reuse in process
3	Ausmelt Slag	—	Reuse in process
4	Fly Ash	—	Utilization in cement industries
5	Bottom Ash	—	Utilization in cement industries/Brick manufacturing industries

Part –G

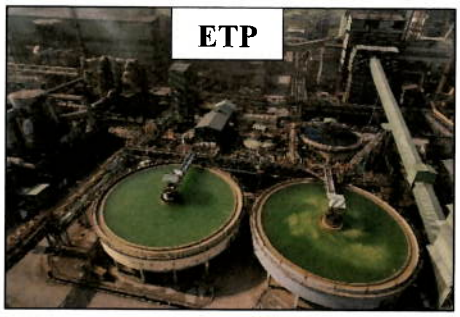
Impact of the pollution abetment measures taken on conservation of Natural resources and on the cost of production

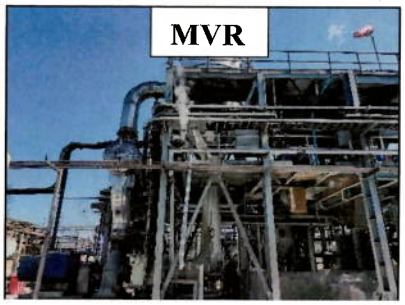
1. **Water Conservation**
   - Reduced freshwater usage through recycling (ETP, RO, MVR).
   - Zero Liquid Discharge ensures no water pollution.
   - STP reuse supports sustainable gardening.
   - Leak prevention & monitoring conserves water effectively.

- Utilization of Chittorgarh STP treated water in CPP significantly reduces freshwater consumption in power generation processes, promoting sustainable resource use.

Impact on Cost of Production

- Lower water procurement costs due to reuse.
- Reduced maintenance and repair costs via preventive actions.
- Avoidance of regulatory penalties through compliance.
- Improved efficiency with real-time water quality monitoring.





2. **To Maintain Ecological Balance**
   - **Green Cover**: Over 37% green cover maintained across CLZS plant and newly acquired land.
   - **Green Belt Development**: Initiatives including plantation at Biliya, complete greening of Jarofix Yard-2, scientific green capping of secured landfills and Miyawaki plantation.
   - **Maintenance**: Dedicated team ensures upkeep of greenery and biodiversity.
   - **Awareness Programs**: Conducted for employees and families on International Biodiversity Day and World Environment Day.
   - **Habitat Preservation**: Dense greenery and preservation of trees/shrubs support local fauna.

Plantation- Biliya	Butterfly Garden
	

Green Cover on Jarofix yard-2	Miyawaki Plantation
	
Scientific Green capping -SLF-1	**Scientific Green capping -SLF-2**
	

3. Air Quality Management

A. Control of Fugitive Emissions

- Regular sprinkling of water across dust-prone areas.
- Deployment of heavy-duty vacuum cleaners to minimize airborne particulate matter.

B. Green Belt Development

- Avenue plantation along roads and open areas to reduce dust emissions from vehicular movement and improve microclimate.

C. Emission Monitoring & Control

- Installation of online analyzers for continuous monitoring of SOx, NOx, and PM.
- These analyzers are connected to the Pollution Control Board (PCB) server for real-time data sharing.
- Interlock systems are in place for Pollution Control Devices (PCDs) to ensure automatic shutdown in case of malfunction.

D. Efficient Operation of Pollution Control Equipment

- Use of Bag Filters, Electrostatic Precipitators (ESPs), and Venturi Scrubbers to capture and neutralize pollutants.
- All equipment is maintained and operated efficiently to ensure compliance with emission norms.

E. Ambient Air Quality Monitoring

- Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are installed on-site.
- These stations provide real-time data on ambient air quality, supporting proactive environmental management.

Tail Gas Treatment Plant

Double Conversion Double Absorption Acid (DCDA)

Road Sweeping by Vacuum Road Sweeper

CAAQMS

PART – H

Additional measures/investment for environmental protection including abatement of pollution

1. **Organic Waste Management**
   - Organic Waste Converter (OWC) is regularly operated at the CLZS plant.
   - Kitchen waste is processed to produce nutrient-rich manure, promoting circular waste utilization.
2. **Industrial Waste Utilization**
   - Jarosite and Slag are supplied to cement industries for use as raw materials.
   - Jarofix and Slag are gainfully utilized in highway construction projects, contributing to sustainable infrastructure development.

PART – I

Any other information on Environmental Protection and Pollution Control

- **Sustainability Governance**: ESG Committee formed to drive HZL Sustainability Goals 2025.
- **Awareness & Engagement**: Mass plantation drive conducted on World Environment Day at CLZS site.
  Interaction with school students to promote environmental awareness.
  Fort cleaning activity to preserve heritage and promote cleanliness.
- **Global Commitment:** Achieved ICMM membership, reinforcing commitment to responsible mining and sustainability.
- Chanderiya Lead Zinc Smelter (CLZS) became India's first Zinc Mark-certified site.

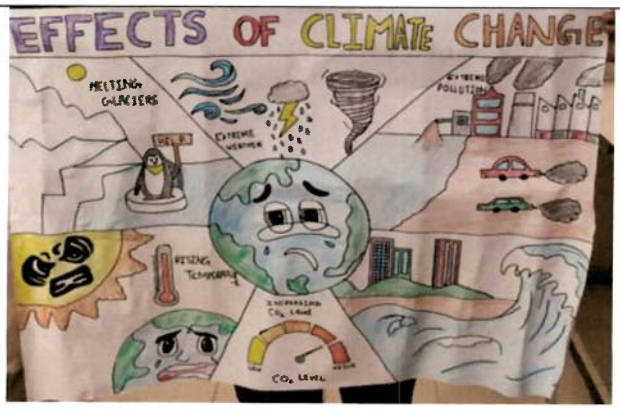
Mass Plantation on World Environment Day

Bag painting competition

Fort Cleaning Activity

River Cleaning Activity

Poster Making Competition



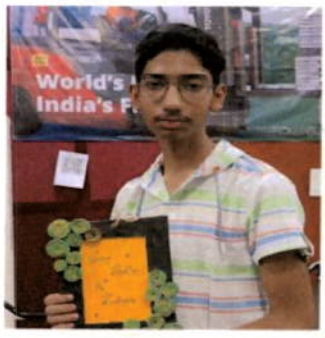
E- Waste collection Drive

Zinc Mark Certification	Clean & Green Workplace Drive
THE ZINC MARK® RESPONSIBLY PRODUCED ZINC	

