



ज़ावर माईन्स
पिन कोड – 313901
जिला – उदयपुर (राज)

HINDUSTAN ZINC LIMITED

हिन्दुस्तान जिंक लिमिटेड

Zawar Mines
PIN Code – 313901
Dist - Udaipur (Raj.)

Telephone - (0294) 2726600, Fax-2726241

Ref.:ZM/ENV/CPP/2020-21/

Date – 13.05.2020

By Speed Post

The Director,
Ministry of Environment and Forests,
Regional Office (Central Region),
Kendriya Bhawan, 5th Floor,
Sector "H", Aliganj,
Lucknow – 226024

Sub: – Six monthly Environment Compliance report for **90 MW Coal Based Captive Power Plant** at Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited

Ref: - **Environment Clearance Letter No. – J-13011/79/2007-IA. II (T), dated 05.02.2008**

Sir,

With reference to aforesaid subject and cited reference, it is to inform that we are herewith submitting six monthly Compliance report for the conditions stipulated in the Environment Clearances for **90 MW Coal Based Captive Power Plant** at Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited for the period from **October'2019 to March'2020** along with monitoring data report for your kind consideration.

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which shall certainly help us in our endeavor for further improve upon our Environmental Management Practices.



Thanking You

Yours faithfully




(Binu Raphael)

(Unit Head – Zawar CPP)

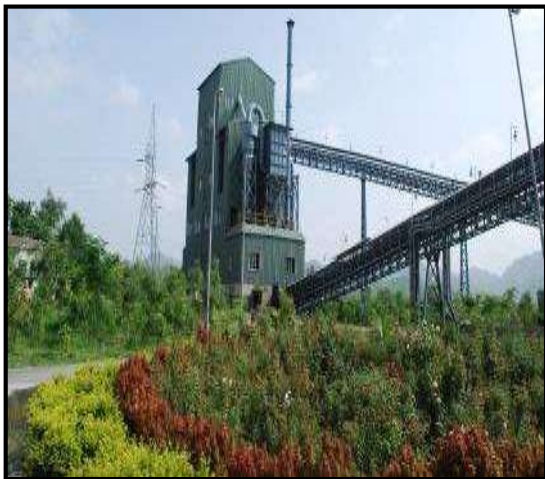
- CC: 1. Incharge (Zonal Office)
Central Pollution Control Board,
3rd Floor, Sahkar Bhawan, North T.T. Nagar, Bhopal – 462003
2. Member Secretary,
Rajasthan State Pollution Control Board,
4, Institutional Area, Jhalana Doongri, Jaipur-302004 (Raj)
3. Regional Officer,
Rajasthan State Pollution Control Board,
F-470, Near UCCI Building, Madri Industrial Area, Udaipur-313003 (Raj)
4. Office Copy Env Cell

Environment Clearance Letter No. – J-13011/79/2007-IA.II (T), dated 05.02.2009		
S.No.	SPECIFIC CONDITIONS	STATUS
(i)	The land requirement shall be restricted to 10 ha for all the activities/facilities of the power project.	<ul style="list-style-type: none"> Complied. Total area occupied by power plant is 10 ha.
(ii)	Blended coal having Sulphur content up to 1.5% and ash content up to 18% shall be used as fuel. (as amended vide MoEF letter No. J-13011/79/2007-IA.II(T) dated 20.10.2008.)	<ul style="list-style-type: none"> Complied.
(iii)	The height of the stack shall be as per the standards prescribed under the Environment (Protection) Act 1986 in this regard or 165 m, whichever is more with continuous online monitoring system. The exit velocity of the flue shall not be less than 19.37 m/sec.	<ul style="list-style-type: none"> As against the stack height of 120 meters as per the stipulation by the EP Act, 1986 based on the SO₂ emission, 165 m high stack has been provided with an online monitoring system for PM, SO_x & NO_x. Exit velocity of Flue gas is maintained above 19.37 m/sec  <p>165 METRE HEIGHT STACK</p>
(iv)	High efficiency electrostatic precipitators of not less than 99.87% efficiency shall be installed to limit particulate emission to 100mg/nm ³ . It shall be ensured that AAQ in the reserved forest downwind of the power plant does not exceed the prescribed norms	<ul style="list-style-type: none"> Electrostatic Precipitators of 99.87% efficiency BHEL make have been installed to restrict the particulate emission below 50 mg/Nm³. AAQ is monitored around the plant at 4 locations and the results of the monitoring near the reserved forest downwind the power plant is found to be within the prescribed norms. The AAQ monitoring results are enclosed as Annexure 1.  <p>8 FIELD ESP</p>