Waste to Wow Activities







Annexure-I

PYRO ETP — ANNUAL TREATED WATER MONITORING SUMMARY

Reporting Period: April- 2025 to March 2026

S.No	Parameter / Unit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26	Limit
1	Total Suspended Solids [mg/l]	7	10	10	14	100
2	Ammonical Nitrogen [mg/l]	5.5	6.8	7.6	7.5	50
3	BOD [mg/l]	8.00	15.00	10.00	12.00	30
4	Chloride [mg/l]	155.9	139.9	213.9	195.9	1000
5	COD [mg/l]	45	60	48	54	250
6	Cyanide [mg/l]	< 0.02	< 0.02	< 0.02	< 0.02	0.2
7	Hexavalent Chromium [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	0.1
8	Fluoride [mg/l]	1	0.85	1	0.76	2
9	pH	7.53	7.69	7.23	7.45	6.5-8.5
10	Phosphate (total) [mg/l]	< 0.50	< 0.50	< 0.50	< 0.50	5
11	Sulphate [mg/l]	374.50	340.10	374.60	330.10	1000
12	Cadmium [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	2
13	Chromium Total [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	2
14	Copper [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	1
15	Iron [mg/l]	0.05	0.04	< 0.01	0.05	1
16	Nickel [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	3
17	Zinc [mg/l]	0.27	0.22	0.22	0.17	1
18	Oil and Grease [mg/l]	< 5.0	< 5.0	< 5.0	< 5.0	10
19	Total Residual Chlorine [mg/l]	< 0.2	< 0.2	< 0.2	< 0.2	0.5
20	Nitrate [mg/l]	6.8	8.3	9.8	8.7	50
21	Lead [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	0.1
22	Fecal Coliform	Absent	Absent	Absent	Absent	Not more than 10/100 ml

HYDRO-2 ETP — ANNUAL TREATED WATER MONITORING SUMMARY

Reporting Period: April- 2025 to March 2026

S.No	Parameter / Unit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26	Limit
1	Total Suspended Solids [mg/l]	5	9	8	14	100
2	Ammonical Nitrogen [mg/l]	5.1	5.8	5.7	6.9	50
3	BOD [mg/l]	4.00	18.00	8.00	15.00	30
4	Chloride [mg/l]	215.9	175.9	253.9	149.9	1000
5	COD [mg/l]	23	18	40	63	250
6	Cyanide [mg/l]	< 0.02	< 0.02	< 0.02	< 0.02	0.2
7	Hexavalent Chromium [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	0.1
8	Fluoride [mg/l]	0.48	0.57	0.85	0.62	2
9	pH	7.71	7.66	7.38	7.53	6.5-8.5
10	Phosphate (total) [mg/l]	< 0.50	< 0.50	< 0.50	< 0.50	5
11	Sulphate [mg/l]	455.20	410.30	369.20	237.30	1000
12	Cadmium [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	2
13	Chromium Total [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	2
14	Copper [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	1
15	Iron [mg/l]	0.06	0.05	< 0.01	0.05	1
16	Nickel [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	3
17	Zinc [mg/l]	0.5	0.36	0.34	0.28	1
18	Oil and Grease [mg/l]	< 5.0	< 5.0	< 5.0	< 5.0	10
19	Total Residual Chlorine [mg/l]	< 0.2	< 0.2	< 0.2	< 0.2	0.5
20	Nitrate [mg/l]	6	7.9	8.4	9.2	50
21	Lead [mg/l]	< 0.01	< 0.01	< 0.01	< 0.01	0.1
22	Fecal Coliform	Absent	Absent	Absent	Absent	Not more than 10/100 ml

Annexure-II

STP OUTLET PLANT — ANNUAL TREATED WATER MONITORING SUMMARY

Reporting Period: April- 2025 to March 2026

S.No	Parameter / Unit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26	Limit
1	**Total Suspended Solids [mg/l]**	18.00	< 5.0	< 5.0	12.00	**20**
2	**Ammonical Nitrogen [mg/l]**	< 5.0	< 5.0	< 5.0	< 5.0	**50**
3	**BOD [mg/l]**	9.00	7.00	7.00	9.00	**10**
4	**Chloride [mg/l]**	129.90	143.90	143.90	123.90	**1000**
5	**COD [mg/l]**	45.00	38.00	32.00	47.00	**50**
6	**Fluoride [mg/l]**	0.68	0.82	0.80	0.75	**2**
7	**pH**	6.75	7.48	8.31	7.82	**6.5 - 9.0**
8	**Phosphate (total) [mg/l]**	0.80	0.90	0.90	0.80	**5**
9	**Sulphate [mg/l]**	56.50	126.50	60.60	70.50	**1000**
10	**Sulphides [mg/l]**	< 0.5	< 0.5	< 0.5	< 0.5	**2**
11	**Oil and Grease [mg/l]**	< 5.0	< 5.0	< 5.0	< 5.0	**10**
12	**Total Residual Chlorine [mg/l]**	< 0.1	< 0.1	< 0.1	< 0.1	**1**
13	**Nitrate [mg/l]**	5.70	3.90	5.50	8.80	**50**
14	**Total Nitrogen [mg/l]**	6.30	6.10	7.40	9.50	**10**
15	**Fecal Coliform (MPN Per 100ml)**	Absent	Absent	Absent	Absent	**100**

STP OUTLET COLONY — ANNUAL TREATED WATER MONITORING SUMMARY

Reporting Period: April- 2025 to March 2026

S.No	Parameter / Unit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26	Limit
1	**Total Suspended Solids [mg/l]**	6.00	13.00	8.00	18.00	**20**
2	**Ammonical Nitrogen [mg/l]**	< 5.0	< 5.0	< 5.0	< 5.0	**50**
3	**BOD [mg/l]**	7.00	9.00	6.00	9.50	**10**
4	**Chloride [mg/l]**	143.90	143.90	129.90	131.90	**1000**
5	**COD [mg/l]**	37.00	47.00	32.00	48.00	**50**
6	**Fluoride [mg/l]**	0.50	0.75	0.73	0.68	**2**
7	**pH**	7.42	7.62	8.45	7.31	**6.5 - 9.0**
8	**Phosphate (total) [mg/l]**	0.50	1.00	0.60	0.90	**5**
9	**Sulphate [mg/l]**	74.20	154.10	74.60	125.40	**1000**
10	**Sulphides [mg/l]**	< 0.5	< 0.5	< 0.50	< 0.50	**2**
11	**Oil and Grease [mg/l]**	< 5.0	< 5.0	< 0.5	< 5.0	**10**
12	**Total Residual Chlorine [mg/l]**	< 0.1	< 0.1	< 0.1	< 0.1	**1**
13	**Nitrate [mg/l]**	6.50	7.40	5.00	6.60	**50**
14	**Total Nitrogen [mg/l]**	6.90	8.50	7.10	9.70	**10**
15	**Fecal Coliform (MPN Per 100ml)**	Absent	Absent	Absent	Absent	**100**

Annexure-III

ANNUAL STACK EMISSION | QUARTER-WISE COMPARISON

Reporting Period: Apr 2025 to Mar 2026

S.No.	Sampling Location	Parameter	Unit	CTO Limit	Apr'25-Jun'25	Jul'25-Sep'25	Oct'25-Dec'25	Jan'26-Mar'26
			Acid Plant Stack report					
1	PYRO Acid plant (TGT) Stack	Sulphur Dioxide (SO_2)	ppm	224 (2 kg/ton)	109.24	99.42	99.80	101.06
		Acid Mist	mg/Nm^3	50	14.00	17.50	16.50	17.90
2	Ausmelt Cansolve Acid Stack	Sulphur Dioxide (SO_2)	ppm	111 (1 kg/ton)	70.19	63.39	63.01	61.21
		Acid Mist	mg/Nm^3	30	9.20	11.50	11.80	11.70
3	Hydro -1 Acid Stack	Sulphur Dioxide (SO_2)	ppm	135 (1 kg/ton)	100.22	105.46	106.22	103.55
		Acid Mist	mg/Nm^3	30	17.40	19.10	19.30	18.40
4	Hydro - 2 Acid Stack	Sulphur Dioxide (SO_2)	ppm	135 (1 kg/ton)	108.97	105.69	106.07	103.85
		Acid Mist	mg/Nm^3	30	16.80	18.50	18.80	19.20
			PYRO (PM & Pb) Stack Report					
5	ISF Slagging	Particular Matter (PM)	mg/Nm^3	100	28.60	26.30	27.30	28.00
		Lead (as Pb)	mg/Nm^3	10	1.70	1.50	1.90	1.30
6	LRP Copper Drossing	Particular Matter (PM)	mg/Nm^3	100	24.50	22.80	23.60	21.40
		Lead (as Pb)	mg/Nm^3	10	0.42	0.36	0.41	0.39
7	LRP Main	Particular Matter (PM)	mg/Nm^3	100	26.30	25.50	23.50	23.80
		Lead (as Pb)	mg/Nm^3	10	0.61	0.47	0.49	0.43
8	Sinter Main	Particular Matter (PM)	mg/Nm^3	100	27.70	28.30	29.50	26.20
		Lead (as Pb)	mg/Nm^3	10	0.86	0.80	0.94	0.85
9	Sinter Venturi	Particular Matter (PM)	mg/Nm^3	100	28.50	25.90	27.60	25.40
		Lead (as Pb)	mg/Nm^3	10	0.29	0.33	0.35	0.31
10	Crusher Main	Particular Matter (PM)	mg/Nm^3	100	28.60	28.00	30.40	28.30
		Lead (as Pb)	mg/Nm^3	10	2.00	1.90	2.10	2.50
11	Crusher Venturi	Particular Matter (PM)	mg/Nm^3	100	20.30	22.00	23.00	22.50
		Lead (as Pb)	mg/Nm^3	10	1.60	1.40	1.70	1.80
12	CRP Milling	Particular Matter (PM)	mg/Nm^3	100	NA	NA	NA	NA
		Lead (as Pb)	mg/Nm^3	10	NA	NA	NA	NA
13	ZRP Main	Particular Matter (PM)	mg/Nm^3	100	21.20	23.70	24.50	23.00
		Lead (as Pb)	mg/Nm^3	-	0.50	NA	NA	NA
14	ZRP Fume	Particular Matter (PM)	mg/Nm^3	100	20.50	18.20	19.70	18.80
		Lead (as Pb)	mg/Nm^3	-	0.47	NA	NA	NA
			AUSMELT (PM & Pb) Stack Report					
15	RMH	Particular Matter (PM)	mg/Nm^3	30	16.50	15.20	14.30	15.90
		Lead (as Pb)	mg/Nm^3	10	0.22	0.20	0.21	0.28
16	Hygiene	Particular Matter (PM)	mg/Nm^3	30	11.20	9.80	9.40	9.20
		Lead (as Pb)	mg/Nm^3	10	< 0.05	< 0.05	< 0.05	< 0.05
			HYDRO - 1 (PM) Stack Report					
17	Zinc Melting & Casting - 1	Particular Matter (PM)	mg/Nm^3	30	15.00	13.80	14.70	11.60
18	Zinc Melting & Casting - 2	Particular Matter (PM)	mg/Nm^3	30	13.60	12.30	13.50	12.70
19	Zinc Dross	Particular Matter (PM)	mg/Nm^3	30	14.70	15.90	16.70	16.20
20	Zinc Dust	Particular Matter (PM)	mg/Nm^3	30	12.20	13.00	14.00	14.20
21	Preheater Stack	Particular Matter (PM)	mg/Nm^3	30	17.40	15.50	15.10	13.70
22	Roaster start up stack	Particular Matter (PM)	mg/Nm^3	30	16.60	17.10	18.30	16.20
			HYDRO - 2 (PM) Stack Report					
23	Zinc Melting & Casting - 1	Particular Matter (PM)	mg/Nm^3	30	9.50	10.80	11.30	10.30
24	Zinc Melting & Casting - 2	Particular Matter (PM)	mg/Nm^3	30	11.30	10.40	11.20	10.60
25	Zinc Dross	Particular Matter (PM)	mg/Nm^3	30	13.30	12.50	12.90	11.90
26	Zinc Dust	Particular Matter (PM)	mg/Nm^3	30	12.40	10.70	10.80	10.50
27	Preheater Stack	Particular Matter (PM)	mg/Nm^3	30	12.00	13.30	13.90	12.80
28	Roaster start up stack	Particular Matter (PM)	mg/Nm^3	30	10.20	11.80	12.30	11.40
			CPP Stack Report					
29	CPP Unit - 1 & 2	Particular Matter (PM)	mg/Nm^3	50	44.70	47.30	48.10	42.80
		Oxides Of Nitrogen (NO_x)	mg/Nm^3	450	438.30	413.50	417.20	410.40
		Sulphur Dioxide (SO_2)	mg/Nm^3	600	1320.00	1510.00	1412.00	1495.00
		Mercury	mg/Nm^3	0.03	0.02	0.02	0.01	0.03
30	CPP Unit - 3	Particular Matter (PM)	mg/Nm^3	50	41.20	43.50	41.60	44.80
		Oxides Of Nitrogen (NO_x)	mg/Nm^3	450	312.80	293.50	292.50	298.20
		Sulphur Dioxide (SO_2)	mg/Nm^3	600	1025.50	980.00	975.00	965.00
		Mercury	mg/Nm^3	0.03	0.02	0.01	0.02	0.01
31	Coal Crusher Stack	Particular Matter (PM)	mg/Nm^3	50	27.80	26.40	25.90	25.80
			Fumer Stack Report					
32	Off Gases (TGP)	Particular Matter (PM)	mg/Nm^3	50	10.10	9.30	10.40	15.70
		Oxides Of Nitrogen (NO_x)	mg/Nm^3	300	NA	NA	NA	20.60
		Sulphur Dioxide (SO_2)	mg/Nm^3	600	NA	NA	NA	14.50
33	Fuming Furnace	Particular Matter (PM)	mg/Nm^3	50	24.70	27.50	26.70	28.80
34	Coal Pulverizer	Particular Matter (PM)	mg/Nm^3	50	NA	NA	NA	46.00