Environment Clearance Letter No. – J-13011/79/2007-IA.II (T), dated 05.02.2009

S.No.	SPECIFIC CONDITIONS	STATUS
(v)	It shall be ensured that the movement of coal is made through covered conveyors only.	<ul style="list-style-type: none"> Movement of coal from the coal yard to the coal crusher and further to the boilers are done through covered conveyors.  <p align="center">CLOSED CONVEYOR BELTS</p>
(vi)	Low NOx burners shall be installed to control NOx	<ul style="list-style-type: none"> Low NOx burners are installed in the boilers of the Power plant to control NOx emissions.
(vii)	Dust Extraction and dust suppression system and water sprinklers shall be provided for controlling fugitive dust during coal transportation, in coal storage & handling area and other vulnerable areas of the plant.	<ul style="list-style-type: none"> Dust extraction & dust suppression system has been installed at transfer points in the coal crushing and conveying facility to reduce dust emission. Similarly, water sprinklers are installed in coal storage, handling and crushing area.  <p align="center">WATER SPRINKLING SYSTEM AT COAL YARD</p>
(viii)	Water requirement shall not exceed 6800m ³ /day which will be met from Tidi Dam. No ground Water shall be extracted for any activity of this project including during construction phase.	<ul style="list-style-type: none"> Water is being drawn from captive Tidi dam and total requirement is maintained within 6800 m³/day. No ground water is drawn for any activity
(ix)	It shall be ensured that the project site is at least 500m away from Tidi Dam.	<ul style="list-style-type: none"> Complied.
(x)	COC of not less than 5 shall be adopted	<ul style="list-style-type: none"> COC of 8 is maintained.
(xi)	Close circuit cooling System with cooling Towers shall be installed	<ul style="list-style-type: none"> Closed circuit cooling water system with cooling tower is installed thus achieving COC of 8.
(xii)	Treated effluents conforming to the prescribed standard shall be re circulated and reused within plant. No effluent shall be discharged outside the project boundary.	<ul style="list-style-type: none"> Effluents are treated to meet the prescribed norms and recycled partly in CPP and balance is reused in Ore Beneficiation Plant of the captive mines. No effluent is discharged outside the project boundary. Zero discharge is maintained.
(xiii)	Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground water Authority/ State Ground Water Board and a copy of the same shall be submitted within three months to this Ministry.	<ul style="list-style-type: none"> Detailed scheme of Rain water harvesting prepared as per norms of CGWA and duly approved by Government of Rajasthan, Ground Water Department, Jodhpur vide letter no. No. F.Tech. (III)/ DSPC/ GWD/ 07 /1910 dated 31.03.2008. The Rain Water Harvesting system is implemented as approved.

(xiv)	<p>Leq Of Noise level shall be limited to 75 dBA and regular maintenance of equipments should be undertaken.</p> <p>For people working in high noise areas, personal protection devices should be provided.</p>	<ul style="list-style-type: none"> Noise reduction at source is achieved by providing inbuilt noise insulation and further construction of enclosures with noise insulations to ensure noise levels at a distance of 1 mtr from the equipment/ enclosure is below 75 dB(A). Further, control rooms are provided for operating personnel that further reduces continues exposure to noise. The noise levels measured are enclosed as Annexure-2. Suitable Personal protective devices are provided to the peoples working in high noise area.
(xv)	<p>Dry fly Ash collection system shall be provided. 100% fly Ash utilization shall be ensured from day one. Bottom ash may be disposed in the existing tailing pond. The tailing pond, after it is filled, shall be covered with one-meter-thick layer of clay and reclaimed by plantation. (as amended vide MoEF letter No. J-13011/79/2007-IA.II(T) dated 20.10.2008</p>	<ul style="list-style-type: none"> Dry collection system has been installed for collection of fly ash from ESPs. 100% fly ash is sold to cement industries. Bottom ash is reused back in the system. <div data-bbox="995 804 1508 1384" data-label="Image"> </div> <div data-bbox="995 1384 1508 1431" data-label="Caption"> <p>BAG FILTER AT COAL CRSUHER</p> </div>
(xvi)	<p>Conservation Measures for Schedule-I animals, as per wild life (Protection) Act 1972, found in the study area shall be taken up on before commissioning the project in consultation with state forest and Wildlife Department.</p>	<ul style="list-style-type: none"> Conservation Plan approved by Dy. Chief Wild Life Warden, Udaipur vide letter No. F.9(10)Survey/Dy.CWLW/Udr/11-12/9477 dated 06.07.2011. Conservation measures as approved are under implementation jointly with the Forest and the Wildlife department.