Annual Ambient Air Quality Monitoring Summary

Reporting period: April 2025 to March 2026

Sampling Location- Near Loco Shed [C2]							
S.No.	Parameter	Unit	NAAQS Limit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
1	**Sulphur Dioxide (SO_2)**	**µg/m³**	**80**	13.70	14.60	17.00	15.20
2	**Nitrogen Dioxide (NO_2)**	**µg/m³**	**80**	22.90	24.50	29.00	22.40
3	**Particulate Matter (PM 2.5)**	**µg/m³**	**60**	50.6	43.10	50.00	46.70
4	**Particulate Matter (PM 10)**	**µg/m³**	**100**	78.3	70.5	81.3	76.2
5	**Ozone (O_3)**	**µg/m³**	**180**	46	50	45.6	55
6	**Lead (as Pb)**	**µg/m³**	**1**	0.35	0.31	0.39	0.35
7	**Carbon monoxide (CO)**	**µg/m³**	**2000**	1260	1145	1489	1260
8	**Ammonia (NH_3)**	**µg/m³**	**400**	33	35	36	40
9	**Benzene (C_6H_6)**	**µg/m³**	**5**	< 1.0	< 1.0	< 1.0	< 1.0
10	**Benzo (a) Pyrene**	**ng/m³**	**1**	< 1.0	< 1.0	< 1.0	< 1.0
11	**Arsenic (As)**	**ng/m³**	**6**	< 5.5	< 5.5	< 5.5	< 5.5
12	**Nickel (Ni)**	**ng/m³**	**20**	3.90	2.30	4.92	2.60

Sampling Location- Near Slag Gate							
S.No.	Parameter	Unit	NAAQS Limit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
1	**Sulphur Dioxide (SO_2)**	**µg/m³**	**80**	15.20	13.80	12.70	12.30
2	**Nitrogen Dioxide (NO_2)**	**µg/m³**	**80**	26.60	22.00	25.90	20.50
3	**Particulate Matter (PM 2.5)**	**µg/m³**	**60**	52.7	46.50	52.00	48.20
4	**Particulate Matter (PM 10)**	**µg/m³**	**100**	83.9	77.2	87.8	80.6
5	**Ozone (O_3)**	**µg/m³**	**180**	46	43	63	47
6	**Lead (as Pb)**	**µg/m³**	**1**	0.42	0.38	0.42	0.41
7	**Carbon monoxide (CO)**	**µg/m³**	**2000**	1374	1145	1260	1031
8	**Ammonia (NH_3)**	**µg/m³**	**400**	38	36	50	43
9	**Benzene (C_6H_6)**	**µg/m³**	**5**	< 1.0	< 1.0	< 1.0	< 1.0
10	**Benzo (a) Pyrene**	**ng/m³**	**1**	< 1.0	< 1.0	< 1.0	< 1.0
11	**Arsenic (As)**	**ng/m³**	**6**	< 5.5	< 5.5	< 5.5	< 5.5
12	**Nickel (Ni)**	**ng/m³**	**20**	3.60	2.70	5.35	3.10

Sampling Location-Near DM Plant							
S.No.	Parameter	Unit	NAAQS Limit	Apr–Jun 2025	Jul–Sep 2025	Oct–Dec 2025	Jan–Mar 2026
1	**Sulphur Dioxide (SO_2)**	**µg/m³**	**80**	9.70	9.50	9.10	10.20
2	**Nitrogen Dioxide (NO_2)**	**µg/m³**	**80**	15.00	14.30	15.80	16.50
3	**Particulate Matter (PM 2.5)**	**µg/m³**	**60**	40.5	37.00	50.10	39.40
4	**Particulate Matter (PM 10)**	**µg/m³**	**100**	67.2	62.1	76.5	66
5	**Ozone (O_3)**	**µg/m³**	**180**	41	39	44	44
6	**Lead (as Pb)**	**µg/m³**	**1**	0.33	0.3	0.36	0.33
7	**Carbon monoxide (CO)**	**µg/m³**	**2000**	916	1031	1145	916

S.No.	Parameter	Unit	NAAQS Limit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
8	Ammonia (NH_3)	$\mu g/m^3$	400	38	35	41	38
9	Benzene (C_6H_6)	$\mu g/m^3$	5	< 1.0	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m^3	1	< 1.0	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m^3	6	< 5.5	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m^3	20	2.19	1.96	1.92	2.11

Sampling Location-Near CISF Colony C1							
S.No.	Parameter	Unit	NAAQS Limit	Apr–Jun 2025	Jul–Sep 2025	Oct–Dec 2025	Jan–Mar 2026
1	Sulphur Dioxide (SO_2)	$\mu g/m^3$	80	9.30	8.40	9.10	8.80
2	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	80	15.40	13.60	15.80	14.50
3	Particulate Matter (PM 2.5)	$\mu g/m^3$	60	37	38.90	50.10	41.30
4	Particulate Matter (PM 10)	$\mu g/m^3$	100	61.5	62.2	76.5	69.6
5	Ozone (O_3)	$\mu g/m^3$	180	39	37	46	40
6	Lead (as Pb)	$\mu g/m^3$	1	0.17	0.15	0.38	0.2
7	Carbon monoxide (CO)	$\mu g/m^3$	2000	802	916	1145	1031
8	Ammonia (NH_3)	$\mu g/m^3$	400	32	34	40	38
9	Benzene (C_6H_6)	$\mu g/m^3$	5	< 1.0	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m^3	1	< 1.0	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m^3	6	< 5.5	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m^3	20	0.88	0.67	1.82	0.92

Annexure-V

ANNUAL AMBIENT AIR QUALITY MONITORING SUMMARY – NEARBY VILLAGES

Reporting period: April 2025 to March 2026

Sampling Location: Billiya

S.No.	Parameter	Unit	NAAQS Limit	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
1	Sulphur Dioxide (SO_2)	$\mu g/m^3$	80	6.5	9.	7.4
2	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	80	10.3	11.3	11.
3	Particulate Matter (PM 2.5)	$\mu g/m^3$	60	35.6	42.8	38.1
4	Particulate Matter (PM 10)	$\mu g/m^3$	100	58.6	70.3	64.5
5	Ozone (O_3)	$\mu g/m^3$	180	28.	33.5	31.
6	Lead (as Pb)	$\mu g/m^3$	1	< 0.1	0.18	< 0.1
7	Carbon monoxide (CO)	$\mu g/m^3$	2,000	802.	1031.	916.
8	Ammonia (NH_3)	$\mu g/m^3$	400	23.	27.4	28.
9	Benzene (C_6H_6)	$\mu g/m^3$	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m^3	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m^3	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m^3	20	0.25	1.08	0.4

Sampling Location: Nagari

S.No.	Parameter	Unit	NAAQS Limit	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
1	Sulphur Dioxide (SO_2)	$\mu g/m^3$	80	6.9	7.8	6.6
2	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	80	9.5	10.6	8.4
3	Particulate Matter (PM 2.5)	$\mu g/m^3$	60	32.7	33.5	30.9
4	Particulate Matter (PM 10)	$\mu g/m^3$	100	54.6	60.6	50.4
5	Ozone (O_3)	$\mu g/m^3$	180	26.	29.4	28.
6	Lead (as Pb)	$\mu g/m^3$	1	< 0.1	< 0.10	< 0.1
7	Carbon monoxide (CO)	$\mu g/m^3$	2,000	687.	916.	802.
8	Ammonia (NH_3)	$\mu g/m^3$	400	22.	23.1	26.
9	Benzene (C_6H_6)	$\mu g/m^3$	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m^3	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m^3	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m^3	20	0.3	0.48	0.25

Sampling Location: Anwalhera

S.No.	Parameter	Unit	NAAQS Limit	Jul–Sep 2025	Oct–Dec 2025	Jan–Mar 2026
1	Sulphur Dioxide (SO_2)	$\mu g/m^3$	80	7.5	7.1	7.
2	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	80	10.6	11.8	9.4
3	Particulate Matter (PM 2.5)	$\mu g/m^3$	60	31.8	28.5	33.1
4	Particulate Matter (PM 10)	$\mu g/m^3$	100	53.7	54.2	56.6
5	Ozone (O_3)	$\mu g/m^3$	180	< 19.6	< 19.6	< 19.6
6	Lead (as Pb)	$\mu g/m^3$	1	< 0.1	< 0.1	< 0.1
7	Carbon monoxide (CO)	$\mu g/m^3$	2,000	573.	802.	687.
8	Ammonia (NH_3)	$\mu g/m^3$	400	< 20.0	< 20.0	< 20.0
9	Benzene (C_6H_6)	$\mu g/m^3$	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m^3	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m^3	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m^3	20	0.2	0.54	0.25

Sampling Location: Munga Ka Khera

S.No.	Parameter	Unit	NAAQS Limit	Jul–Sep 2025	Oct–Dec 2025	Jan–Mar 2026
1	Sulphur Dioxide (SO_2)	$\mu g/m^3$	80	7.2	7.4	6.7
2	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	80	11.5	12.5	10.2
3	Particulate Matter (PM 2.5)	$\mu g/m^3$	60	30.	41.	34.3
4	Particulate Matter (PM 10)	$\mu g/m^3$	100	54.7	61.5	58.6
5	Ozone (O_3)	$\mu g/m^3$	180	28.9	26.8	32.
6	Lead (as Pb)	$\mu g/m^3$	1	< 0.1	< 0.10	< 0.1
7	Carbon monoxide (CO)	$\mu g/m^3$	2,000	802.	802.	802.
8	Ammonia (NH_3)	$\mu g/m^3$	400	< 20.0	< 20.0	< 20.0

9	Benzene (C_6H_6)	µg/m³	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m³	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m³	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m³	20	0.34	0.43	0.45
Sampling Location: Ajoliya Ka Khera						
S.No.	Parameter	Unit	NAAQS Limit	Jul-Sep 2025	Oct-Dec 2025	Jan-Mar 2026
1	Sulphur Dioxide (SO_2)	µg/m³	80	6.6	7.4	6.3
2	Nitrogen Dioxide (NO_2)	µg/m³	80	10.2	12.5	9.5
3	Particulate Matter (PM 2.5)	µg/m³	60	32.8	23.9	30.2
4	Particulate Matter (PM 10)	µg/m³	100	64.1	65.4	59.6
5	Ozone (O_3)	µg/m³	180	< 19.6	< 19.6	< 19.6
6	Lead (as Pb)	µg/m³	1	< 0.1	< 0.1	< 0.1
7	Carbon monoxide (CO)	µg/m³	2,000	916.	687.	802.
8	Ammonia (NH_3)	µg/m³	400	< 20.0	< 20.0	< 20.0
9	Benzene (C_6H_6)	µg/m³	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m³	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m³	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m³	20	0.33	0.3	0.28
Sampling Location: Putholi						
S.No.	Parameter	Unit	NAAQS Limit	Jul-Sep 2025	Oct-Dec 2025	Jan-Mar 2026
1	Sulphur Dioxide (SO_2)	µg/m³	80	7.9	8.6	8.5
2	Nitrogen Dioxide (NO_2)	µg/m³	80	13.6	11.	12.3
3	Particulate Matter (PM 2.5)	µg/m³	60	41.7	45.3	43.
4	Particulate Matter (PM 10)	µg/m³	100	70.6	70.1	74.
5	Ozone (O_3)	µg/m³	180	44.	45.	48.
6	Lead (as Pb)	µg/m³	1	0.12	0.16	0.15
7	Carbon monoxide (CO)	µg/m³	2,000	802.	1031.	916.
8	Ammonia (NH_3)	µg/m³	400	34.	36.	39.
9	Benzene (C_6H_6)	µg/m³	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m³	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m³	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m³	20	0.45	0.97	0.6
Sampling Location: Zinc Nagar						
S.No.	Parameter	Unit	NAAQS Limit	Jul-Sep 2025	Oct-Dec 2025	Jan-Mar 2026
1	Sulphur Dioxide (SO_2)	µg/m³	80	10.8	9.02	12.
2	Nitrogen Dioxide (NO_2)	µg/m³	80	18.5	14.9	20.1
3	Particulate Matter (PM 2.5)	µg/m³	60	40.	51.	43.
4	Particulate Matter (PM 10)	µg/m³	100	67.2	78.7	72.6
5	Ozone (O_3)	µg/m³	180	35.	38.	41.
6	Lead (as Pb)	µg/m³	1	0.14	0.25	0.2
7	Carbon monoxide (CO)	µg/m³	2,000	916.	1145.	1031.
8	Ammonia (NH_3)	µg/m³	400	30.	40.	36.
9	Benzene (C_6H_6)	µg/m³	5	< 1.0	< 1.0	< 1.0
10	Benzo (a) Pyrene	ng/m³	1	< 1.0	< 1.0	< 1.0
11	Arsenic (As)	ng/m³	6	< 5.5	< 5.5	< 5.5
12	Nickel (Ni)	ng/m³	20	0.84	1.88	1.2