(xvii)	A greenbelt shall be developed with local species around the plant boundary with tree density of 1500-2000 per ha covering at least 3.6 ha area.	<ul style="list-style-type: none"> Total 7000 saplings were planted covering an area of 4.0 ha in and around CPP.  <p>PLANTATION</p>
(xviii)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<ul style="list-style-type: none"> The First Aid and Sanitation arrangements was provided to the construction workers during construction phase and is now extended to the contract labors in operation phase.
(xix)	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and record maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with the state pollution control Board. Periodic reports shall be submitted to the regional office of this ministry at Lucknow.	<ul style="list-style-type: none"> Regular monitoring of ambient air is carried out at 4 locations that are identified in consultation with RSPCB. Monitoring reports are submitted to the MoEF, Lucknow, CPCB, Bhopal and RSPCB, Jaipur. Monitoring results for the past 6 months is enclosed as Annexure-1.
(xx)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forest at http://enfor.nic.in	<ul style="list-style-type: none"> The grant of EC has been advertised in two local newspapers, both in vernacular language and a copy of the same has been sent to MoEF Lucknow vide our letter No. Zawar CPP/08-09/ dated 31.03.2008.
(xxi)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards	<ul style="list-style-type: none"> An environment management cell with adequate qualified staff exists jointly for Zawar mines as well as CPP to ensure implementation of stipulated environmental safeguards.
(xxii)	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to Ministry, the regional office, CPCB/SPCB	<ul style="list-style-type: none"> Compliance reports are submitted to the MoEF, Lucknow, CPCB, Bhopal and RSPCB, Jaipur and Udaipur
(xxiii)	Regional office of Ministry of Environment and Forest located at Lucknow will monitor the implementation of the stipulated conditions. A complete set of document including Environmental Impact Assessment Report and Environment Management plan along with the additional information submitted from time to time shall be forwarded to the Regional office for their use during monitoring.	<ul style="list-style-type: none"> EIA & EMP submitted to MoEF vide our letter No. ZM/ENV/CPP/08-09/290 dated 03.07.2008. Monitoring report is being submitted regularly every 6 months as stipulated.
(xxiv)	Separate funds shall be allocated for implementation of environmental protection measures along with item wise break up. These	<ul style="list-style-type: none"> Complied.

	cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year wise expenditure shall be reported to ministry	<ul style="list-style-type: none"> Total expenditure towards environment protection during the project stage is about Rs. 14.5 Crores. The operating cost for environment protection during the October 19 to March 20 is Rs. 604360.
(xxv)	Full Cooperation shall be extended to the scientist/Officers from ministry/Regional Office of Ministry at Lucknow/the CPCB/the SPCB who would be monitoring the compliance of environmental status	<ul style="list-style-type: none"> Full cooperation is extended during inspections / monitoring.