Annexure-VI

Annual Ambient Noise Level Monitoring Summary								
Reporting period: April 2025 to March 2026								
S.No.	Sampling Location	Parameter	Unit	Industrial Area Limit	Apr'25–Jun'25	Jul'25–Sep'25	Oct'25–Dec'25	Jan'26–Mar'26
1	**Near CISF Colony C1**	**Leq Day**	**dB(A)**	**75**	62.9	60.3	59.8	63.6
2	**Near CISF Colony C1**	**Leq Night**	**dB(A)**	**70**	48.1	50.5	45.1	52.0
3	**Near Loco Shed C2**	**Leq Day**	**dB(A)**	**75**	62.5	66.9	68.1	64.4
4	**Near Loco Shed C2**	**Leq Night**	**dB(A)**	**70**	58.9	60.5	55.8	58.2
5	**Near Slag Gate**	**Leq Day**	**dB(A)**	**75**	59.7	62.0	65.3	60.1
6	**Near Slag Gate**	**Leq Night**	**dB(A)**	**70**	55.0	52.7	53.9	51.7
7	**Near CPP DM Plant**	**Leq Day**	**dB(A)**	**75**	69.1	71.6	71.6	72.4
8	**Near CPP DM Plant**	**Leq Night**	**dB(A)**	**70**	64.7	64.2	68.2	64.5

Annexure-VII

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HINDUSTAN ZINC
Zinc & Silver of India

HZL/CLZS/ENV/HAZ/46

Date-26.06.2026

27687

To

Member Secretary,
Rajasthan State Pollution Control Board
4, Institutional Area
Jhalan Doongri, JAIPUR-302004

Sub- Hazardous Waste Annual Statement (Form 4)

Dear Sir,

Please find enclosed herewith a copy of Hazardous Waste Annual Statement (Form 4) for the Year 2025-26 as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. This is for your kind information and record please.

For Hindustan Zinc Limited
Yours faithfully,

Manisha Bhati

(Manisha Bhati)
Associate General Manager & Head-Environment,
Chanderiya Lead Zinc Smelter

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HINDUSTAN ZINC
Zinc & Silver of India

FORM 4
[See rules 6(5), 13(8), 16(6) and 20 (2)]

FORM FOR FILING ANNUAL RETURNS
[To be submitted to State Pollution Control Board by 30th day of June of every year for the preceding period April to March]

1. Name and address of facility:

Chanderiya Lead Zinc Smelter
Hindustan Zinc Limited
P.O. Putholi -312021
Chittorgarh (Rajasthan)

2. Authorisation No. and Date of issue:

F(HSW)/Chittorgarh (Gangrar)/7066(1)/2024-2025/583-585 issued dated 27.05.2024

3. Name of the authorised person and full address with telephone, fax number and e-mail:

Manisha Bhati
Associate General Manager-Environment
Chanderiya Lead Zinc Smelter, Hindustan Zinc Limited
Chittorgarh (Raj)
01472-254412
Email – manisha.bhati@vedanta.co.in

4. Production during the year (product wise), wherever applicable

CLZS - Total Metal (Zinc Lead) - 615796 MT

Part A. To be filled by hazardous waste generators

1. Total quantity of waste generated category wise -

Total Generation – 61271.19 MT & 32 Nos (For details refer Annexure 1)

2. Quantity dispatched
   (i) to disposal facility – Disposed: 29839.39 MT & 32 Nos
   (ii) to recycler or co-processors or pre-processor – To Recycler: 29206.94 MT
   (iii) others

3. Quantity utilised in-house, if any – 2710.87 MT

4. Quantity in storage at the end of the year – 957.43 MT

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HINDUSTAN ZINC
Zinc & Silver of India

Part B. To be filled by Treatment, storage and disposal facility operators

1. Total quantity received – 29839.39 MT & 32 Nos
2. Quantity in stock at the beginning of the year - NA
3. Quantity treated – 29839.39 MT & 32 Nos
4. Quantity disposed in landfills as such and after treatment – 29839.39 MT & 32 Nos
5. Quantity incinerated (if applicable) - NA
6. Quantity processed other than specified above - NA
7. Quantity in storage at the end of the year - NA

Part C. To be filled by recyclers or co-processors or other users

1. Quantity of waste received during the year –
   (i) domestic sources – NA
   (ii) imported (if applicable) - NA
2. Quantity in stock at the beginning of the year - 0
3. Quantity recycled or co-processed or used – NA
4. Quantity of products dispatched (wherever applicable) – NA
5. Quantity of waste generated - NA
6. Quantity of waste disposed - NA
7. Quantity re-exported (wherever applicable)- NA
8. Quantity in storage at the end of the year - NA

Manisha Bhati

Date - 26 June 2026

Manisha Bhati
Associate General Manager
Environment

Chittorgarh

ANNEXURE 1						
		Category				FY 2025-26
S.No	Type of Hazardous Waste	Sch	Code		MTA	
1	Spent catalyst	I	17.2	Generation	6.70	
				Sale	0.00	
				Disposal/Reuse	6.70	Disposed to SLF
2	Empty barrels/containers contaminated with hazardous chemicals/wastes	I	33.1	Generation	32.00	
				Sale	0.00	
				Disposal/Reuse	32.00	Disposed to SLF
3	Water Purification Resin	I	34.2	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.00	
4	Exhaust Air or Gas cleaning residue	I	35.1	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.00	
5	Spent ion exchange resin contaning Toxic metals	I	35.2	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.00	
6	Ash from incinerator and flue gas cleaning residues	I	37.2	Generation	1.54	
				Sale	0.00	
				Disposal/Reuse	1.54	Disposed to SLF
7	MEE Salt	I	37.3	Generation	832.14	
				Sale	0.00	
				Disposal/Reuse	832.14	Disposed to SLF
8	Used or spent oil	I	5.1	Generation	62.27	
				Sale	54.47	Sold to Registred Recycler
				Disposal/Reuse	1.23	Reuse/Recycle in Process
9	Filter contaminated with oil	I	5.2	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.0	
10	Oil soaked Material	I	5.2	Generation	6.92	
				Sale	0.00	
				Disposal/Reuse	6.92	Disposed to SLF
11	Waste Oil	I	5.2	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.00	
12	Anode Mud	I	7.2	Generation	779.53	
				Sale	779.53	Sold to Registred Recycler
				Disposal/Reuse	0.00	Reuse/Recycle in Process
13	Cobalt cake	I	7.2	Generation	0.00	
				Sale	0.00	
				Disposal/Reuse	0.00	
14	Cooler cake	I	7.2	Generation	5805.83	
				Sale	0.00	
				Disposal/Reuse	5805.83	Disposed to SLF
15	Copper bearing lead residue/process residue	I	7.2	Generation	0.00	
				Sale	0.00	Sold to Registred Recycler
				Disposal/Reuse	0.00	
16	HGP Dust	I	7.2	Generation	3911.88	
				Sale	2238.33	Sold to Registred Recycler
				Disposal/Reuse	2637.64	Reuse/Recycle in Process