Environment Clearance Letter No. – J-13011/79/2007-IA.II (T), dated 05.02.2009		
S.No.	GENERAL CONDISTIONS	STATUS
1	The proposal is for grant of environmental clearance under EIA Notification, 2006 for setting up of a 90 MW coal based captive thermal power project at Zawar. The land requirement is estimated as 10 ha, which is already available with the company. The water requirement is 6800m3/ day, which will be obtained from Tidi dam. Imported coal shall be used as fuel and the requirement will be 800 TPD. No national park and wild life sanctuary is reported within 10 km radius of the project boundary however two reserve forest falls within 2.6 km radius. Public hearing of the project was held on 18.08.2007. Capital cost of the project is 285 crores, which includes Rs 14.40 crores for environmental protection measures.	<ul style="list-style-type: none"> Complied
2	The proposal has been considered and Ministry of Environment & Forest hereby accords environmental clearance to the said project under the provision of Environment Impact Notification, 2006 subject to implementation of following terms and conditions.	<ul style="list-style-type: none"> Noted
3	The ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry	<ul style="list-style-type: none"> Noted
4	The environmental clearance accorded shall be valid for a period of 5 years to start of production operation by the power plant.	<ul style="list-style-type: none"> Noted
5	In case of any deviation or alteration in the project proposed from that submitted to this ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of condition(s) imposed and to incorporate additional environmental protection measures required if any	<ul style="list-style-type: none"> There has been no change in the project scope than proposed.
6	The above stipulations shall be enforced along with others as under the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act 1986, The manufacture, Storage and Import of Hazardous Chemical Rules 1989, Hazardous Wastes (Management and Handling) Rules 1989, the Public Liability Insurance Act 1991.	<ul style="list-style-type: none"> Latest CTO granted under air and water act by RPCB vide letter No. F(Tech)/Udaipur(Sarada)/50(1)/2016-2017/6817-6819 dated 18.02.2019 with a validity up to 31.10.2022.

No.J-13011/79/2007-IA.II(T)
Government of India
Ministry of Environment & Forests

By Speed Post

Prayavaran Bhawan
CGO Complex, Lodi Road
New Delhi-110 003

Dated: 20th Oct ,2008

To

The General Manager(EOHS)
Hindustan Zinc Limited
Yashad Bhawan
Udaipur- 313 004

Subject: 90 MW Coal based Captive Power Plant at Zawar, District Udaipur, Rajasthan
by M/s Hindustan Zinc Ltd - Change in environmental clearance-
regarding.

Sir,

The undersigned is directed to refer your communication no. HZL/Env/08 dated 16.2.2008 on the subject mentioned above. Subsequent information furnished vide letter dated 1.8.2008 and 25.9.2008 have also been considered.

2. The Ministry of Environment and Forests here by amends the conditions no. 3 (ii) and 3 (xv) contained in this Ministry's letter of even no. dated 5th Feb, 2008 to read as under:-

Condition no. 3 (ii) - "Blended coal having sulphur content up to 1.5% and ash content up to 18% shall be used as fuel".

Condition no. 3(xv) - "Dry fly ash collection system shall be provided. 100% fly ash utilization shall be ensured from day one. Bottom ash may be disposed in the existing tailing pond. The tailing pond, after it is filled, shall be covered with a one meter thick layer of clay and reclaimed by plantation."

3. All other conditions contained in this Ministry's earlier letter of even no. dated 5th Feb, 2008 shall remain unchanged.

This issues with the approval of the Competent Authority.

Yours faithfully;



(OM PRAKASH)
DEPUTY DIRECTOR

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Deptt. of Forests & Environment, Government of Rajasthan, Secretariat, Jaipur.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Rajasthan Pollution Control Board, 4, Institutional Area, Jhalana Doongri, Jaipur.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Regional Office(CZ), Kendriya Bhandar , 5th Floor ,Sector-H, Aliganj, Lucknow-226 020, Uttar Pradesh.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

(OM PRAKASH)
DEPUTY DIRECTOR

A. Stack Monitoring

Stacks	Main Stack				Coal Crusher Stack
Parameters	PM	SOx	NOx	Hg	PM
Limits	50	600	300	0.03	50
Oct – 19	25.54	455	256	BDL (<0.001)	14.85
Nov – 19	38.62	415	245	BDL (<0.001)	21.37
Dec - 19	25.82	399	240	BDL (<0.001)	11.77
Jan – 20	29.32	395	246	BDL (<0.001)	14.89
Feb – 20	27.28	513	250	0.005	19.64
Mar - 20	27.47	435.67	245.33	BDL (<0.001)	18.2