17	Process residues(ISF Dross)	I	7.2	Generation	4568.70	
				Sale	4568.70	Sold to Registred Recycler
				Disposal/Reuse	0.00	
18	Process residues(De-Fluorination cake)	I	7.2	Generation	101.86	
				Sale	0.00	
				Disposal/Reuse	101.86	Disposed to SLF
19	Process residue (Lead Dross/Lead bearing residues/Lead Scrap)	I	7.2	Generation	15039.61	
				Sale	14852.07	Sold to Registred Recycler
				Disposal/Reuse	72.00	Reuse/Recycle in Process
20	Process residue (Zinc Dross)	I	7.2	Generation	62.96	
				Sale	62.96	
				Disposal/Reuse	0.00	
21	Process Residues and Wastes (Geothite Cake)	I	7.2	Generation	5955.20	
				Sale	0.00	
				Disposal/Reuse	5955.20	Disposed to SLF
22	Purification Cake (Enrichment cake)	I	7.2	Generation	5758.00	
				Sale	5402.02	Sold to Registred Recycler
				Disposal/Reuse	0.00	
23	Non-Ferrous Sludge from ETP and scrubbers	I	7.4	Generation	18378.07	
				Sale	1248.87	Sold to Registred Recycler
				Disposal/Reuse	17129.20	Disposed to SLF
		Category				
S.No	Type of Non- Hazardous Waste				MTA	
1	Jarosite Cake	Non Hazardous		Generation	366331	
				Sale	33799	Jarosite to Cement
					454350	Jarofix to Highway
				Disposal/Reuse	366331	Disposed off to Jarofix Yard Landfill
2	ISF Slag			Generation	83159.19	
				Sale	117713.41	Cement
				Disposal/Reuse	489.90	Reuse /Recycle
3	Ausmelt Slag			Generation	31488.10	
				Sale	7530.97	Sale
				Disposal/Reuse	18558.21	Reuse /Recycle
4	Fly Ash			Generation	293966.46	
				Sale	293966.46	Cement
				Disposal/Reuse	0.00	
5	Bottom Ash			Generation	68799.99	
				Sale	75778.62	Cement/Bricks
				Disposal/Reuse	0.00	

Annexure - VIII

RAJASTHAN STATE POLLUTION CONTROL BOARD
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-5159600,5159695Fax: 0141-5159697

Registered

File No: **F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585** **Date:-** 27/05/2024

Unit Id : 263

M/s Hindustan Zinc Ltd.
Chanderia Lead Zinc Smelter, P.O. Putholi , Tehsil:Gangrar
District:CHITTORGARH

Sub:- Authorization for operating a facility for Collection, Disposal, Disposal at landfill, Generation, Reception, Recycler, Recycling, Reuse, Storage, Transport, Treatment of Hazardous Wastes Under Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.

Ref:- Your application received on 27/02/2024 and subsequent correspondence.

Sir

1 Number of authorization RPCB/HWM/2024-2025/HDF/HSW/12.

2 Application Number : 364338 dated : 27/02/2024 .

3 **FACTORY MANAGER of M/s Hindustan Zinc Ltd. is hereby granted an authorization based on the enclosed signed inspection report for Collection, Disposal, Disposal at landfill, Generation, Reception, Recycler, Recycling, Reuse, Storage, Transport, Treatment of Hazardous waste on the premises situated at Chanderia Lead Zinc Smelter, PO Putholi Tehsil: Gangrar District: Chittorgarh.**

Details of Authorization

SNo	Type of Hazardous waste	Category		Quantity/ Unit	Hazardous Waste Disposal Practice
		Sch	Code		
1	Spent catalyst*	I	17.2	60.00 KLA	SLF/Sold to registered recycler
2	Empty barrels/containers contaminated with hazardous chemicals/wastes	I	33.1	2400.00 NOS. PER YEAR	SLF/Sold to registered recycler
3	Water Purification Resin	I	34.2	2.00 TPA	SLF/Sold to registered recycler
4	Exhaust Air or Gas cleaning residue	I	35.1	100.00 KG/YEAR	Approved Incinerator
5	Spent ion exchange resin contaning Toxic metals	I	35.2	1.00 TPA	SLF/Sold to registered recycler

RAJASTHAN STATE POLLUTION CONTROL BOARD
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Registered

File No: F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585 **Date:-** 27/05/2024

Unit Id : 263

6	Ash from incinerator and flue gas cleaning residues	I	37.2	2.00 TPA	SLF/Sold to registered recycler
7	MEE Salt	I	37.3	8000.00 TPA	SLF/Sold to registered recycler/recycle in the process
8	Used or spent oil	I	5.1	171.00 KLA	Reuse/ Sales to Registered Recycler
9	Filters contaminated with oil	I	5.2	100.00 TPA	SLF/Coprocessing/Incineration/Sales to registered recyclers
10	Oil soaked Material	I	5.2	10.00 TPA	SLF/Coprocessing/Incineration/Sales to registered recyclers
11	Waste Oil	I	5.2	270.00 KLA	Reuse/ Sales to Registered Recycler
12	Anode Mud	I	7.2	2200.00 TPA	SLF/Sold to registered recycler/recycle in the process
13	Cobalt cake	I	7.2	1000.00 TPA	SLF/Sold to registered recycler/recycle in the process
14	cooler cake	I	7.2	6000.00 TPA	SLF/Sold to registered recycler/recycle in the process
15	Copper Bearing lead residue/process residue	I	7.2	11000.00 TPA	SLF/Sold to registered recycler
16	HGP Dust	I	7.2	7500.00 TPA	SLF/Sold to registered recycler