B. Ambient Air Monitoring

Location	Date	Limits	Oct – 19	Nov – 19	Dec - 19	Jan – 20	Feb – 20	Mar - 20
Ashok Nagar STP	PM 10	100	64.29	70.90	74.86	71.72	77.81	74.81
	PM 2.5	60	28.34	32.75	36.56	32.69	29.50	32.59
	SOx	80	5.14	3.46	3.41	3.83	6.41	3.33
	NOx	80	11.57	15.15	15.30	14.61	12.08	13.4
	CO	2000	297.50	316.25	307.50	281.25	258.75	373.33
Weigh Bridge	PM 10	100	74.86	73.79	76.50	69.50	76.97	70.22
	PM 2.5	60	31.33	36.62	39.19	35.30	33.02	33.36
	SOx	80	5.32	3.33	3.20	3.69	6.52	3.22
	NOx	80	12.98	14.98	13.99	16.15	12.90	13.78
	CO	2000	298.75	351.25	313.75	271.85	265	298.33
Main Gate	PM 10	100	74.46	70.50	73.99	69.42	78.65	71.18
	PM 2.5	60	32.59	34.88	35.17	33.72	34.94	39.77
	SOx	80	5.95	3.49	3.29	3.66	5.22	3.16
	NOx	80	14.57	15.67	14.61	11.95	13.52	14.17
	CO	2000	315	338.75	315	261.25	268.75	311.67
MAS Office	PM 10	100	72.60	74.51	74.53	75.13	76.93	72.85
	PM 2.5	60	28.36	38.65	34.78	34.96	30.75	37.44
	SOx	80	5.54	3.59	3.38	4.18	5.41	3.27
	NOx	80	13.40	15.40	14.29	14.23	12.04	15.33
	CO	2000	328.75	293.75	355	277.50	266.25	298.33

C. CPP FINAL TREATED WATER ANALYSIS REPORT

Parameters	Concentration	Oct – 19	Nov – 19	Dec – 19	Jan – 20	Feb – 20	Mar – 20
TSS mg/l	100	12	15	13	13	13	28
BOD mg/l	30	6	3.2	3	3	6	7
COD mg/l	250	38.02	35.55	38.78	16.64	26.62	24.58
pH mg/l	6.0-8.5	7.26	7.39	8.25	8.2	7.29	7.96
Phosphate as P mg/l	5	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	0.67	BDL (<0.1)
Oil & Grease mg/l	10	2	4	5	3	3	3
Free Available Chlorine mg/l	0.5	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)
Copper	1.0	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	0.03	BDL (<0.01)
Iron	1.0	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	0.07	BDL (<0.01)
Total Chromium Cr ⁺⁶ mg/l	0.2	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc mg/l	1.0	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	0.23	BDL (<0.01)
Sulphide mg/l	2.0	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)
Temperature℃	Not more than 10℃ higher than the intake water temperature	27.2	25	18	22	26	38

AMBIENT NOISE MONITORING AT CPP, ZAWAR						
DAY TIME NOISE LEVELS						
Stations/Month	Oct – 19	Nov – 19	Dec - 19	Jan – 20	Feb – 20	Mar - 20
Main Gate	46	45	45	45	46	45
Switch Yard	63	62	62	59	63	59
Below ESP	71	73	70	72	70	72
Inside Chimney	56	53	61	59	62	59
Crusher Floor	72	73	70	73	70	72
Control Room	57	56	56	54	57	54
Outside Control Room	72	73	71	73	71	72
Security Office	47	45	48	45	49	45
Near Fly Ash Loading	63	63	64	63	65	63
Near Cooling Tower	71	70	71	71	72	70
Permissible Limit	75					

NIGHT TIME NOISE LEVELS						
Stations/Month	Oct – 19	Nov – 19	Dec - 19	Jan – 20	Feb – 20	Mar - 20
Main Gate	42	42	43	41	41	43
Switch Yard	57	58	61	57	59	56
Below ESP	67	67	66	68	66	67
Inside Chimney	56	56	57	52	56	55
Crusher Floor	67	67	67	67	66	66
Control Room	56	54	56	55	55	55
Outside Control Room	67	68	66	68	67	68
Security Office	41	39	41	41	42	41
Near Fly Ash Loading	61	60	58	59	59	62
Near Cooling Tower	68	67	67	67	68	67
Permissible Limit	70					