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Unit Id : 263

17	Process residues ((ISF Dross)	I	7.2	10000.00 TPA	SLF/Sold to registered recycler/recycle in the process
18	Process residues (De-Fluorination cake)	I	7.2	2000.00 TPA	SLF/Coprocessing
19	Process residues (Lead Dross/Lead bearing residues/ Lead Scrap)	I	7.2	18000.00 TPA	SLF/Sold to registered recycler/recycle in the process
20	Process residues (Zinc Dross)	I	7.2	12000.00 TPA	Sold to registered recycler/recycle in the Process
21	Process residues and waste (Geothite cake)	I	7.2	11471.00 TPA	SLF/Coprocessing/Incineration/Sales to registered recyclers
22	Purification Cake	I	7.2	12520.00 TPA	SLF/Sold to registered recycler/recycle in the process
23	Non-Ferrous Sludge from ETP and scrubbers	I	7.4	30000.00 TPA	SLF/Coprocessing/Incineration/Sales to registered recyclers
24	Jerosite cake	III	OW	387000.00 TPA	Utilization in Cement Plant/Manufacturing of Road/used in fumer plant
25	Zinc Dross/Zinc Ash/Zinc Skimming/Zinc Scrap/Zinc Residue	IV	...	25000.00 TPA	Used as raw material

4 The authorization shall be in force for period from **09/02/2024** to **31/01/2029** .

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Phone: 0141-5159600,5159695Fax: 0141-5159697

Registered

File No: F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585 **Date:-** 27/05/2024

Unit Id : 263

The authorization is subject to the following general and specific conditions :

A. General conditions of Authorization

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.

2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.

3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.

4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed

RAJASTHAN STATE POLLUTION CONTROL BOARD
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Registered

File No: **F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585** **Date:-** 27/05/2024

Unit Id : 263

of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B. Specific Conditions

5 **That this authorization shall cease to be valid & shall be liable to be revoked without any further notice in case of refusal/expiry of consent to operate under the provisions of Water(Prevention and Control of Pollution) Act,1974 and Air(Prevention and Control of Pollution)Act,1981 by the State Board.**

6 **That no recycling/re-processing of the hazardous waste covered under schedule IV shall be carried out without prior authorisation from Rajasthan State Pollution Control Board as recycler/ re-processor of hazardous waste under the rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.**

7 **That no other hazardous waste shall be utilized for co-processing as a supplementary resource or for energy recovery, or after processing without prior & valid approval of Central Pollution Control Board under the rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.**

8 **That in case of any expansion or change in process or product or change in mode / practice of disposal of hazardous waste or its quantity, industry shall obtain fresh authorization.**

9 **That the industry will sell hazardous wastes to units which are having valid authorization under HWM Rules, 2016 from concerning State Pollution Control Boards or similar competent authority for co-processing in cement kiln or recycling of hazardous waste.**

RAJASTHAN STATE POLLUTION CONTROL BOARD
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Registered

File No: F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585 **Date:-** 27/05/2024

Unit Id : 263

10 **That the arrangements for transportation of the hazardous waste for disposal shall be done by the authorized/dedicated vehicles only after obtaining authorisation and any environmental damages during Transportation shall be borne by sender/receiver whoever arrange the transportation.**

11 **That unit will develop plantation for gap filling.**

12 **That the unit shall give more focus on plantation to cover 33% area under plantation. The species like Tamarind /Imli(Tamarindus Indica), Palas(Butea Monosperma),Ber(ZizipusMauritiana),Bael(AegleMarmelos) , Moulsari(Mimusops Elengi), Siris(Albizia Lebbeck), Kacchnar(Bauhinia Variegata), Sunflower(Helianthus annuus), Mustard(Brassica Nigra) should be planted for better control of noise and air pollution.**

13 **That unit shall operate and maintain truck mounted vacuum operated road sweepers for housekeeping in the premises.**

14 **That unit shall maintain and operate water spraying system for raw material handling in storage yard.**

15 **That unit shall provide and maintain cemented internal roads so as to avoid dust emission due to movement of vehicles.**

16 **That in case of any expansion or change in process or product or change in mode/ practice of disposal of hazardous waste or its quantity, fresh authorization shall be obtained.**

17 **That unit will renew their membership of UCCI Udaipur within one month.**

18 **That unit will strictly comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016 and comply the guidelines of CPCB for Jarofix.**

19 **That this authorization is being issued in suppression of earlier authorizations issued vide order no-876-878 & 5969-5972 dated 03/06/2020 & 27/01/2022 respectively.**

20 The authorization is subject to the conditions stated at Annexure "A" enclosed with the authorization letter and the such conditions as may be specified in the Rules for the time being forced under the Environmental (Protection) Act, 1986.

21 The unit has to display and maintain the data online outside the factory main gate in Hindi & English both on a 6'X 4' display board in the manner & format prescribed at Annexure "B" and the report of the Compliance along with photograph shall be submitted to this office & Regional Office, time to time.

RAJASTHAN STATE POLLUTION CONTROL BOARD
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-5159600,5159695Fax: 0141-5159697

Registered

File No: F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585 **Date:-** 27/05/2024

Unit Id : 263

22 That the annual reports/returns in the form prescribed under the Rules shall be submitted to the Board by 30th June of every year and records of hazardous waste Generation, handling & management shall be maintained according to the provisions of the Hazardous Waste (Management and Transboundary Movement) Rules, 2016 and shown & submitted to the Board as and when asked for.

23 The hazardous waste should not be stored for a period beyond 90 days, failing which the authorization shall deemed to be revoked.

24 It shall be ensured that the Hazardous waste is handled, managed & disposed of strictly in accordance with the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016. Non compliance of Rules or any of the conditions contained in the authorization shall be tantamount to automatic cancellation/revocation of the authorization.

25 The operator of the facility shall liable to comply any other conditions as per the guidelines isssued by the MoEF or CPCB or State Board related to collection, disposal, reception, storage & treatment of hazardous waste.

26 **That this Authorization is being issued under the provisions of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with conditions laid down in all other rules for the time-being in force,rests with the industry/unit/project proponent.**

27 That this Authorization shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted againt you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

RAJASTHAN STATE POLLUTION CONTROL BOARD
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Phone: 0141-5159600,5159695Fax: 0141-5159697

Registered

File No: **F(HSW)/Chittorgarh(Gangrar)/7066(1)/2024-2025/583-585** **Date:-** 27/05/2024

Unit Id : 263

This bears the approval of the competent authority.

Yours sincerely,

Group Incharge

Copy To:-

1 Regional Officer, Regional Office, Rajasthan State Pollution Control BoardChittorgarh to ensure the compliance

2 Master File

Group Incharge